



Volume - VIII
Issue II



Jigme Namgyel Engineering College would like to wholeheartedly welcome the new president, Dr. Tshewang Lhendup, to the family. With the coming of the new president, the college has now a new light of hope for all things good and better. We are looking forward to benevolent years ahead, full of excellent professional kinship and growth, taking the institution forward miles by years. The entire JNEC family is always ready with all necessary support and cooperation as required by the new head of the college.

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My Career Journey as an Educator

Hon'ble Secretary of NLCS meets with Students of JNEC

Campus Stories

On 25th September, Hon'ble Secretary of National Land Commission Secretariat (NLCS), Dasho Pema Chewang met with students of B.E. in Surveying and Geoinformatics, and Diploma in Surveying.

Dasho expressed that he always had aspirations to meet and talk with the students of JNEC, and thanked the College Management for the opportunity. He also relayed his appreciation to the College Management for allowing him and his entire Eastern COVID-19 Task Force team to house in the college guest house since the start of the COVID-19 pandemic.

During the talk, Dasho highlighted the issues related to state land and the problems of limited arable land in Bhutan. Dasho informed the students that Bhutan has only 7% (664,000 acres) of arable land, of which 500,000 acres are already owned by individuals, leaving only 164,000 acres for future populations. Dasho further added that there are approximately 24,000 individuals who are landless in Bhutan. Dasho then shared how NLCS has already implemented National Land Use Zoning Guidelines to address such issues related to land and is working on a new land policy. Furthermore, Dasho also emphasized that NLCS is working on policies to utilize underground spaces in the urban areas and



Hon'ble Secretary of National Land Commission Secretariat (NLCS), Dasho Pema Chewang, addressing the students

policies for vertical growth – the utilization of space, to address the limited land issues.

Hon'ble Dasho also spoke on the employability of the JNEC students undergoing B.E. in Surveying and Geoinformatics, and Diploma in Surveying. Dasho expressed his regret for not being able to employ all 125+ surveying graduates of JNEC in NLCS. Nevertheless, Dasho promised that NLCS would continue to support young Surveyors by providing intensive training and certifications to carry out cadastral and land transaction surveys as in the past.

Dasho urged the students not to confine themselves to job opportunities inside Bhutan but to think beyond. He encouraged graduates

to form groups and take up cadastral surveying works in other South-East Asian countries. He reminded the students that although the job opportunities are limited, the opportunities for employment are always there. "Ultimately, it boils down to an individual's focus, interest and how they want to contribute," Dasho stressed.

Dasho also highlighted the importance of integrity in the workplace. "As a surveyor, your integrity has to be high, and you cannot be biased," he said. Dasho concluded the session by gifting four copies each of books titled "NYE- Religious, Culture and Historical Atlas of Bhutan" and "ATLAS OF BHUTAN-Land Cover and Institutional Facilities", published by NLCS as a solera for the college library.

5th Faculty Research Seminar

The 5th Faculty Research Seminar of Jigme Namgyel Engineering College was held on October 20, 2021. The seminar is an annual calendar activity organized by the Office of Dean, Research, and Industrial Linkages. It is a platform for the faculty members to share their research experiences and their findings with the students and staff. It is also a platform for enthusiastic researchers to explore possible research areas and gain research insights.

Four faculty members presented their recent research findings from their respective fields of interest.

Mr. Deo Raj Biswa, Associate Lecturer from the Department of Electronics and Communication Engineering, presented his project titled “Development of the Segway Forklift”. The presentation was accompanied by the demonstration of the working of the Forklift.

Mr. Sangay Chopel, Adjunct Faculty from the Department of Electrical Engineering, presented on “Protective Relay Coordination of Bhutan Transmission Network”. The study was carried out in collaboration with the Bhutan Power Corporation and Druk Green Power Corporation.

Mr. Thongley, Associate Lecturer from the Department of Civil Engineering and Surveying, presented his findings from his research on “Flood Risk Area Mapping



using Logistic Regression: A Case study of Phuentsholing City in Bhutan”.

Mr. Pema Wangchuk, Associate Lecturer from the Department of Humanities and Management, presented the findings from research titled “Humankind’s Existential Crisis Amid COVID-19 Pandemic: A Theoretical Perspective”.

Besides the speakers presenting their findings, the Guest of Honor, President of the college, Dr. Tshewang Lhendup, expressed his insights on the significance of research for the faculty and students. He emphasized on how the research enables individuals to learn and search for ideas beyond classroom teaching-learning.

He remarked on why research by faculty should not be looked at as just a criteria for promotion

but as a life-long learning for individual development. President also highlighted the importance of focusing on applied research rather than high-end sciences. Among many research insights shared by the President, one of the very relevant areas where faculty and students can do research was to study 'Why there is high consumption of lighting lamps/bulbs in the JNEC campus.' Other areas highlighted were the finding the reasons for the over-reinforced buildings in Bhutan, and why CGI sheets rust within a short span of time.

A faculty seminar is a forum to disseminate the research findings and also discuss the prospective research fields for further research and development.

Integrity Club – A Club to uphold Integrity

The President of the College, Dr. Tshewang Lhendup, inaugurated the Integrity Club on 13th October 2021.

The Integrity Club was formed in the college as per the letter RAA (AG-SP)/26/2020-2021/065 dated 19th July 2021, with clear direction from the Royal Audit Authority, Thimphu: Bhutan.

During the inauguration, the Club Advisor, Ms. Wangmo shared the background and objectives of the Integrity Club to the members. She also reiterated a couple of activities that the Club plans to carry out. Activities such as auditing of student mess, student welfare scheme, and some clubs handling finance.

The President highlighted the significance of the Integrity Club in the College. He reiterated to everyone to work and maintain integrity, honesty, accountability, responsibility, professionalism, and patriotism in day-to-day work and assist other students to develop the same. The President of the College also cited a couple of issues of the past on the lack of

accountability, and how it would have been resolved.

He thanked all club members, club advisor and Office of the Dean of Student Affairs for establishment and operation of Integrity

Club. The President assured full support to the Integrity Club and asked club students to work diligently and transform students into responsible individuals during and after graduation from the College.



President of the College, Dr. Tshewang Lhendup graced the inauguration of the club.

Awareness Workshop on Energy Efficient Power and Lighting appliances

Workshop & Seminar

To mark the 'Climate Action Week', Center for Lighting and Energy Efficiency Studies (CLEES), JNEC, and Maintenance Hobby Club (MHC), conducted a day-long awareness workshop on Energy Efficient Power and Lighting appliances on 28th October, 2021. The awareness workshop was particularly tailored for the students of Garpawoong Middle Secondary School (GMSS) and Dungsam Academy to advocate, discuss and share ideas on climate change. A total of 95 students from two schools and JNEC participated in the workshop.

temperature over the past few decades. He cited that the temperature are rising faster; "Bhutan has gone from 0.8 °C rise temperature around 1910s to 1.5 °C in 1960s, and 2.8 °C since the 1990s (Kuenselonline, 2021)." He added that for the last three consecutive years, Lunana which is located at 4000m above sea level, has observed mosquitoes breeding. This is due to the rising heat as a consequences of climate change.

The President urged that everyone needs to act now to fight climate change. Among other ways to help fight climate change, one simple thing we can do is "turning off the lights when not in use, using longer life bulbs, and avoiding the use of artificial lights."

The president also highlighted what JNEC has been doing so far to help and benefit the

saving energy at individual level, at national level and combating climate change at global level. The benefits of extending the life and usage of appliances by carrying out repair and maintenance was also discussed.

The participants, through the feedback, reported that the program was very beneficial and timely. They were able to understand the impact of Climate Change and learn the causes and sources of environmental pollution and global warming. They felt such programs, if extended to larger population, including rest of the schools' students and local community, would bring broader realization in the society. They are also assured to share the information to their friends, family and neighbors, and convince them to save energy to whatever extent possible.

The workshop is sponsored by National Environment Commission (NEC) of Bhutan and UNDP through Royal University of Bhutan (RUB).

To conclude, JNEC would like to acknowledge the magnanimous support of the sponsors and partners (National Environment Commission, Royal University of Bhutan, United Nations Development Programme, Bhutan Ecological Society, World Wildlife Fund Bhutan, Bhutan Foundations and United Nations Capital Development Fund) toward making this event a great success. JNEC will continuously commit to

work for the cause of the global environment at its own capacity.

The Centre for Lighting and Energy Efficiency Studies (CLEES) at Jigme Namgyel Engineering College (JNEC) was established through Erasmus+ Project, "Promoting Energy Efficient Lighting Education in Nepal and Bhutan (ELNAB)" in 2018 with the objective to enhance research activities at the college. ELNAB is a higher education capacity building project to support Nepali and Bhutanese Higher Education institutes to provide education that promotes sustainable socio-economic development. The center has a state of the art laboratory with high-end equipment (portable goniometer, integrating sphere, luminance meters, illuminance meters and power meters) which are very useful to support the analysis of lighting appliances available in the market. The equipment in the lighting laboratory was received through the ELNAB project.

JIGME NAMGYEL ENGINEERING COLLEGE, ROYAL UNIVERSITY OF BHUTAN CENTER FOR LIGHTING AND ENERGY EFFICIENCY STUDIES (CLEES)



The workshop aimed to help students understand what climate change is, its impacts, emphasize on how human actions are instrumental to climate change, and means to combat Climate Change at individual level.

Dr. Tshewang Lhendup, the President of JNEC, in his keynote address reminded us that climate change is man-made and it is real. "It will affect all of us one day and it has already started affecting". He said that studies indicate 2°C rise in average global temperature every year would melt half the glaciers in the Hindu-Kush region and would destabilize at least 10 major river systems in the region (ICIMOD, 2021), including rivers in Bhutan, and that would be "catastrophic to all of us".

The effects of climate change are becoming increasingly visible in Bhutan. The President highlighted that the recent "flash floods, erratic rainfall, extreme temperature in isolated regions and glacier melting at faster rates ever" indicate that climate change has already affected Bhutan. Bhutan has observed rise in

local community. He said that the 'community outreach' is one of the key missions of the college, particularly in the transfer of knowledge and skills, and that the college is constantly looking for opportunities through two research centers namely Center for Appropriate Technology (CAT) and the Centre for Lighting and Energy Efficiency Studies (CLEES).

He said that JNEC in the past has also collaborated with Samdrup Jongkhar Initiative (SJI) to carry out several activities to help the local communities.

The three sessions of the workshop informed the participants on the harmful effects of power generation related to pollution of air, water and land, and how such pollution impacts humans, animals and plant health. The workshop then deliberated on how opting to shift to the use of energy efficient appliances (both lighting and power) could lead to reducing pollution and combat Climate Change. The sessions also discussed the economic benefits of

Rising Climate Ambition - Voices from Bhutan

Workshop
&
Seminar

Climate Series IV 'Youth Matters: Voices and Action in Climate change' on an International Youth Day, 2021, is a joint initiative of the National Environmental Commission, Bhutan Foundation, WWF, Royal University of Bhutan, Bhutan Ecological Society, and UNDP. The series was divided into two sessions, The Future We Want and Youth for Climate Action. There were a total of ten speakers representing different schools and colleges.

Jigme Namgyel Engineering College (JNEC) was also invited to represent in this event, where one of the Problem Based Learning (PBL) project work carried out by the Surveying Programme from the Department of Surveying & Geoinformatics along with students from Aalto University, Finland, was selected based on its significance to climate change. JNEC has incorporated Problem Based Learning (PBL)



in its project and mini-project modules as an outcome of PBL South Asia project funded by EU, and has been continuously working in collaboration with Aalto University for a few years now.

On behalf of JNEC, Ms. Deki Tshomo (recent graduate of 2021) presented their joint project

work titled 'Landslide susceptibility of Dewathang' at the event. She highlighted the importance of this project and its linkages with climate changes along with issues that can be considered to address these pressing issues. Ms. Tshomo also shared that the project teams have come out with a 'Handbook on landslides' to raise necessary awareness. Ms. Tshomo, on behalf of the project teams, also thanked the college for initiating such a project which were found to be very effective while working on problems the localities were facing, and also while working in consultations with academics and stakeholders for overall insight as well as addressing the issues.

The young voices from different schools and institutions on climate change and their vision of a green future were truly inspiring and motivational. Their voices and actions on climate change were the highlights of International Youth Day this year, and it was indeed a great experience sharing and learning from young minds. A well informed and awakened youth is one of the biggest treasures of any nation.



JST Sakura Science Exchange Program

International Linkages

Ten students and one faculty from Jigme Namgyel Engineering College (JNEC) is participating in the ongoing JST Sakura Science Exchange Program being held online from 18th October 2021.

The Sakura Science Exchange Program which is an annual event aimed at comparing the empowerment of community between Bhutan and Japan, is sponsored by Japan Science and Technology Agency (JST). This year's exchange program is being hosted by SHOWA Women's University (SWU) of Japan

The online event, which is also an avenue to share one's own culture and tradition, is expected to take place over 5 days, twice a week, from 18th October – 3rd November. 10

students and a faculty from Sherubtse College is also participating in the event. International Youth Day this year, and it was indeed a great

experience sharing and learning from young minds. A well informed and awakened youth is one of the biggest treasures of any nation.



6th University Toilet Day

Campus
Stories

Maintaining toilet cleanliness is very important. Moreover, His Majesty has commanded that we should have decent toilet facilities.

Everyone should know that the toilet is one of the needs aside from foods, clothing & sheltering and value our toilets. Toilet cleanliness is not maintained until someone tells us to do so.

Since maintaining toilet sanitation is an essential work, the club (JNEC-Clean Toilet Initiative) have advocated the students about the toilet sanitation and initiated daily toilet cleaning routine for every student residing in the hostels, provided the things needed to clean the toilet and monthly mass toilet cleaning in the student hostels.

On 8th October every year, the day is observed as the University Toilet Day and the theme for 6th University Toilet Day is "Valuing Toilet". The day is observed by the universities under Royal University of Bhutan as College of Science & Technology (CST), Gaeddu College of Business Studies (GCBS), Paro College of Education (PCE), College of Language & Cultural Studies (CLCS), Sherubtse College, College of Natural Resources (CNR), Samtse College of Education (SCE) and Jigme Namgyel Engineering College (JNEC).

To mark the day, the JNEC-CTI pasted the posters on every Department's notice board and pasted banners on places where students frequently visit. The Club also coordinated mass toilet cleaning in the student's hostels in the college to have a clean toilet to use. As for the club members, which consist of 28 members, they cleaned the toilets at Sports Complex (under Football ground) and the toilets at Lecture Theater. The Club has provided the



8TH OCTOBER, 2021 UNIVERSITY TOILET DAY THEME: VALUING TOILET



IT DOESN'T
FLUSH
ITSELF

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diluted muriatic acid which is mainly used on tiles and floors to 17 student blocks (JA-JF, DA-DF, NA & NB, ZB) to remove the stains from the toilet pots and the floors. The Club also provided gloves to the respective block councilors to ensure safety while spraying the acid.

The mass toilet cleaning commenced from 6:30 PM BST so that we don't disrupt the water timing. Respective block councilors and ASSOs were responsible for initiating the toilet cleaning at the hostels. With full support from the management and the students, the program successfully ended with every toilet in the student's hostels clean.

36 JNEC Students Trained as Mentors

Campus
Stories

A total of 36 undergraduate students attended a three day training session on mentoring high school students on science, technology, engineering, and mathematics (STEM) subjects among Class IX & X students. The training was organized by the Jigme Namgyel Engineering College (JNEC) in collaboration with the Ministry of Education from 1st – 3rd October.

The mentoring program aims to instill interest in STEM subjects among the students and encourage them to enroll in STEM programmes in Class-XI. The training was resourced by Mr Tshewang Penjor and Mr Lozang Jamtsho, Councilors from Nangkhor Central School and



Student participants with the Resource Persons

Mini-Project- An Innovative Display

Academic Development

The work of innovation is to do with creativity and imagination, but that is not all to do. It is rather getting involved in innovating and creating that generates a most satisfying result. With such hands-on skill, one gets trained and corrected to the level getting exhausted yet rewarding.

The second-year students of Diploma in Electronics and Communication have been engaged almost for a month and a quarter, working on a modular mini-project initiated by Module Tutor, Mr. Deo Raj Biswa. Students have come up with various creative projects topics and the activities went on smoothly with the sense of accomplishment as the works get completed bit by bit. The primary aim of undertaking this mini project was main to gain hand-on learning by applying the conceptual knowledge in creating a prototype to understand the actual application. The overall work done is emphasize on exploring, creating and applying through series of errors.

The innovative project area comprises Automatic Plant Watering and Monitoring System that are applicable in the field of agriculture, Smart Exhaust Fan for household purpose, Mini-Obstacle Detector Robot for self-navigating purposes, Automated Waste Segregator for both household and industrial applications and Smart Gate and Automatic Door System that are applicable in any homes depending on the modernized home designs. The approach to this mini-project is based on the collaborative work among the groups. With the support of group members and guidance from the module tutor, the activities were carried out effectively in the given duration, resulting in a gratifying outcome.



Demonstration of project works by students.

of this mini project, it is learnt that each participants had a productive investment of time and effort leading to knowledgeable experience. Despite few challenges, all the participants have enjoyed and shared excitement with much satisfaction for having showcased the handwork. During the exhibition, the audience (Tutors, Academics and Staff) were impressed who expects to foresee the mini prototypes as functional innovation applicable in real life.

A mini-project is one of the kinds to create a platform to realize the theoretical concepts into a realistic applications and designs. The project certainly uplifted the spirit of learning where many grabbed opportunities to build skills, explore new strategies, and apply multiple ideas to make innovation come to lively result. It is in fact a trial to transform the knowledge learnt and to link

happening across the globe. Although it is a display of innovative projects in mini way, it is a huge step in the educational journey for all the participants.



The Undisclosed Fate

Literature

The histories and chronicles shaped by the audacious and fearless undertaking, when glimpsed, it always reminds each of us with hope, courage, loyalty and rooted in faith. Going by one of the ancient folks, "a crippled son abandoned right after his birth by his father and withdrawn from his inherent land, soon after passing many years, within the count of two decades, he returned with all might to the land where he belongs as the Viking King. His return came with fierce raid that ended with bloodshed and afterwards, the helpless son that was left behind was blessed by the Viking God 'Odin'. Such tales lives and leaves lesson for many in the world and in fact revealing the invaluable essence of this life and realizing one's potential that can be unleashed at the feet of this entire world.

Such is my story, resembling the fate I had, my destiny laid ahead to becoming someone from the world of nowhere.

I do believe in miracle, and the strength within me which has cautiously made me follow the journey unknown destination that awaited me. I did not ignore the uncommon feelings of in me neither did I stop wandering about my bloodlines as I was compelled to drive along with this undisclosed fate.

The social life proved unusual for me and this distinct environment that I experience parted much of the contentment and joy of life that I cherish with my dear friends. Sorrow at times paint my dear life and future journey as the fate of mine always resume with this distinct environment of downcast yet I stood unstoppable against my unique race and remained joyful for I am accustomed to live, endure and run for this Undisclosed Fate.



My Career Journey as an Educator

Literature Many great people in general assumes and says that teaching is the profession seldom opted by many and some never dreamt of becoming one. As presumed and perceived by many, I too never had an aspiration to be an educator. Having received degree qualification in Engineering, I always dreamt of pursuing a profession under pioneer organizations in the country.

With complete hope and confidence, I made an attempt in the year 2013 to secure my aspired profession as expected. I got opportunity and appeared for an interview in one of the esteemed organizations in the country, unfortunately the very first opportunity came to an abrupt end, adding one tale of failure in search of my career. I indeed felt shattered beyond maybe because the very failure hit hard against my expectation and professional dream yet deep within, I knew that I must go on.

Consequently, in the year 2014, it was another career opportunity that I came across but the post was not the one I long to become. The vacancy was for the post of a lecturer in one of the engineering colleges under Royal University of Bhutan (RUB). With the least interest, I applied for the post and underwent similar selection processes expecting same faith as before. Out of blue, I received unexpected news of recruitment after going through thorough selection process. I was finally selected candidate as an assistant lecturer at the then Jigme Namgyel Polytechnic, now Jigme Namgyel Engineering College under RUB. Without having much of thought over the choice of the profession, I simply embraced the opportunity, thinking it to be one special career to explore.

Upon joining the college to pursue my unexpected career choice, I was immediately assigned to take classes of students studying in their first year. The very first class was a terrifying confrontation with many young and curious learners as I never had any sort of



Mr. Deo Raj Biswa with his students.

training nor experience to deal with teaching activities. I certainly felt that I must groom and nurture their knowledge and skills in engineering area and infuse lessons with values through constant guidance.

As the time passed by, I never felt discouraged nor dissatisfied, rather with motivated spirit, I sought support of senior colleagues and consulted them on the various aspects of teaching learning approaches and strategies to assure quality time with my students. As a young educator, it had been a challenge to handle teaching situations and to keep up the expectation from learners end. I knew the hardships behind being an educator, the hardships to educate and convince the young learners. It is not all about the delivery of content but to establish a great deal of inspiration and passion among learners to sustain their effort. Maybe that could be one reason why many seldom opt a teaching career and many even fails to attempt not realizing that “teaching is the one profession that creates all other professions”.

Looking back at my career goals, I was partially wrong to make general assumption of the profession that I have taken. It is not certainly a demotivating career to pursue, maybe people are misinformed or maybe people are radically

influenced about the teaching career. As an educator, I find myself much rejuvenated and passionate, I never cease to work hard and feel ever motivated. I have now evolved as an educator with much love to learn, share and make someone educated.

I simply wish to submit that many in the beginning of the career dreams huge in terms of job and stumbles with immature choices and goals. I must say that I am not born educator nor made rather I evolved with open mindset without getting tossed by radical beliefs. Unlike many profession, the career in teaching is always about learning, exploring and upgrading in the face of advancing knowledge and innovation.

“In life no one will remember how you looked, walked, talked or what you did. Everyone just remembers you by the way you made THEM feel when they were with you”. Dr. APJ Abdul Kalam want to show my young friends that their dreams are never impossible to achieve, and I would help them guide in directing them to their dreams. For these reasons and to keep up those developed interest in learning-learning, I have chosen to upgrade myself with latest form of sharing information and developing together by applying various hands-on learning.

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