



School of General  
Education

BSDU

# NEWSLETTER

Issue No. 5

Jan – June, 2020



## BHARTIYA SKILL DEVELOPMENT UNIVERSITY JAIPUR

### Editor's Desk

Welcome to the V Issue of the BSDU Newsletter.

The entire world is going through unprecedented times which has thrown up challenges for all of us, where the best line of defense against the deadly Covid-19 was to stay at home. There is a saying that “When the going gets tough, the tough get going” and BSDU is a shining example of this. Lockdown limited us physically, but it goes to the credit of our faculty, research scholars, staff and students that everyone rose to the occasion and continued to their maximum potential. Be it online classes, competitions, webinars or research, we did not slacken our pace, and this Newsletter stands as a testimony to our efforts. We are grateful to the management for their support and encouragement which motivated us in all our endeavors in these difficult days. We are excited to record our journey during this historical period, and hope the coming days will bring in a new world of health and happiness for all.

We look forward to your cooperation and support for the next edition.

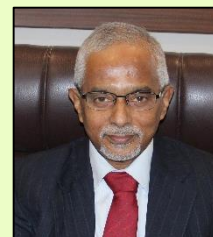
**Dr. Surat Singh**

Principal,  
School of General Education



### VC's Message

It is heartening to learn that the Editorial team of the BSDU Newsletter is almost ready with yet another issue, the fifth one in order. This issue of the newsletter is expected to chronicle the events for the period January – June, 2020. The period under surveillance is one which has witnessed a difficulty with hardly any parallel in the recent history. COVID 19 pandemic has posed a serious threat before humanity, challenging its pride of technological superiority. Along with other sectors, the education sector has also been very adversely affected by the pandemic. The challenges for the TVET (Technical and Vocational Education and Training) sector are even greater considering the fact that in this sector, all deliverables cannot be disseminated online. We are fortunate that our students and faculty members have stood firm to face the challenge. Within the constraints, BSDU has taken special care to hold online sessions for the courses, wherever possible.





This zeal and bonding among students and staff give me confidence that we shall certainly overcome the crisis and go much beyond. During the period under consideration, an expert team from UGC visited the University for ascertaining its norms and standards. The team, in its report, made an observation that ‘this University can be a model in the field of skill education’. Such an observation gives us confidence that we are treading the right track.

I wish all the readers a very happy and healthy time and the belief that ‘*We Shall Overcome*’.

**Dr. Achintya Choudhury**, Vice Chancellor

### **Brig. S.S. Pabla: New Chairman of All India Board for Vocational Education**



It is a matter of great prestige and pride for BSDU family that our Pro Chancellor, Brig. S.S. Pabla, has been appointed as the new Chairman of the All India Board for Vocational Education by the All India Council for Technical Education (AICTE). He will hold his new position for three years until 2023.

BSDU extends hearty congratulations and wishes him the best in his tenure!

### **VISIT OF THE UGC EXPERT COMMITTEE**



The UGC Expert Committee visited Bhartiya Skill Development University on 31 January and 1 February 2020. The purpose of the visit was to

ascertain fulfillment of criteria by BSDU in terms of programmes, faculty, infrastructural facilities, financial viability, etc. as laid down by the UGC and other concerned Statutory Councils. The Expert Committee comprised Prof Vinod Kumar Jain, Vice Chancellor, Tezpur University, Tezpur as the Chairperson, Prof Manoj Kumar Saxena, Director, DDU, Kaushal Kendra, Central University of Himachal Pradesh, Dharamshala, Prof Neela Dabir, Dean, School of Vocational Education, Tata Institute of Social Sciences, Mumbai, Dr. S.P. Agarwal, Principal, Ramanujan College, University of Delhi, Delhi, as members and Mr. Mriganka Sekhar Sarma, Education Officer, UGC, New Delhi as the Coordinating Officer.

The Committee interacted with the Pro-Chancellor, Vice Chancellor and the Principals of the Schools. The committee was apprised of the various programmes at BSDU including a brief description of the RUJ Charitable Trust and its legal status. The Committee visited the Schools and appreciated the infrastructure, programmes and faculty, which was reflected in their observations as well.

The Committee observed that the University had adhered to the required standards and could serve as a model university for skill education. They appreciated the transparency in its academic activities and governance. However, the UGC expert committee suggested that the University should constitute an Internal Quality Assurance Cell as per the norms of UGC.

## UPDATES FROM COE OFFICE

- The Semester-End Examinations, 2019-20 (Summer) of B.Voc., Semesters- I, III and V and M.Voc., Semesters- I and III were conducted from 4 - 11 January, 2020 and the results were declared on 27 January, 2020.
- The interviews of the Ph. D candidates who had cleared their entrance test conducted in December 2019, were held between 13 January - 16 January 2020 and seven candidates were selected. Online classes of Research Methodology are being conducted for the aforesaid batch.
- All the Ph. D scholars of the previous batches were asked to submit the reports about the work done during the lock down period.



## ANNUAL SPORTS CHAMPIONSHIP 2020

To disseminate the old saying 'Healthy Mind Lives in a Healthy Body' among the young adult minds and to boost their brain power and immunity, sports activities for students are organized as a regular phenomenon in the academic calendar of the University. Under the guidance of the Sports Officer, Dr. C. P. Sharma, various themed playgrounds were designed in accordance with the needs of different sports activities like Long Jump, Triple Jump, Javelin Throw, Discus Throw, Football, Cricket and Volleyball in the University campus. The novices of sports activities were trained and coached meticulously by the sports officer Dr. C.P. Sharma regularly.

To imbibe the thought of healthy and zestful competition among students through sports activities, an Annual Sports Championship was organized from 23 January to 31 January 2020 in the campus. The event was inaugurated by Hon'ble Pro Chancellor and the President of the University. Dr Anil Rana, Principal, School of Woodworking, coordinated this sports championship in a very systematic way by dividing the games in teams (Tigers, Jaguars, Cougars, Panthers and Cheethas) and deputing their Coordinators.



There were five team events and many individual events namely Athletics (including Shotput, Discus and Javelin Throws), Badminton (Male/Female), Table Tennis and Chess. The team events were Football, Basketball, Cricket, Volleyball and Kabaddi. Students and staff members participated wholeheartedly in the ensuing events with the Champions trophy being lifted by the team "Cougars". The winners and runner ups were awarded with gold/silver medals and certificates. The volunteers and coordinators who supported the event were felicitated by Prof. Garg, Dean, Academics.

## INTERNATIONAL WOMEN'S DAY 2020 CELEBRATIONS @ BSDU# *EACH FOR EQUAL*

Commemorating the social, economic, cultural and political accomplishment of women, BSDU celebrated the International Day for Women on 7 March 2020 on the theme *Each for Equal*.



A get together for all the female faculty was organized in the Conference room, Polymechanic Block, in the presence of Prof. Charanjeet Kaur Pabla, COE, and Dr. Susheela Sharma, Deputy Registrar of the University. Prof. C. K. Pabla, Dr. Susheela Sharma deliberated on the theme of the day. Many other faculty also expressed their opinions on the means and ways of attaining the theme Each for Equal. The session became quite interesting with the poem recitation and extempore talks delivered by the faculty showcasing their thoughts and beliefs on women empowerment. The programme was followed with cultural activities and refreshments.

The celebration was indeed a great initiative by the University to show love, appreciation and respect towards the female fraternity.

# ACADEMIC ACTIVITIES @BSDU

## SCHOOL OF AUTOMOTIVE SKILLS

### Academic Activities

- The assessment of the industrial students of II and IV Semesters was conducted in the presence of the member nominated from ASDC, industry and BSDU faculty on 25 February 2020.
- The students of I and III semesters interned with *Maruti, Honda, Jaguar-Landrover, John Bean, Bluepoint and Snap-on*.
- The M.Voc. students of final semester interned with *International Centre of Automotive Testing (ICAT)* at Manesar, Gurgaon.
- Protocol Presentations and Research Progress of a Ph.D. student was held in February 2020.
- Online classes were conducted during the lockdown period between April – May 2020.
- Faculty and trainers attended webinars, online courses and quizzes.



### Inauguration of Hero Motocorp, Centre of Excellence

*Hero Motocorp, Centre of Excellence* for training in two wheelers was inaugurated on 22 February 2020, in the presence of Mr. Vijay Sethi, Head CSR, HR Hero Motocorp., Mr. Rajesh Mukhija Advisor CSR, Hero Motocorp, and the management of BSDU.

### Skills Training

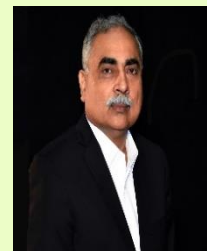
- Skills training session sponsored by Hero Motocorp. was held at *Hero Centre of Excellence* BSDU from 20 February to 4 March 2020. 12 candidates participated from Rajasthan and Bihar and were certified jointly by Hero Motocorp. and BSDU.
- Skills training in *Automotive Wheel Care* was imparted to four candidates in *Fleeca India Pvt. Ltd.* for two weeks in March 2020 and were assessed and certified jointly by BSDU and *Fleeca*.

### Webinar

- Col. Sanjay Gangwar, Principal of the School presented a webinar on *Empowering Youth in a Career of Opportunities: Automotive Sector*. It focused on Skilling as a necessity in the Automotive sector, teaching pedagogy and state of the art infrastructure at School of Automotive Skills and a career in the Automotive Sector.

## SCHOOL OF COMPUTING SKILLS

During the lockdown, the School of Computing Skills conducted various activities in addition to online classes. Google Meet, Google Classroom and Zoom Meet were used to conduct online classes. Assignments were given to students as per requirement of topics and quizzes were conducted to evaluate the progress of students. Supportive notes and PPTs were also provided to students. The



## Webinar

faculty guided students to enroll in online courses related to their courses/topics offered by *Coursera*. Students interning at industries were guided for online courses at various platforms such as Coursera, Cisco Network Academy. Coursera courses have been made available free of charge till August 2020 for all BSDU students and staff members. Some students interning in 'Work from Home' (WFH) mode are being paid stipend.

## Academic activities

IT-Service Department under the School has been monitoring the IT infrastructure at both campuses. For technical support and issues, the IT Service team has been providing solutions, to staff and students and updating the BSDU website.

- *Learning Management System* Moodle is implemented for Online Examination and Online admission test for new students. The School has been using *Learning Management System* (LMS) on campus for learning and teaching purpose.
- Attendance module of *Enterprise Resource Planning* has been developed and tested by the school during the lock down period and ready for launch.
- The School implemented an in-house system for conducting online entrance test, named as BSDU Common Admission Test 2020.
- The faculty earned certificates by attending webinars and quizzes, MOOC programs on Coursera and Cisco Network Academy.
- The School conducted online quizzes on computing for class XII students, diploma and ITI students and issued certificates.

Prof. Anurag, Principal of the School presented a webinar on ***Computing Technology: Innovation, Automation & Industry*** in which he discussed how computing technology is changing industry and lifestyles. Certificates were distributed to the participants.

## SCHOOL OF ELECTRICAL SKILLS

### Academic Activities

- The School organized a four-day workshop on *Renewable Energy Technology Skills* for M/s Elecon Pvt. Ltd. from 25-28 February 2020. The workshop was conducted by Dr. Pancham Kumar and Mr. Kuldeep Kumar which was highly appreciated by the management of M/s Elecon.
- A lecture series was delivered by **Dr. Satyendra Singh** in the Faculty Development Program on ***Recent Trends in Power Systems and Power Electronics*** sponsored by TEQIP-III at Govt. Engineering College Bharatpur, Rajasthan from 6-11 January 2020 on Deregulation and Restructuring, Power Markets: Energy and Ancillary Service Markets and Indian Energy Exchange Market.
- The faculty submitted two projects to Electronics Sector Skills Council of India seeking funds. These projects are designed to impart electrical skills training to the students of engineering colleges.



- To provide better understanding and skill based knowledge, the students were taught and trained via online lectures and videos for the conduct of experiments during the Covid- 19 lockdown period.
- Ms. Surbhi Pareek, student of M.Voc. presented a research paper on *Electric Vehicle Charging Station Challenges and Opportunities: A Future Perspective* in the IEEE International Conference. The conference was held on the theme **Emerging trends in Communication, Control and Computing (ICONC3)** at Mody University of Science and Technology, Lakshmanagarh, Sikar, Rajasthan from 21-22 February 2020.
- Three students of M.Voc. viz. Ms. Surbhi Pareek, Mr. Yaduvendra Singh Rawat and Mr. Anil participated in SPARC sponsored workshop on **Design, Control and Operation of Flexible Micro-grids with Opportunities and Challenges** held at Malviya National Institute of Technology Jaipur, Rajasthan from 4-8 March 2020.
- Students of the School attended webinars, quizzes and online courses during lockdown period. The themes of these events were on design of solar home, battery management, power system protection, resume building, interview skills and many more.

#### Visit to Schneider Electrical Ltd

Mr. Akashay Sahni visited *Schneider Electrical Ltd.*, Jarod, Vadodara, Gujarat (17-19 Feb. 2020)

for acceptance trials of 1.6 MVA and 1 MVA transformers.

#### Webinar

Comde. (Dr) Jawahar M Jangir presented a webinar on *Promising Career Options: Focus on Electrical/Renewable Energy* on 29 May 2020. The webinar highlighted the importance of skills for growth and development of the country, growth in the power and renewable energy sectors, job opportunities and career options in Electrical and RET Skills, infrastructure of the School and on internships and placements.

## SCHOOL OF ENTREPRENEURSHIP SKILLS

#### Academic Activities

- The School organized a one - day workshop on *India's Skill Competition, Rajasthan* in association with *National Skill Development Corporation (NSDC)* and *Rajasthan Skill & Livelihood Development Corporation (RSLDC)* on 13 January 2020 and another workshop on *Understanding the Patent Filing Process* on 18 February 2020 in which Mr. Govind Sharma, Ex. Chief, NRDC, New Delhi was the resource person.
- Dr. Pawan K. Kankar, Associate Professor, IIT Indore delivered expert sessions on *Design Thinking as a Strategy for Innovation and AI Techniques and Research Applications* on 24 February and 2 May 2020 at BSDU Jaipur. The



sessions discussed the design principles and their applications to strategy and innovation, and their impact on success rate.

- Dr. Mredu Goyal, Assistant Professor, SES was a panelist in the third edition of *LinkedIn Local*, Jaipur, on 6 March 2020. The topic of panel discussion was *The Unconventional Track of Career Building*.
- The School organized E- quizzes and online contests to enhance the creative skills of the students during lockdown viz. *Writing Karo Na, Painting Karo Na* and many more.
- The School organized a series of webinars during the lockdown period on skills enhancement, management and research.

#### **Selection of Students for IOP in Europe**

To offer intercultural ambience for learning the modern approaches and techniques of business, four students of SES were selected for IOP at Agricultural State University of Moldova, Europe.

#### **Inauguration of School of Beauty & Wellness,**

##### **CoE**

The *Centre of Excellence, School of Beauty and Wellness* in the School of Entrepreneurship Skills was inaugurated on 7 January 2020 by Shri Tika Ram Jolly, Hon'ble Minister, Labour (Independent Charge).

#### **Visits**

- As part of the International Program on *Innovative Leadership for Organization Growth and Excellence* (ILOGE) organized by the *National Institute for Entrepreneurship and Small*

*Business Development* (Niesbud) Noida, 40 participants from 27 countries visited BSDU campus on 5 March 2020 and gained an insight into the entrepreneurial culture and blue-collar incubation practices in the University.

- The School organized a visit of the officials from the Leadership team of the *National Skill Development Corporation* (NSDC), New Delhi on 20 January, 2020 at the BSDU campus.

#### **Webinar**

Dr. Ravi Goyal, Principal of the School presented a webinar on the topic *Importance of Skill Education and Entrepreneurship: BSDU Model*. It highlighted the Startup Entrepreneurship with focus on innovation, creativity and design thinking, unique modular entrepreneurship- UG and PG Program with emphasis on startup incubation, infrastructure, facilities, THT Labs, etc. for specialized skill training and international collaboration and internships abroad program.

### **SCHOOL OF GENERAL EDUCATION**

#### **Annual Report- July2018- August 2019**

The School of General Education undertook curricular, co-curricular, editorial and other tasks during Jan- June 2020.



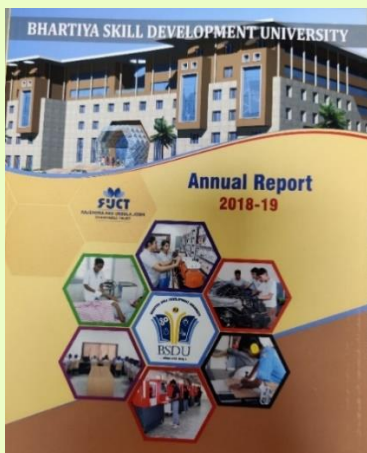
The School proudly brought out the first comprehensive and detailed Annual Report- July





2018- August 2019 documenting the tremendous strides taken by the various Schools and Offices viz. the Examination Cell, the Human Resource Office, and the Administrative Office contributing towards the incredible growth and success of this exemplary University.

the other milestones achieved by the great son of India during his glorious journey of life. The issue was e- circulated on account of the lockdown due to Covid- 19.



**BSDU Newsletter- July 2019- Dec.2019**

The School released the special issue of the BSDU Newsletter- July 2019- Dec. 2019 dedicated to its founder- Dr. Rajender Kumar Joshi. The newsletter highlighted the facts and details of his lineage, family, education, business ventures and his contribution to the medical world in addition to



**Online Lectures and Evaluation during Lockdown**

The lockdown, otherwise considered a great hindrance in classroom teaching, was taken as a great opportunity by the School to hold online classes for the students pursuing I, III, and V semesters- B. Voc. and I semester in the M. Voc. programme. Rigorous teaching done by the School

imparted not only new insights in online teaching learning to the faculty but was also enjoyed and appreciated by students besides benefiting them immensely. Strict adherence to the timetable and the overwhelming attendance in the classes held by the School was heartening. Assignments were given to students of all semesters which were collected and graded by the faculty.

### **Industrial Semesters**

The assignments from the students pursuing the Industrial Semesters were collected online and subsequently evaluated. The faculty prepared notes and Power Point Presentation of the study material to facilitate students pursue their course effectively. The faculty also addressed the queries of the students online.

### **Creative Writing Competition**

Committed towards the holistic development of the students and to satiate their creative urges, the School also conducted a Creative Writing Competition for the students of the University on the topics videlicet - *Life in Lockdown*, *Lockdown – A Blessing in Disguise for Family Togetherness* and *Life after Lockdown*.



The enthusiastic participation of the students in the competition resulted in good number of entries in both Hindi and English. The entries were scrutinized by the faculty on various parameters to select the three best write ups. Tanisha Khandelwal, School of Entrepreneurship Skills, Semester-II, Omprakash Saini, School of Manufacturing Skills, Semester- VI and Ayush Trivedi, School of Electrical Skills, Semester- IV secured the first, second and third prize respectively.

### **Counselling of Students**

The School carried forth their moral responsibility of helping students maintain their composure during the outbreak of the pandemic, Covid - 19, mandated by UGC. The faculty conducted one- to-one counselling session for the students educating them about the academic activities in addition to ensuring their mental well-being.

### **Faculty Development Initiatives**

The faculty of the School also attended various online courses and workshops conducted by reputed institutions such as Coursera, TCS- India and REST - Society for Research International (RSRI), Krishnagiri, Tamil Nadu, India.

## **SCHOOL OF HOSPITALITY AND TOURISM SKILLS**

### **Academic Activities**

15 students of Hospitality and Tourism Skills of Semester-I were sent for industrial training to hotels including five star hotels. They interned in all operational



departments to understand standard operating procedures of guest services and were paid stipend. The hotels where the training occurred were: *Shiv Vilas Jaipur, Souvenir Jaipur, Zone Palace by The Park* and *Crown Plaza, Gurugram*.

### Webinar

Dr. Mushtaq Ahmed, Principal of the School presented a webinar on *Skill Education in Hospitality & Tourism: Opening New Frontiers* in which he gave a brief overview of the Hospitality and Tourism Industry, employment opportunities in Hospitality and Tourism, future prospects and career development at BSDU for a promising future.

## SCHOOL OF OFFICE ADMINISTRATION SKILLS

### Academic Activities

- Students of II and IV semesters interned in various industries and were granted stipend.
- English speaking and interview skills classes were organized for students.
- Students attended online classes during the lockdown and submitted their assignments online.



## SCHOOL OF MANUFACTURING SKILLS

### Academic Activities

- Students manufactured machine parts as part of their course
- Train the trainers programme was conducted for junior trainers to enhance their training skills.

- The students of the School prepared many projects in which one of the major projects named *Arbor Press* was taken by the MD of RUFIL Pvt. Ltd. plant and it is being utilized for bottle capping.



- Virtual tour was conducted for the Subodh Groups, Jaipur to familiarize them with the infrastructure, ambience and amenities at BSDU.

### Blog by the School

A blog was published by the School in which an overview of necessities of manufacturing and its learning concepts was explained.

### Webinar

Prof. Binit Jha, Principal of the School presented a webinar on *Skills Development in Manufacturing: A Case Study* which gave a detailed explanation of the functioning and cult procedures of teaching and training in the School.

## SCHOOL OF WOODWORKING SKILLS

### Academic Activities

- Prof. Anil Rana, Principal, in his address at the *India Wood Exhibition, Bangalore*, on 28 Feb 2020 spoke about the B.Voc. programme offered at BSDU, the infrastructure, faculty, trainers and career opportunities on completion of the programme. The presentation received an overwhelming response.



- Mr Mohit Kalal and Mr Hanuman, students of the V Semester, demonstrated their project at the Ahmedabad *Design Week* conducted from 17 to 20 January 2020. The event was sponsored by M/s Bram Studio, Bangalore and it created an awareness of the B.Voc. programme through the tag line *Giving Wings to Your Creativity*.
- A workshop was conducted for the students of various schools who were instructed to construct a Bird House with the help of the power tools and fasteners using wooden blocks made available to them. The objective of the workshop was to imbibe a sense of involvement in learning, accomplishing and ownership among the students in the given skill.

#### **Visits**

- Mr. Prasad Kasekar and Mr. Prakash Mahajan from Godrej visited BSDU on 22 and 23 Jan 2020. A draft MoU was handed over to the guests for their perusal and possible mutual agreement in the future.
- RSLDC Representatives Dr Neeraj K Pawan, Secretary, Department of Skills Labour and Employment and Shri Prateek Jhahhariya MD, RSLDC, Government of Rajasthan visited the workshop conducted by the School on 4 June 2020. The guests were appreciative of the workshop and the quality, health and safety aspects of the installed systems.

#### **Nomination of BSDU Members by FFSC**

- Two faculty from BSDU were nominated by FFSC to be part of the NOS development and

upgrading committee. The committee will include industry experts, FFSC staff and NSDC representatives. Regular meetings through video conferencing has commenced since 4 May 2020.

#### **Article on BSDU Woodworking School in Media**

- An article on School of Woodworking Skills was published in a reputed furniture magazine *Furniture Design and Technology*, published by Modest Graphics, volume- Jan-Feb 2020. The article gave a wide coverage on the mode of education and infrastructure of the School. The article also threw light on the success of the School and its networking with the industry.

#### **Faculty Development Initiatives**

- The faculty enrolled in various online courses such as *Neural Networks* and *Deep Learning*, *Convolution Neural Networks*, *Autocad Advanced*, *TCS-ION* and *Project Management* etc. In addition, online classes were conducted in *Research Methodology*, *Advanced Carpenter Mathematics* and *Quality Control*.

#### **Webinar**

- Prof. Rana, Principal of the School presented a webinar on *Opportunities for Indian Youth in the Woodworking Sector* on 23 May 2020. Detailed discussion on the growth of the woodworking industry and the increasing number of job opportunities at national and international levels was presented on this virtual platform.

## PAPERS PRESENTED IN CONFERENCES

### Dr. Ravi Kumar Goyal

**Title of Paper:** Assessment of Rolling Loads Accomplished by AISI60 Steel Cold Deformation.

**Venue & Date:** International Conference on contemporary Trends in Management, Technology and Engineering, on 18 April 2020.

### Dr. Mredu Goyal and Prof Ravi Kumar Goyal

**Title of Paper:** Exploring the Antecedents of Green Consumption Intention: A Sustainable Model for Food Aggregators.

**Venue & date:** Pragmaan 2020 of International Conference on Innovations in Technology and Management for Achieving Sustainable Development Goals, on February, 7-8, 2020 at JK Lakshmipat University, Jaipur

### Dr. Mredu Goyal

**Title of Paper:** Modeling the Relationship of Antecedents to Sustainable Green Decisions.

**Venue & date:** Annual Seminar on Rajasthan 2030, "Redesigning Human Presence on Earth: Let's Begin with Rajasthan (A community approach to SDGs), on 7-8 December, 2019.

### Manisha Sheoran, Pancham Kumar, Susheela Sharma

• **Title of Paper:** Photovoltaic Waste Assessment in India and Its Environmental Impact.

**Venue & date:** ICSDG2020, JK Lakshmipat University, Jaipur, on 7 Feb. 2020.

• **Title of Paper:** Life Cycle Reassessment Strategy for Existing Bulk and Thin Film Photovoltaic Materials in Indian Context.

**Venue & date:** ICEEE 2020, National Power Training Institute, Faridabad, 28-29 Feb. 2020.

### Dr. Satyendra Singh

• **Title of Paper:** Double Sided Bidding Strategy in a Day-Ahead Electricity Market.

**Venue & date:** ICPS 2019: 8th International Conference on Power Systems, 2019, Malviya National Institute of Technology Jaipur, Jaipur, India, on 20-22 Dec. 2019.

• **Title of Paper:** Supplier's Strategic Bidding for Profit Maximization with Solar Power in a Day-Ahead Market

**Venue & date:** MoSICom 2020 Dubai International Conference on Modelling, Simulation & Intelligent Computing, on 29-31 Jan. 2020.

### Ms. Falti Teotia

• **Title of Paper:** Deviation Charge Reduction of Aggregated Wind Power Generation Using Intelligently Tuned Support Vector Regression

**Venue & date:** 8th International Conference on Power System (ICPS), 20-22 Dec. 2019, Jaipur.

• **Title of Paper:** Identifying The Potential For Peer-To-Peer Trading of Rooftop Solar Power For Indian Scenario.

**Venue & date:** 8th International Conference on Power System (ICPS), on 20-22 Dec. 2019 Jaipur.

### **Dr. Sujil A.**

**Title of Paper:** Electric Vehicle Charging Station Challenges and Opportunities: A Future Perspective.

**Venue & date:** International Conference on Emerging trends in Communication, Control and Computing (ICONC3), Sikar, Rajasthan, on 21-22 Feb. 2020.

### **Dr. Ritu Tak**

**Title of Paper:** Performance Analysis Permanent Magnet Synchronous Motor Drives with Pulse Width Modulation Control Technique.

**Venue & date:** The Smart City Convergence, Jaipur, Rajasthan, on 20-21 Mar. 2020

### **Dr. Kiran Shekhawat**

**Title of Paper:** Re-analising Follies of King Lear in Light of Dementia.

**Venue & Date:** International Conference on “Hermeneutics Today: Negotiating Traditional Approaches across Cultures and Languages” on January 24-25,2020 at SKIT, Jaipur

### **Dr. Sangeetha Noval**

**Title of Paper:** Teaching ESL through a Five-Stage Activity: A Process -Oriented Approach.

**Venue & Date:** International Conference on “Hermeneutics Today: Negotiating Traditional Approaches across Cultures and Languages” on January 24-25,2020 at SKIT, Jaipur

### **Dr. Ajay Sharma**

**Title of Paper:** Translation: Adaptive Articulation of Culture and ELT'.

**Venue & Date:** International Conference on “Hermeneutics Today: Negotiating Traditional Approaches across Cultures and Languages” on January 24-25,2020 at SKIT, Jaipur.

### **Dr. Prerna Srivastava**

**Title of Paper:** Treatment of Religion and Spirituality in Dattani’s Final Solutions and Thirty Days in September.

**Venue & Date:** International Conference on “Hermeneutics Today: Negotiating Traditional Approaches across Cultures and Languages” on January 24-25,2020 at SKIT, Jaipur.

## **PAPERS PUBLISHED**

### **Ms. S. Glory Swarupa, and Dr. Ravi Kumar Goyal**

- **Title of the paper:** Corporate Social Responsibility for Scaling up Skill Development in India: An Exploratory Study.

**Journal:** International Journal of Advanced Science and Technology, June 2020, Vol. 29, No. 11s, (2020), pp. 625-633. ISSN- 2207-6360 (SCOPUS Indexed Journal).

- **Title of the paper:** Entrepreneurial Intentions of Students: Review of Academic Literature.

**Journal:** International Journal of Scientific & Engineering Research, January 2020, Volume 11, Issue 1, Page: 1146-68. ISSN-2229-5518

### **Dr. Shekhar Kapoor**

**Title of the paper:** A Case Study (Good Me, Bad Me)

**Journal:** International Journal Management Effigy, Vol. X, Issue II December 2019. (indexed in J-Gate Plus).

### **MS Shekhawat, Harlal Singh Mali and APS Rathore**

- **Title of the paper:** Development of Centreless Electric Discharge Machining Process and Optimization of Process Parameters.

**Journal:** *Recent Patents on Engineering*, DOI: 10.2174/1872212114999200423113816(<https://doi.org/10.2174/1872212114999200423113816>)

- **Title of Paper:** Micro-Feature Fabrication on External Cylindrical Surface by Centreless Electric Discharge Grinding.

**Journal:** *Advances in Materials Processing* pp. 291-300, (doi [https://doi.org/10.1007/978-981-15-4748-5\\_28](https://doi.org/10.1007/978-981-15-4748-5_28)), Lecture Notes in Mechanical Engineering (LNME) Published by Springer, Singapore.

### **Prof. Ram Adhar Dubey**

**Title of the paper:** Planning of Rainwater Harvesting Scheme for BSD University: A Case Study.

**Journal:** Proceedings of the conference held on the theme *Artificial Recharge of Ground Water and its Role in Water Management*, 9 Nov. 2019, The Institutions of Engineers, Jharkhand

### **Dr. Pancham Kumar**

- **Title of the paper:** A Study of Structure and Electronic Properties of Chalcopyrites

Semiconductor Invoking Density Functional Theory.

**Journal:** *Materials Chemistry and Physics* (Elsevier), vol. 241, pp. 122346, 2020.

- **Title of Paper:** Cost–Benefit Calculation Using  $AB_2X_4$  (A = Zn, Cd; B = Ga; X = Te): A Promising Material for Solar Cells.

**Journal:** *Intelligent Computing Techniques for Smart Energy Systems*, Springer, Vol. 607, 2020.

### **Dr. Satyendra Singh**

**Title of Paper:** Double-Sided Bidding Strategy for Power Suppliers and Large Buyers with Amalgamation of Wind and Solar Based Generation in a Modern Energy Market.

**Journal:** *IET Generation, Transmission & Distribution*, Volume: 14, Issue: 6, Page(s): 1031 - 1041, 12 March 2020, DOI: 10.1049/iet-gtd.2019.0570.

### **Dr. Kiran Shekhawat**

- **Title of Paper:** Isadora as a Mother in Erica Jong's Fear of Flying.

**Journal:** *Journal of Gujarat Research Society*, December 2019, ISSN: 0374-8588, Vol.21, Issue 16, Pg. 1717-1721.

- **Title of Paper:** Relationship between the Self and Society in Ralph Ellison's Invisible Man.

**Journal:** *Studies in Indian Place Names*, March2020, ISSN2394-3114, Vol. 40 Issue60, Pg.1869-1875

- **Title of Paper:** Self-Realization and Transformation of the Female Protagonist Nora in Henrik Ibsen's A Doll's House.

**Journal:** Studies in Indian Place Names, March2020, ISSN2394-3114, Vol. 40 Issue60, Pg.4666-4669.

**Dr. Kiran Shekhawat and Dr. Prerna Srivastava**

**Title of Paper:** A Critical Exploration of Social, Financial and Environmental Elements in Ralph Ellison's Invisible Man.

**Journal:** Journal of Gujarat Research Society, December 2019, ISSN: 0374-8588, Vol.21, Issue 16, Pg. 1704-1710.

**Dr. Sangeetha Noval and Dr. Prerna Srivastava**

**Title of Paper:** CLT: An Approach to Develop Communicative Proficiency of the ESL/EFL Learners.

**Journal:** Journal of Gujarat Research Society, December 2019, ISSN: 0374-8588, Vol.21, Issue 16.

**Dr. Prerna Srivastava and Dr. Sangeetha Noval**

**Title of Paper:** Humanism and Dignity in Dattani's Ek Alag Mausam.

**Journal:** Journal of Gujarat Research Society, December 2019, ISSN: 0374-8588, Vol.21.

**HUMAN RESOURCE OFFICER'S  
DESK**

**New Joinings @ BSDU**

- Dr. Mushtaq Ahmed joined BSDU on 3 Jan 2020 as Professor & Principal in the School of Office Administration Skills. He is



also assigned the duties of Principal School of Hotel Management & Tourism Skills.

- Mr. Bharat Bhandari joined BSDU on 10 Jan 2020 as Chief Trainer in the School of RAC Skills. He is also assigned the duties of Assistant Director Industrial Relations at BSDU.
- Mr. Sheetal Kumar Jain joined BSDU on 19 Feb 2020 as Assistant Professor in the School of RAC Skills.
- Dr. Manish Kumar joined BSDU on 6 Mar 2020 as Assistant Professor in the School of Woodworking Skills.
- Mr. Shitanshu Sapre joined BSDU on 16 Mar 2020 as Assistant Professor in the School of Woodworking Skills.
- Mr. Ardit Tahiri joined BSDU on 07 Jan 2020 as Master Trainer in the School of Manufacturing Skills.
- Mr. Andre Schneiter joined BSDU on 19 Feb 2020 as Master Trainer in the School of Metal Construction Skills.
- Mr. Ubed Ul Haque, Jr. Trainer-I in the School of Automotive Skills
- Mr. Shekhar Sharma, Jr. Trainer in the School of Automotive Skills
- Mr. Madhusudan Singh Rathore, Jr. Trainer in the School of Manufacturing Skills
- Mr. Sumit Bhukar, Jr. Trainer in the School of Manufacturing Skills
- Mr. Mukesh Kumar Khakhal, Jr. Trainer in the School of Manufacturing Skills
- Mr. Shankar Lal Choudhary, Jr. Trainer in the School of Manufacturing Skills



- Mr. Navjot Singh, Jr. Trainer in the School of Electrical Skills
- Sub Ranvir Singh, Hostel Supervisor
- Ms. Mona Joshi, PA Cum Store Executive in Maintenance & Purchase Cell
- Mr. Shankar Singh, PA in the School of Health Care & Paramedics Skills
- Mr. Manohar Gupta, Workshop Technician in the School of RAC Skill
- Ms. Manju Devi, GDW
- Mr. Arjun Prajapat, GDW

### **Promotions**

- Dr. Rajdeep Deb, AP-I to Associate Professor
- Dr. Sangeetha Noval, AP-I to Associate Professor
- Mr. Hardik Sharma, Junior Trainer to Trainer-II
- Ms. Nikita, Junior Trainer to Trainer-II
- Ms. Neha, Junior Trainer to Trainer-II
- Mr. Akash Gade, Junior Trainer to Trainer-II
- Mr. Akram Razza Mansuri, Junior Trainer to Trainer-II
- Mr. Pranjal Maheshwari, Junior Trainer to Trainer-II
- Mr. Pradeep Singh Chouhan, Junior Trainer to Trainer-II
- Ms. Rikky Kumari, Clerk to Junior Trainer
- Ms. Diksha Sharma, PA to Junior HR Executive-I
- Ms. Shanti Thapa, Clerk to PA
- Ms. Nihala, Clerk to PA
- Mr. Jitendra Kumar Piploda, Driver to Caretaker Ashiana Umang

### **Changes in Administration**

- Prof. Jawahar M Jangir appointed as the Principal, School of Electrical Skills
- Col Raj Kumar assigned the duties of Provost in addition to his own duties of Professor in the School of Telecom Skills
- Dr. Susheela Sharma appointed as In-charge Registrar
- Prof. GMJ Bhat retired as Professor, School of General Education
- Brig (Dr.) Somnath Mishra was relieved as Registrar, BSDU
- Prof. S.K. Jhahharia, retired as the Head-Maintenance & Purchase

### **INDUSTRIAL RELATIONS, TRAINING AND PLACEMENT**

An interactive session was held with the Principal Secretary, Social Justice and Empowerment and Tribal Area Development, Jaipur, Rajasthan on 12 February



2020 to discuss the areas of cooperation between BSDU and Government of Rajasthan.

- A visit to the *National Engineering Industries Ltd*, Jaipur, was organized on 29 Feb, 2020 for an Industry-Academia cooperation with BSDU.
- Pre-placement activities for the VI semester students were conducted online by the HR Heads of companies namely Mahaveer Groups, Ajmer, Shri Balaji Industrial Products Limited, Jaipur, Johri Digital, Jodhpur, Nidec India,

Neemrana, Mac Consultant Pvt Ltd, India., NBC, Jaipur and Nachi India, Neemrana.

- 375 students were placed, with stipends. Eight students of SES were offered to intern at Romania and Moldova. Mr Pradeep Sangwan, a VI semester student of SMS was offered Rs. 25000/month in N&N, Jaipur. A total of 105 companies offered internships to our students.

### **FDP and Soft Skills Training Activities**

- A Soft -Skills Training Programme for the trainers and research scholars was conducted from 13 – 18 January 2020.
- Faculty Development Programme was organised for faculty, trainers and research scholars from, 24 February – 3 March 2020.

### **MOUs**

- Six MOUs were signed between BSDU and industries during the period Jan-June 2020 viz.
- Apollo Home Care
- Dozzy Doc
- Zorgers
- Bhandari Hospital
- Zone by Park
- Sara Abode

## **ARTICLES**

### **Relaxations in Tax Compliances during COVID-19**

**Ms. Kritika Tekwani, Research Scholar  
Management**

On account of the Covid-19 outbreak, various countries have given exemptions and relaxations in

tax compliances including India. The financial sector of India is also affected by this situation. Due to lockdown, various trade activities have come to a standstill. Businesspersons, traders, registered taxpayers, and professionals are facing obstacles and issues while fulfilling statutory tax practices. In this view, the Government has given some relaxations for direct and indirect tax compliances. Indian Government has extended the filing date of income tax (direct tax) return till 30 November, 2020. If a person misses this deadline, then he has to pay only half penalty. TDS and TCS rates have also been reduced by the Government. To increase liquidity in the market, the Government announced a reduction in the rate of tax deducted at source (TDS) for non-salaried specified payments made to residents by 25%. The assessment date has also been extended until 31 December 2020. As per the notifications number, 30/2020 to 36/2020 issued by the Government in the view of the novel coronavirus the due date of (indirect tax) GSTR-3B for February to May, 2020 has been extended. GSTR-1/5/6/7/8 filing dates have been extended to 30 June, 2020 from March to May, 2020. Similarly, the filing date of CMP-02/08, ITC-03, and GSTR-4 have also been extended. The Government has also waived the late fee, interest, and penalties till the extended due dates. Corporates can file their GST returns by EVC (Electronic Verification Code) till 30 June, 2020. As per the notification no. 40/2020-Central Tax, an E-Way Bill which has been generated before 24 March 2020 will be treated as valid till 31 May 2020. Similarly, a LUT,

which has expired on 31 March 2020 will be valid up to 30 June, 2020 (as per the circular 137/7/20). The time limit of registration of Interim Resolution Professional (IRP) and Resolution Professional (RP) has also been extended till 30 June, 2020 or within 30 days of the appointment of IRP/RP whichever is later (as per the notification no. 39/2020- Central Tax). A registered taxpayer can file the nil return through SMS also (as per the rule 67 A). The export time limit of merchant exporters has been extended to 30 June, 2020.

### **Communication Skills: Key to Personal and Professional Success**

**Dr. Sangeetha Noval, Associate Prof.  
School of General Education**

Every age and every crisis, let alone corona throws up its own demands and challenges and it is for us to acquire skills and competencies to face them. Today, our demands, our aspirations, our expectations have become multi-dimensional and multi directional and in order to cope with them we require matching skills. Knowledge and Information, which are the main source of power and leadership alone are not sufficient to grapple with the demands and challenges of the global society. Therefore, what is required is a developed skill set, which can generate autonomy besides liberating and making individuals future ready to meet the evolving demands. One such skill which can be instrumental in giving us success and happiness is none other than communication skill.

Communication today, is not merely two people talking to each other. It has become an old notion. Communication in the changing era has assumed a

different form. Unlike the conventional model where communication used to take place between the speaker and the listener, today the speaker is required to talk to the invisible hearers through different platforms and create a meaningful interaction with them. Digital Marketing has got set as a new trend demanding digital communication where one communicates not with just a single person face to face but communicates with people who are far away through telephones, e- mails, google apps and via various other social networking platforms.

Therefore, emphasis has to be laid on training learners to apply skills to suit contextually or situationally. Increased capacity to apply knowledge of communication in various situations would not only open many job opportunities for the efficient communicators but also contribute to their amiable interpersonal relationships, their own wellbeing and social wellbeing.

In the current ICT global scenario, we rely heavily on sharing information throughout the world resulting in greater emphasis being placed on having good communication skills. While Good communication skills aid us deliver and understand information quickly and accurately, poor communication skills in the contrast, have detrimental impact on all aspects of life because a poorly delivered message may result in misunderstanding, frustration and in some cases disaster. Both the employee and organization can benefit highly from effective communication. Some of the benefits are:

- Strong decision-making and problem-solving

- Increased productivity
- Convincing and compelling corporate materials
- Clear more streamlined workflow and
- Sound business relationships

Communication skills are vital to the development of the person as a whole. These skills enhance the interpersonal, intra personal relationship and improve specific skills and abilities including critical thinking, media literacy and criticism, leadership skills, and family relational development. Acquiring communication knowledge allows one to gain personal power or say, these skills empower people to deal effectively in their personal and professional lives.

### **Indian Cold Chain Market: Feature & Future**

**Md. Najmool Haque, Trainer  
School RAC Skills**

While Globalization has made the relative distance between two regions of the world vastly smaller, the physical separation of the same regions is still a very important reality. Phone calls, emails and videos can be transmitted in fractions of seconds to all corners of the globe but physical objects such as a bushel of grapes, a drug or a bodily organ cannot be transferred within seconds. It takes time and coordination to efficiently move a shipment and every delay can cost money, moreover in some cases, may even cost lives. To ensure that cargo does not get damaged or compromise throughout this process, businesses in the pharmaceutical, medical, food and meat industries are depending more and more on the cold chain technology.

The cold chain, which refers to the transportation of perishable materials along with a supply chain, relies on thermal and refrigerated packaging methods and logistical planning to protect the value of a shipment. Specialization of this sort has led many companies to not only rely on the major shipping service providers, but also more focused industry specialists around the logistical expertise of international shipping and receiving.

Integrated network of production, trade and service activities cover all the stages in a supply chain, from the transformation of raw materials through intermediate manufacturing stages to the delivery of finished goods to a market.

The Indian cold chain market was worth INR 1,121 Billion in 2018. The market is further projected to reach INR 2,618 Billion by 2024, growing at an average rate of 14.8% during 2019-2024. India is currently the world's largest producer of milk, the second largest producer of fruits and vegetables and has a substantial production of marine, meat and poultry products. Most of these products are perishable and require specific temperature conditions to be stored and transported. This has resulted in the establishment of a very large cold chain infrastructure in the country.

### **Indian Cold Chain Market: Drivers**

- **Growth in Organized Food Retail:** Organized retail is expected to be amongst the biggest drivers of the cold chain market in India. With the growth of the organized food retail, we expect consumers to get access to a very large variety of fresh fruits and vegetables, dairy

products, meat and poultry products and a number of other perishable commodities that require cold storage and transportation. Most of the organized retail players have already acknowledged that setting up of a strong cold chain infrastructure is a key step in efficiently managing their supply chains.

- **Growth in the Processed Food Sector:** There has been a marked improvement in the consumer demand for processed foods. The Indian government has also announced the intent of establishing several mega food parks. This augurs well for the development of the cold chain industry in the country.

- **Shift towards Fruits and Vegetables:** Due to increasing risks and investments in grain crops, farmers are moving towards cultivation of fruits and vegetables. Most of these crops require refrigeration and hence are expected to encourage the development of cold storage facilities.

- **Increasing Demand from the Healthcare Sector:** A number of healthcare products such as vaccines, biopharmaceuticals as well as clinical trial materials are heat sensitive and must be stored at temperatures ranging from 2°C - 8°C. With India's vaccine, biopharmaceutical and clinical trial market expected to grow at double digit growth rates, we expect a strong demand of efficient cold chain facilities in the coming years.

Due to fledgling cold supply chain, there is a heavy loss of food and other resources. These losses have

been stated to be as high as Rs. 52,000 to Rs. 95,000 crores per annum from the agriculture sector alone. Therefore, it is very clear that Indian cold chain is still at a nascent stage. Although, there is large production of perishables but still the cold chain potential remains untapped due to multiple reasons like high share of single commodity cold storage; high initial investment (for refrigerator units and land); lack of basic enabling infrastructure (roads, water supply, power supply, drainage, etc.); lack of awareness for handling perishable products and lapse of service either by the storage provider or the transporter leading to poor quality produce. The refrigerated transport in the country is under-developed with less than 10,000 reefer vehicles and zero reefer containers for rail movement. Recent surveys have also indicated that although most of the cold storages facilitate transportation of commodities, 79 percent does not own any transportation. It can be perceived that transport is going to be increasingly the main bottleneck to maintaining the integrity of the cold-chain, along with modern pack-houses as points of origin for fresh farm produce.

Cold stores are the major revenue contributors of the Indian cold chain industry, yet, approximately 36% of the cold storages in India are believed to have a capacity below 1,000 MT. Thus, lack of proper and adequate food storage, processing and cold chain logistics remain a serious challenge. Nevertheless, the Indian Government is one of the driving forces in developing the cold chain industry and supports private participation through various

subsidy schemes. Ministry of Food Processing Industries (MOFPI) provides financial assistance (grant-in-aid) to the tune of 50% the total cost of plant and machinery and technical civil works in General areas and 75% for north east region including Sikkim and difficult areas (J&K, Himachal Pradesh and Uttarakhand) subject to a maximum of Rs.10 crores.

With the current outlook, cold chain industry could easily be a winner, but it isn't yet. It is an eye opener to the new entrepreneur and investor for being a key market player.

### **The Role of Cell Phones in Teaching - Learning**

**Sumit Kashyap, Trainer  
School of Automotive Skills**

In the tough times of the deadly Corona outbreak, mobile phones have become the greatest source of learning. Educational institutions have started the concept of online teaching from primary to higher education. In today's era, cell phone has emerged as a new educational tool for learning. It is a creative and direct method to access the ocean of knowledge. Mobile learning is a need, not a want in the present circumstances. Mobiles have made learning possible anytime, anywhere, even in remote and rural areas as they are portable and in budget.

Mobiles provide enriched learning instantly with internet connectivity and also through messages. It allows individual learning and has enhanced interest, motivation, self-regulation, independence, enthusiasm and productivity.

Expertise teachers are available to provide knowledge. Introduction of technology education by mobile phones can help in making school bags lighter. Voiceover and talkback applications installed in the mobiles have made them popular tools for meeting the needs of the students with autism, dyslexia, motor skill impairments, visual impairment and speech disorder. It further enhances the writing and communication skills of the students. Rapid progress can be made by proper training to the students to further enhance learning. One third of the world's adult population in the economically advancing countries is devoid of the hard core knowledge and skills. Their lifestyles can be improved by learning through cellphones.

Lower socio-economic sector of the society is showing greater ownership of the mobile phones. Learning through mobiles is not in want of any infrastructural needs as it requires simply an internet connection. With easy transfer of data and communication, any information can be transferred to any place. It is proving to be a boon for those who cannot attend the educational institutions physically. It enables the learners to peruse according to their own schedules.

The evolution of cell phones has changed the teaching-learning system across the globe due to their vital role in accumulating the learning platforms in a single device using internet. A new era has set in modern information and communication technologies and one of the best examples of it is cell phone.

Mobile learning applications are now available with complete syllabus for kids, school students, university students and for competitive students as well. These are the most probable reasons that many drop-out students again started their studies through distance learning programs. Mobiles are facilitating both formal and informal education. Adults can learn anything related to their career, employment sector, soft skills enhancement, health routines, cooking, life skills etc. Mobile phones played a vital role to improve teaching-learning process and presently everyone is learning from home through mobiles. Mobile learning has to be included in curriculum of educational institutions so as to facilitate learning under every circumstance. Henceforth, it is clearly justified that the use of cell phones facilitates learning.

### **Health Care during Covid-19 : The Need of the Hour**

#### **Kastroit Komani, Project Manager, Health Care and Paramedics**

There are situations in which certain professions suddenly come into focus. And hardly any other profession has received more attention than the nursing profession since COVID-19 and the lock down. Health Care professionals are recognised worldwide as being extremely relevant. While many of us are at home, healthcare professionals are on the front line. They are doing an incredible amount of work to overcome this desperate situation. It takes a lot of courage to face this situation. Despite low wages and difficult working

conditions with the current crisis, they are doing everything they can to save human lives and putting their own lives at risk in the process. Their own needs, fears (for example, no protective material or the fear of infecting their own relatives with the virus) and worries are put into the background.

Even after several months since the outbreak of COVID-19, we still do not know enough about this virus. Whether a second wave will reach us, we do not know either. Especially in times of uncertainty and fear, the so-called soft skills are relevant. Nursing professionals are known to possess a high degree soft skills or to have been trained in them. Caring is a central quality of professional care. Caring means to care for others, to engage with someone with appreciation. It is about commitment, compassion and trust and about human assistance in care. Caring includes specific nursing contents such as accompanying the affected persons in coping with their everyday life and their advice and support in dealing with the illness. Other elements include advocacy, the inclusion of personal resources to promote health, autonomy and quality of life, and professional care for patients and their relatives. These central nursing characteristics are performed in everyday professional life. Caring is a fundamental element of professional care.

Most students of the School of Health Care & Paramedics have achieved a lot in the last few months. They have all been on internships. We asked our students again and again whether they were afraid of the virus. The answers varied, but

one answer came from almost all of them: *The patients need us!* These students and all other people in the world deserve respect for their commitment, for risking their own lives to save others.

### **Smart Power System: Future of Electricity**

**Ms. Surbhi Pareek, Student**

**School of Electrical Skills**

Electricity is an integral part of everyone's life and it is the most important parameter to decide the development of any country. Throughout history, the energy use of any country was used to define the level of its development. India is a developing country and hence electricity plays an important role in its overall development as a large number of industries give a significant figure to the per capita income of the country. India operates the 3rd largest transmission and distribution network in the world, still facing lots of challenges like poor quality of power, huge losses, energy theft, inadequate access to electricity, shortage of supply during peak load hours and lots of faults. All these problems make the system very unreliable. The Smart power system would overcome all these challenges and transform the existing conventional grid into a more efficient, reliable and safe grid which can help to provide access to electricity to all.

Smart Power System or Smart grid can be defined as an interconnected system of information, communication technology, control system which

is used to interact with the entire power system comprising of generation, transmission, distribution, and utilization of electric power. In short, it is the digital technology that allows two-way communication between the utility and customers, and various types of sensors along the transmission lines are something that make the grid smart.

Smart Grid= Information and Communication Technology + Conventional Electric Grid

The concept of a smart power system is so vast that it includes various aspects and among them, one is the integration of power generated using renewable energy sources (sun, wind, tides geothermal, etc.) with the conventional power sources (coal, diesel, gas, etc.). With the help of the integration of renewable sources of energy, environmental issues like global warming carbon, carbon emission, and air pollution can be reduced to a great extent. A smart grid can provide quality power transmission which is a substantial contribution in reducing power losses. It helps in the reduction of operations and maintenance costs for utilities, which in the end reduces the cost of power for consumers. This system provides quicker restoration of electricity after power disturbances that are better fault detection techniques and their self-healing technologies which make the system more efficient and reliable. The freedom of generating power for consumers shows a significant change in the availability of power due to the bi-directional flow of power by which at the time of peak demand the



consumers can feed power back to the grid when not in use. In other words, the smart grid is one that provides the availability of power 24\*7 without any issue.

With the help of a smart power system, the backup power can be always available to the consumers by the help of micro-grids which is nothing but integration of various renewable sources of energy to generate electric power near the load center. It helps in islanding facilities which means when the authorities are unable to lay transmission lines or provide electricity to the area situated at a remote location like mountains, valley, villages, etc. then micro-grids can be set up there which can help to fulfill the energy requirement of that place. The controlling and monitoring of all these small micro-grids can be centrally done using proper intelligent devices and software which are situated far away from the actual location.

The Smart Grid is not just about utilities and technologies; it is about giving them information and tools that allow consumers to make choices about their energy use. Managing own electricity from home is just similar to managing activities such as personal banking. A smart grid enables consumer's participation for example; they don't have to not wait for their monthly statement to know how much electricity they use. With a smart grid, they can have a clear and timely picture of it. Smart meters and other mechanisms can help them to see how much electricity they use and what is its cost. Combined with real-time pricing, this will

allow the saving of money by using less power when electricity is very expensive. While the potential benefits of the Smart Grid are usually discussed in terms of economics, national security, and renewable energy goals, the Smart Grid has the potential to help in saving money by helping the consumers to manage the electricity they used and they can save even more by generating their power. The deployment of smart meters and smart grid also helps in reducing energy theft which is a major issue of discussion in the present power system.

The Smart Grid consists of millions of pieces and parts—controls, computers, power lines, and new technologies and equipment. It will take some time for all the technologies to be perfect, equipment installed, and systems tested before it comes fully online. Moreover, it won't happen all at once- the Smart Grid is evolving, piece by piece, over the next decade or so. After the full deployment of the smart power system in place of a conventional power system, sooner there will be a day when you will see the most efficient, reliable and available electric energy at your doorstep at a very minimal cost per unit and you will see the significant change which will bring a new era of the power system in INDIA.

### **Challenges experienced in online learning during Lockdown**

**Antima Sharma, Research Scholar  
Management**

The world is facing an unprecedented crisis since beginning of 2020. In the absence of a vaccine for

the virus the government has taken some preventive measures to cope with the current situation such as social distancing, lockdown etc. COVID-19 has a massive impact on education, training, jobs, economic and social conditions of the country. One of the sectors which is badly hit by lockdown is the education sector. The schools, colleges, training centres etc. are closed for an indefinite period due to the coronavirus outbreak. However, the education sector (schools, colleges, universities, coaching, etc) decided to continue education through online learning and video calls. On one hand this model is currently the best alternative as keeping education institutions open poses a safety risk for students (Report by Rarkryan P. Anghiri, April 2020). On the other hand, it has some limitations and challenges faced by students/learners and faculty/mentors/teachers. Some of the major challenges experienced are:

**Network Issue:** Poor internet connection creates disturbance during the online. Interruption between the classes and resuming it again takes a lot of time of both teachers and students. In this way students get distracted and are unable to understand the topic completely. They also get delayed in submitting their assignments on time.

**Lack of Resources:** Not all institutes and students are equipped with sophisticated technology. This problem is mainly faced in the rural areas, where faculty and students are not very proficient about the technology and about its operations which created hindrance in learning.

**Lack of Environment:** At home students do not get proper environment as they get in their classroom learning. They get distracted easily from the activities going at home. At home they have their own comfort zone, so they are not able to concentrate on classes. It has been observed that students do not take online classes seriously compared to offline classes which they attend in their respective schools/colleges.

**Lack of Extra:** Curricular Activities: Online classes provide learners with only fixed content and book knowledge. In online classes students miss extracurricular activities, classroom activities, games, etc.

**Less Interaction:** One of the problems faced by teachers is that classes are less interactive; they are not able to see all students together on single screen. Online classes seem one-way communication.

**Change in Behaviour:** Less physical activity and interaction and pressure of attending online classes causes issues like irritation, obesity, and unethical practices among students.

Lockdown is not a choice; it is reality which we have to accept and we don't know how much time it will get back to normal. This situation has given us both opportunities and challenges. Opportunity in the form of learning new technologies and moving toward digitalization which is the necessity of today's world. Challenges which we have discussed above are the result of improper planning, lack of resources, internet issues,

mindset, less practicality, quality, effectiveness issues, less supervision, lack of human contact, psychological changes etc. There is need to work on these challenges and some of institutes are working on it in the way and providing,

- 1) Quality online learning through ICT which reduces the physical distance between mentor and learner.
- 2) Proper planning of online classes as an active learning classroom rather than video lecture delivering session. Technology is a designer, through which educational bodies can customize learning in any manner. Graphics, videos, quizzes and games, fun activities can make the class attractive.
- 3) Reducing the size of class, so that mentor/teacher can notify everyone and can take feedback of individual student.
- 4) Delivering quality rather than quantity should be the aim of institutes. Focus to be given on collaborative learning through peer learning, peer assessment, online peer collaboration which reduce the gap of social distancing.
- 5) Periodical counselling of students and interaction with parents reduces the gaps.

Future is of technology and digital world which can change the scenario of education system in coming days. Online classes may be the main frame of giving learning and developing skills. These challenges which we are facing today can be overcome through above discussed measures and by introducing more innovative approaches through gamifications, multiple communication tools, creative on- discussion boards etc. And

online classes can provide more productive and efficient platform for next generation learning.

*“Online courses are a disruptive technology in the sense that it requires different pedagogical methods which may not yet be fully understood”*

(By Scott Reid)

## **Research on IoT based E-healthcare Systems**

**Dr. Sumitra Singar, Assistant Professor  
School of Computing Skills**

During the worst situations like the COVID-19 pandemic, we need E-healthcare systems. The Internet of Things (IoT) is considered as the ultimate growing technology in various fields.

Internet through the smart devices, embedded system, and healthcare devices are the joint linkage of the IoT based Smart Healthcare System (SHCS). SHCS gives many applications and services for crucial signs monitoring, along with the detection and diagnosis of many diseases. IoT based E-healthcare systems are extensively used for remote health monitoring, diagnosis needs to cut down the cost of health care services. Various researchers are working on IoT based E-healthcare systems.

In the future, to improve the decision making processes of clinicians, E-healthcare systems will trust on Clinical Decision Support System (CDSS). The researchers are improving the design of CDSS and developing research focused CDSS for the management of patients in the intensive care unit based on IoT devices able of gathering streaming

physiologic info from ventilators and other medical devices. In pandemic situations like the COVID-19, to predict Acute Respiratory Distress Syndrome (ARDS) in newly infected patients, researchers show that CDSS may be used to evaluate physiologic info for clinical event awareness and computerized diagnosis.

In the healthcare department, IoT and cloud have been extensively used in various applications for implementing automated solutions and services. To enhance the healthcare systems and build cloud and IoT based systems for smart home and smart hospital environments for handling health related issues various researchers are working on advanced technologies. Also, to provide quality healthcare and modernize the healthcare systems, developers are working on the integration of machine learning techniques for processing health care data in the cloud.

Presently, blockchain and IoT technology have been achieving importance globally in different fields. For secure conduction of healthcare management, there is a need for appropriate applications of IoT and blockchain. In the market, the pharmaceutical sector helps in drug delivery to increase the growth of medical science. Medical products sold to the customers had to be taken care of safety and proper validation. Blockchain and IoT can give the security of drugs and also deliver at the proper time without the wrong communication.

According to the present scenario, for remote health monitoring and implementing automated

solutions and services, a huge requirement of research in IoT. Cloud and IoT based research could improve the smart home and smart hospital environment for handling health related issues and also, provide quality healthcare and modernize healthcare systems. For the drug's safety and proper validation, there is a lot of need for research on IoT with blockchain. IoT with machine learning and artificial intelligence has the powerful potential to transform various facets of E-healthcare systems.

### **LiFi: A Revolutionary Wireless Communication Technology**

**Anuja Arman, Assistant Professor  
School of Computing Skills**

In the era of overcrowded (data communication) world, **Li-Fi** (*Light Fidelity*) is wireless communication technology that is capable of transmitting data at high speeds over the visible light, ultraviolet, and infrared spectrum. LiFi can transmit at multiple gigabits, is more reliable, virtually interference free and uniquely more secure than radio technology such as Wi-Fi or cellular.

The term was first introduced by a German physicist Harald Haas during a 2011 TED (Technology, Entertainment, Design) Global talk in Edinburgh on Visible Light Communication (VLC) in July 2011, by referring to it as “data through illumination”.

In simple terms, Li-Fi can be thought of as a light-based Wi-Fi i.e. instead of radio waves it uses light to transmit data. In place of Wi-Fi modems, Li-Fi would use transceivers fitted with LED lamps that

could light a room as well as transmit and receive information.

Radio waves are just a small part of the electromagnetic spectrum available for data transfer. Li-Fi has got a much broader spectrum for transmission compared to conventional methods of wireless communications that rely on radio waves. The basic ideology behind this technology is that the data can be transferred through LED light by varying light intensities faster than the human eyes can perceive. This technology uses a part of the electromagnetic spectrum that is still not greatly utilized- The Visible Spectrum, instead of Gigahertz radio waves for data transfer.

The principle of Li-Fi is based on sending data by amplitude modulation of the light source in a well-defined and standardized way. In its present state, only LED lamps can be used for the transmission of visible light. LEDs can be switched on and off faster than the human eyes can detect since the operating speed of LEDs is less than 1 microsecond. This invisible on-off activity enables data transmission using binary codes. If the LED is on, a digital '1' is transmitted and if the LED is off, a digital '0' is transmitted. Also these LEDs can be switched on and off very quickly which gives us a very nice opportunity for transmitting data through LED lights, because there are no interfering light frequencies like that of the radio frequencies in Wi-Fi.

Li-Fi is thought to be 80% more efficient, which means it can reach speeds of up to 1Gbps and even beyond. Li-Fi differs from fibre optics because the

Li-Fi protocol layers are suitable for wireless communication over short distances (up to 10 meters). This puts Li-Fi in a unique position of extremely fast wireless communication over short distances.

Although there's still a long way to go to make this technology a commercial success, it promises a great potential in the field of wireless internet. A significant number of researchers and companies are currently working on this concept, which promises to solve the problem of lack of radio spectrum, space and low internet connection speed. By deployment of this technology, we can migrate to greener, cleaner, safer communication networks.

### **Workplace Spirituality**

#### **Soma Kumawat, Assistant Professor School of Computing Skills**

Attention towards workplace spirituality is growing now these days. But, what exactly this term "spirituality" means in it. The term 'spirituality' resists a precise definition due to the very strong personal nature of the word itself. It is a highly individual and intensely personal awareness. How awareness is connected to the workplace, what exactly it means together?

Understanding, Workplace Spirituality began in the early 1920s. It emerged as a grassroots movement with individuals seeking to live their faith and/or spiritual values in the workplace. Both the words cannot be confined to a particular definition but it is totally about understanding according to a person's perspective.

Workplace Spirituality means how employees and workplace nourish each other in such a way that they give opportunity to grow both of them together and contribute to society in a meaningful way. It is about care, faith, compassion and support of others; about integrity and people being true to themselves and others. It means individuals and organisations attempting to live their values more fully in the work they do.

Research suggests that the encouragement of spirituality in the workplace can lead to benefits in the areas of creativity, honesty and faith, satisfaction, personal fulfillment, and commitment, which will ultimately lead to increased organizational performance. How will this happen?

Spirituality has the potential to link the creative power of the human mind. Spirituality also gives the power of intuition, which leads to creativity or uniqueness in work. The feeling of completeness improves the happiness of an employee which will cause the employees to be more creative. This will result in increased organizational performance and financial success.

Spirituality increases commitment by establishing a trustful climate in the workplace. Spirituality is recognized as one of the crucial dimensions of the human personality. Therefore, if an organization encourages spirituality, then it is actually encouraging the people to bring their whole self to work. This whole leads to more creativity and commitment towards work and /or an idea, which

in turn is converted into personal fulfillment, satisfaction, happiness and joy of doing.

Spirituality in the workplace enjoys widespread interest. It represents a worldview in which the emphasis is that work should be meaningful and significant and that an employee wants to bring his or her whole self to the workplace. This trend will endure because it speaks to the deeper needs of the human heart and provides a promising remedy to declining job satisfaction.

Workplace Spirituality is a new start for a bright future which enhances the experience of inner wholeness or connectedness at the workplace.

# Glimpses



**India Skill Competition-Jan2020**



**Soft Skill Training Program-Jan 2020**



**2nd Rajasthan Skill Summit-Jan2020**



**BSDU Sport Championship-Jan2020**



**Inauguration of Center of Excellence Hero MotoCorp-Feb 2020**



**Womens Day-March2020**

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