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Empowering Classrooms with Student-Led Learning

Pema Choezom, Lecturer

As we move forward in the age of globalization, it has become evidently clear that Bhutan's current education system does not meet the needs of students and employers, only contributing to growing youth unemployment.

"We must revisit our curriculum, pedagogy, learning process, and assessments to either transform or rewrite them in view of the challenges and opportunities of the twenty-first century. Otherwise, continued focus on textbooks and content without integrating technology and social learning risks perpetuating passive modes of learning. Then, whatever education our children acquire today will become irrelevant and obsolete when they graduate."

The Royal Kasho on Education Reform

Hence, there is a pertinent need to transform the education system to increase access, quality, equity, and efficiency. With the transformation of higher education in Bhutan already underway, CST has begun to incorporate 'student centered learning' in their curriculum. Student-led learning is an education style that emphasizes self-directed education, creativity, and discovery, rather than rote memorization or traditional lecture-style education. Students are encouraged to incorporate their own interests into projects, within a set of broad guidelines.

As part of the transformation process, each class is now to incorporate student-led learning. As educators though, there is a need to realize that



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you cannot force passion and motivation upon students. We know that it is not just your IQ, but your passion and motivation, that are the keys to success. By promoting student-led learning, it becomes more possible for learners to 'learn how to learn'. So, if we can start with the student's interests, we can build skills and knowledge from there. Then, learning comes in overdrive and students are set up well to become lifelong learners. By encouraging students to take ownership of their learning, they become intrinsically motivated, and see their worth and potential. Giving greater power to students allows them to become more aware of their personal strengths and to develop greater confidence in themselves. Student-led learning makes the classroom less of an "institution" and more of a community, encouraging all-around mutual support. Student-led learning provides students with ample opportunities for self-direction, a powerful sense of ownership and the ability to explore topics that are meaningful and relevant in their lives. Student-led learning is not however, about leaving students to fend for themselves; the goal is to foster a learning environment where students have the support and structure, they need to make decisions. Teachers can present students with different choices that are all designed to lead to the same goal.

Although there are many benefits of student-led learning, creating student-led classrooms is going to be challenging. Educators must forget what you know about teaching, and start with what you really know about learning. We need to start with the personal goals and personal learning paths of the student, and that means starting with something that the student wants to learn, make, or do, and giving the student the chance to fail and reflect on that along the way. A 'teacher' should use all his or her knowledge to ask the right questions and help the student reflect, not simply explain to them. This enables students to manage their own learning process.



By building opportunities for student choice into lessons, teachers provide students with a supportive framework for autonomy that empowers students to take learning into their own hands. Encouraging students to step into the teacher role gives individual students an opportunity to gain valuable leadership experience while engaging the whole class. In student-led learning, the teacher is a guide and facilitator, walking around to ask reflective questions or guide students to ask their own questions

Student-centered classrooms include students in planning, implementation, and assessments. Involving the learners in these decisions will place more work on them, which can be a good thing. A student-centered classroom is one where the focus of instruction is shifted from the teacher to the student, with the end goal of developing students who are autonomous and

independent, by placing the responsibility of learning in the hands of the students. The interests of the students take center stage, and the teacher gives students choice and voice, finding ways to provide learning experiences that focus on what students value. Students take a more 'active' role in the education experience. Developing a student-centered learning environment will help students become independent learners who will ultimately take charge of their own education-students who are curious, eager to learn, and willing to do whatever it takes to be successful.

So, as we commence into a new semester, we embark on this new transformation of our classes, where our students will take center stage; where our ability to unleash 21st century learning in our classrooms is dependent on the power of our students to become masters of their own learning.

International Women's Day

Palden Samdup

International Women's day is a day that is celebrated worldwide to recognize the social, economic, cultural and political achievements of women. It is also a day to raise awareness about gender inequality and provide women's right. This day is celebrated on the 8th of March every year, and it is an important day for all the women around the world.



This year, international Women's Day was celebrated as an event in our college where the women were given a small surprise by the men. Weeks before the event, the men gathered and discussed their plans to collect a sum of Nu.15/- and was collected from all the men in the college for refreshments and to select people to perform on the day of the event. All the planning was to be kept as a secret from the women and weeks were spent in order to prepare for the event.



On the day of the actual event everyone was flabbergasted to see the multipurpose hall decorated knowing nothing about the event that was planned for them.

The Event started with the cake cutting ceremony from women's faculty and the Deputy Chief Councilor. The Chief Councilor had then proceeded with giving the welcome speech talking about his appreciation

and support towards Women empowerment. After that, the program began with a variety of dances that had pleased the audience which was shown to be true from the smiles that they had plastered on their faces. The program continued with a short lottery drawing, the winner of the lottery had received many beautifully packed gifts that were given with care. The show continued with a short skit from the Y-PEER club on the empowerment of gender equality, the skit had shown the story of a young woman aspiring to achieve her goals even though life had shown her many reasons to give up. When the skit was over, the audience was visibly shown to be touched, their applauses and cheers had filled the room and the hearts of all the actors. After the skit, many singers had come to the stage to touch our hearts with their soothing voices, the singers had bright smiles as they sang which made the audience smile even more.The event concluded with the vote of thanks from the president himself, showing his appreciation for the men who had organized the event and to the women who made all this possible

Marathon for endurance

Som Maya Tamang

The College of Science and Technology held a marathon on 8th April (Saturday), 2023 to mark the World Health Day which was on Friday, 7th April. The program was organized by Rover club along with BRCS (Bhutan Red Cross Society) club. The total distance coverage for the female category was 10 km and 16.4 km for male category. The race was open to all the staff and the students of the college. There were 167 boys and 43 girls participating in the race. The race was exciting with medals, cash prizes and certificates.



Regardless of hot weather and busy schedule, the participants, the organizers and some councilors woke up as early as 5:00 am for the preparation and commenced the race with some encouraging and motivating words from the president.The marathon began at around 6:40 am, with the starting line located in the football field.The race was well-organized, with water stations and first aid stations located along the route. There were also numerous volunteers who helped to ensure the safety and well-being of the participants.

Marathon was not just the race, it was endurance, consistency and perseverance, where every little step was counted. Right after the race, the most awaited moment-awarding medals for winners was held.

Overall, the marathon event was a great success, with participants and spectators enjoying the festive atmosphere and the excitement of the race. The event was well-organized, with plenty

of support from volunteers and local police officers. We look forward to next year's marathon event and hope that it will be even bigger and better than this year's.

Retrospective of the Ideathon on Health Data Analytics
Neeraj Nepal

The Ideathon on Health Data Analytics was organized as a part of the project "Strengthening Government Capacity for Using Digital Technology and Data" led by the Royal Government of Bhutan [Government Technology Agency] in collaboration with the Government of Japan [JICA]. The event was held in our college on 17th-18th February, and it aimed to promote the use of digital technology and data in the health sector and find innovative solutions to improve health outcomes for the Bhutanese people.



The event included various sessions, including a talk by Mr. Vincent Ho, an experienced entrepreneur, who shared his journey as a startup founder and offered guidance to aspiring entrepreneurs. Yeshi Dorji, the Chief ICT Officer at GovTech, discussed the details of four banks and their importance in data collection and utilization. Additionally, Krishna Subba, Chief Program Officer at JICA, provided an overview of JICA's project on strengthening government capacity for using digital technology and data.

The Ideathon began with a design thinking workshop led by Karma Kelzang Eudon and Kamal Chapagai, both lecturers at CST. The workshop helped participants develop detailed designs and prototypes for their solutions. The participants were then divided into groups and assigned mentors to guide them through the ideation process.



The Ideathon culminated in the presentation of all group works, followed by a Q&A session with a panel of experts. The panelists selected the most innovative proposals and presented certificates to the winning teams.The event was a huge success, and it provided an excellent platform for students to engage in problem-solving and use their skills to contribute to the betterment of society. The event encouraged participants to

think creatively, collaborate with peers, and learn from experts in the field.

The winning teams presented some innovative solutions that had the potential to transform the health sector in Bhutan. The event helped raise awareness about the importance of digital technology and data in the health sector and provided an opportunity for students to showcase their talent and skills.

In conclusion, the Ideathon on Health Data Analytics was a valuable event that helped students develop innovative solutions to improve health outcomes for the Bhutanese people. The event was an excellent example of how collaborations between the government and educational institutions can lead to meaningful outcomes. We look forward to more such events in the future.

Best of CST on the theme "Decades of Melodies".

Prem Kala Kharka
Nima Lhamo



On 11th March, College of Science and Technology conducted a cultural show featuring songs from the 1980s to 2023.The event, titled "Best of CST" was organized by the Cultural Club of the college and showcased the diverse musical traditions of the world. The show was held in Basketball court and all students and staffs were invited to attend. The program was also inter-department competition graded for their creativities, the right song of the generation, the coordination in the dance and the overall performance. The winner was decided based on 60% vote count and 40% judges' mark.

The program began with a warm welcome by the Cultural Coordinator, who introduced the theme of the show and explained the significance of the songs that were going to be presented. The first performance was a traditional dance from the 1980s to 1990s, which was followed by a contemporary fusion of pop and rock music from the 1990s. The performers were students from different departments, who had practiced for weeks to perfect their routines.
Throughout the show, the audience was treated to a variety of musical genres, including folk, classical, and modern, all performed in traditional costumes. In-between the program, there was live music, played by a talented group of musicians from the college. The songs were carefully selected to reflect the changing musical landscape of the world, from the rise of pop music in the 2000s to the recent revival of traditional folk music but many came with the songs and cultures within Bhutan only.

The show culminated in a grand finale, where the audience sang in the background to a medley of popular songs from different decades. They joined in, clapping and singing along, as the performers showcased their impressive choreography and creativity. The energy in the court was electric, and everyone had a great time.



In conclusion, the cultural show "Decades of Melodies" was a huge success. It ended with the vote of thanks from the Cultural Coordinated. All credit goes to the hard work and dedication of the Cultural Club and the talented performers. The event showcased the rich cultural heritage in world through music and dance, and brought together students and staffs from different departments of the college. Overall, the show was a joyous celebration of different music and culture, and left a lasting impression on everyone who attended.

The Importance of Reflections for Students

Pema Choezom, Lecturer

At the end of each topic, unit, project or class, your teacher might ask you to reflect on your learning. They may ask how you are doing on them, but what does that mean, what should you truly be reflecting on and why does it matter to your learning?

The Merriam-Webster dictionary defines *reflection* as “a thought, idea, or opinion formed or a remark made as a result of meditation.” Reflection is a process by which students engage in metacogntive thinking about what they have done, what they are doing, and what they will do in the future.

The idea of reflecting might seem unnecessary, but think about what you get out of it. This type of thinking helps students better identify what they know, what they don’t know, and what they plan to do to learn what they don’t know.Reflection is a process of examining ourselves, including our perspectives, attributes, experiences, interactions and actions. It helps us gain insight and see how to move forward.

In the classroom, self-reflection means examining the way you learn. The implication of self-reflection implies that without thinking deeply about how we learn, we can never gain the insight necessary to correct poor habits and affirm good ones. The cognitive process of self-reflection not only helps students improve learning outcomes, but fosters self-regulated learning, a cyclical process that involves planning to complete an academic task, using strategies to monitor progress, evaluating the outcome and using that knowledge to guide future tasks.

Together, reflection and self-regulated learning help teach responsibility. By asking students to think about how they can improve their learning experience encourages them to consider learning objectives and their own part in developing knowledge.

Reflection at the end of a semester brings students back to course objectives as they evaluate what they have gained from a class. However, as teachers, we can inject self-reflection into our classrooms in several ways at any time during the unit or semester.

Here are some ideas for self-reflection:

- Discuss and explain reflections: Talk about why reflection is important and how it makes students into better learners not just in class, but in life. Repeat this as much as needed or desired throughout the semester.
- Assign reflections during class time: Assign a reflection during class to students about a specific task or assignment. It is important to use class time to have students complete the reflection because it is found that sometimes they do not put as much thought into the reflection.
- Accept different reflection modalities: Students do not always need to write their reflections. Some students might prefer to make a video or audio response to their work.

In the end, self-reflection helps our students, but it also helps instructors understand what students believe they have learned.

Data Science Short Course
Nyingye Metog Dorji

On a normal 22nd to 25th March, our college was offered a visit by Professor Jennifer Widom, Stanford computer science professor, school of engineering dean, and MOOC pioneer. Professor Widom had traveled the globe offering free short courses in data science, workshops in design thinking & collaborative problem-solving, and roundtables with women in technology. On her odyssey to Bhutan, the above four dates were dedicated to CST where she spent a day for Design Thinking Workshop and the next three days for Data Science Workshop.



The Data Science workshop took place in the college multi-purpose hall which is also known as the Teamwork Hall and accommodated 132 interested participants. The hall provided good-speed internet with a proper projection of the professor's desktop for everyone to view without a problem and also a good sound system for everyone in the hall to listen to and experience no discomfort during the three-day intensive course. The hall had been

set up in a classroom-style arrangement upon suggestion from the professor herself as it allows free spaces for movability and hence has more opportunity to interact with everyone.

The day started off with a brief introduction to what is Data Science and a quick insight into what shall be taught during the course so that the participants are aware of what they will be learning and what kind of skills would they acquire. After that, the Professor proceeded on with one of the main topics and taught the participants about spreadsheets. There were various ways to handle and analyze data and one of them was through spreadsheets. The professor made sure none of the essential topics were left out and even provided the participants with challenging questions where the ones who could solve them the quickest were given prizes which included bags, caps, pens, and many other Stanford goodies. After a few more practice sessions, the professor decided to wrap up for the day and hence day one came to an end.

The next day started off more vibrantly as the topic that would be discussed for the day was data visualization. Data visualization could be done through spreadsheets as well but the professor suggested that there is a much better way to visualize data and it is through a software known as Tableau. Tableau is a simple and interactive software in which we could create graphs, charts, and many other forms of data visualization, and was one of the most fascinating software to use. Clearly, the participants were enjoying it as well and the morning session was concluded with an interesting question that was open for anyone to solve and show to the professor for prizes. After lunch, then came the much heavier side of the workshop, i.e., SQL. With the introduction of relational database management system(RDMS), the session kicked off with some basic SQL and slowly moved on to much more detailed topics such as data mining, and machine learning.



Likewise, more challenging questions were given as well but surprisingly the number of people who could solve those was not disappointing. Sadly, time was up and day two came to an end which makes it only one day left to experience this workshop and utilize the time efficiently.

Finally, the third day started much more enthusiastically with bright eyes and hopes from the participants and the trainer. Now since the necessary modules were completed, through the majority's interest, the professor let the participants choose what extra modules to learn according to the time left for the day. The participants did not back down and did their best to solve the questions and interact with the professor as much as possible. After the extra modules were done, the professor asked for feedback and did a short survey to see which of three methods of handling data would the participants prefer and most voted for spreadsheets. With this, the professor distributed pens to all of the participants and volunteers who were involved during

these three intensive days as a token of gratitude for participating and actively interacting with her and hence ended the workshop officially.

This marked the end of Professor Widom's odyssey to CST and successfully coordinated the one-day Design Thinking Workshop and three-day short but intensive Data Science course. The college provided their hearty gratitude for making her presence which ignited inspiration and provided valuable knowledge to the attendees that they would've missed out on if it weren't for this generous contribution. In conclusion, the workshop ended on a good note and everyone returned back to their own lives with a new experience that would not be easy to come by every time and the participants were very delighted to share their positive feedbacks on this workshop to the organizers.

Fashion Show 2023
Neeraj Nepal

The NDLD club's Fashion Show is an annual event that is eagerly awaited by fashion enthusiasts and designers alike. This year's show was held on April 15th, 2023, and the theme for the event was "Youth and cinema: movies around the world" for the cosplay round and "Heritage Hues: Traditional dress from different lands" for the traditional round. The event was a spectacular showcase of creativity and innovation in fashion design.



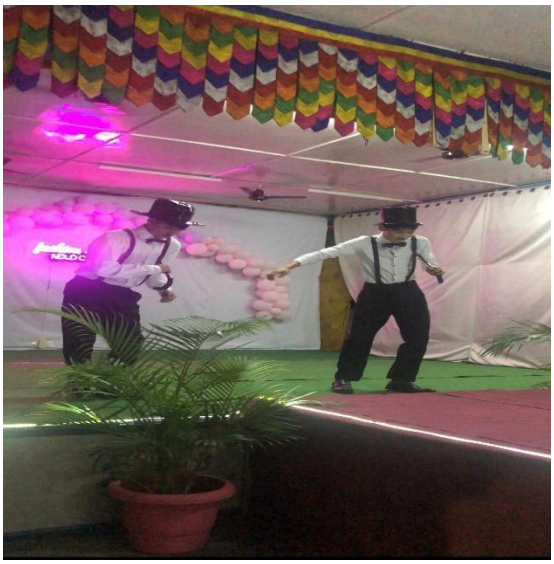
The show was a grand affair, with the venue beautifully decorated in accordance with the theme of the event. The atmosphere was electric, as the audience eagerly awaited the start of the show. The event was organized by the NDLD club members who had worked tirelessly for weeks to ensure that the event was a success.

The first round of the show was the cosplay round, and the participants did not disappoint. They had put together some amazing costumes inspired by their favorite movie characters from different parts of the world. Some of the costumes were so intricate and detailed that it was hard to believe that they were made by students. The designs were not only visually appealing but also reflected the personality and character of the wearer. Some of the participants had taken the help of FABLAB, the college's state-of-the-art design and fabrication laboratory, to create their costumes, which added a new dimension of creativity to the show.

The traditional round was equally impressive, with participants showcasing traditional dress from different parts of the world. The dresses were a celebration of cultural diversity and heritage, with each dress reflecting the unique style and identity of the region it represented. The

colors, fabrics, and designs of the dresses were a feast for the eyes, and the audience was left spellbound by the beauty and elegance of the dresses.

The event was a great success, with the audience appreciating the hard work and creativity of the participants. The judges had a tough time deciding on the winners as each participant had put in their best effort. The event ended with the announcement of the winners and a vote of thanks from the organizers. The NDLD club members were congratulated on their hard work and dedication in making the event a success.



The Fashion Show was not only a platform for students to showcase their talent and creativity but also an opportunity to celebrate diversity and cultural heritage. The event was a reminder that fashion is not just about what is trending but also about the unique and diverse identities that make up our world. It was a celebration of youth, creativity, and culture, and a fitting tribute to the spirit of the college.

Ground Station Workshop
Bhimal Pradhan
Nima Gyeltshen

The Government Technology Agency (GovTech) in collaboration with Kyushu Institute of Technology (Kyutech) had hosted the 6th ground station/ground sensor terminal from 7th to 9th March, 2023 at Thimphu Residency. The 3-day workshop, with international representation from the ground sensor terminal network member countries and participation from various colleges under the Royal University of Bhutan, had provided insights on satellite technology and applications, small satellite missions including country presentations on the ground station/ground sensor terminals and discussions on the current and future satellite projects, ground station operation and troubleshooting.
The inaugural session was graced by Honourable Acting Secretary, Government Technology Agency (GovTech).

The event started with an introduction to Kyutech and its activities in Japan by Cho Sensei. Kyutech is known for its contribution to the development of small satellites and has been actively involved in promoting space education through its BIRDS (Joint Global Multi-Nation Birds) program. BIRDS is an open-source initiative that allows participants from different countries to collaborate and build small satellites.

The workshop covered various topics related to space technology, including Space Weather and its impact on satellites, Small Satellite Missions, and Internet through Space. One of the highlights of the workshop was the presentation on the Satellite Training KIT, which aims to

promote space education by providing hands-on training to students. Another interesting topic was the Edu Sat project in Bhutan, which aims to provide affordable and accessible internet connectivity to remote areas using small satellites. The delegates also got a chance to learn about the BIRDS Store and Forward Missions (BIRDS-2/4/5) and APRS, which are used for communication in remote areas where traditional methods are not available.
The workshop also featured a presentation on the Tracking Antenna System for Store and Forward Missions, which helps in tracking the movement of small satellites. The delegates were also updated on the KITSUNE Satellite Missions and Operations, which are aimed at developing a low-cost and reliable communication system for small satellites.
The event concluded with the results of the KITSUNE S&F Operations Results from different delegates, which showcased the success of the program. The workshop provided a platform for delegates from different countries to exchange ideas and learn from each other's experiences. It also highlighted the importance of space education and the role of small satellites in promoting connectivity and communication in remote areas.
The workshop also covered the Basics of Antenna and Communication, Ground Station Maintenance and Tips, and an Open Discussion on GS, which addressed the challenges faced by participants regarding Ground Station (GS). The Future Direction of Birds GST/GS Work Shop discussed the scope for future collaborations and the potential for developing new technologies and tools.

The workshop concluded with a Closing and Vote of Thanks, which thanked the organizers and the delegates for their contributions. The workshop provided a platform for delegates from different countries to exchange ideas and learn from each other's experiences, highlighting the importance of space education and collaboration in promoting the development of small satellite missions.

Zorig Day

Shreya Chhetri

“Zorig Day”, is celebrated annually on the fifteenth day of the third month as per the Bhutanese Calender. This year's celebration marked the 22nd National Zorig Day, which was commemorated with a series of events organized by the Department of Research and Industrial Linkage office in collaboration with the CST-Tech incubation center.



This year's Zorig Day had the theme "Industry, Innovation, and Infrastructure," which is in line with the ninth Sustainable Development Goal. The day began at the college Choesham with a Labsang Ceremony, which was followed by the Thruesel Ceremony for all the labs and cars present on the college grounds.
To commemorate the 22nd anniversary, two significant events were held concurrently. At the college's teamwork

hall, the 22nd Zorig Day was formally launched where first- to third-year students displayed their top ten entries. Final-year students also took part in the annual Student Research Meet, which was hosted in Lecture Theatre 02 and featured presentations by the best final-year projects from each department.



The Zorig Day event served as a gentle reminder of the value of originality and creativity in the field of engineering. Additionally, it gave aspiring engineers a chance to show off their skills and get helpful criticism to accelerate the completion of their projects.

For their outstanding work, the winners of every contest were chosen and awarded attractive rewards. We were able to celebrate our accomplishments and find inspiration to keep advancing engineering through the Zorig Day event.

Student research meet, 2023.
Darshan Subedi



The field of engineering has always relied on research and transcending the boundaries of generally accepted knowledge. It is what has led to innovation and inventions, which till this day impacts all of our lives. To cultivate the same spirit at CST, the DRIL office and the research officer annually coordinate the annual student research meet where students are given a platform to present their yearlong work and findings.

This year, there were 14 exciting ideas that were presented at LT-02 on 5th of May coinciding with Zorig day, where a panel of judges from different departments provided invaluable feedback to various teams that presented at the event. Some of the highlights of the event were:

- Dzongkha braille board: presented by a team of final year ECE students, the braille board was aimed to help visually impaired people to be able to write and read Dzongkha alphabets from a custom designed keyboard. The team demonstrated their prototype which used buttons for inputs and actuators mimicking the bumps on the fingertips of the user. The team also mentioned their experience where visually impaired individuals tried their prototype and provided feedback based on the usability.



- Turbine: a group of enthusiastic students from the Civil Engineering department displayed their prototype of a turbine that would fit inside a pipe such that it would generate electricity as water flows through it. The group displayed their knowledge and expertise in CAD simulation where they claimed that the turbine is designed in a way to not interrupt the flow of water through the pipes.

- Plastic bottle to 3D printing filament: a group of students from 4ICE have developed a system that can take a regular plastic bottle and turn it into filament which can be used for 3D printing. As procurement of filament often becomes a challenge in 3D printing, this new innovative solution could not only help address the issue of procurement, but it could also help the environment by reusing the plastic bottles.

- Dzongkha speech recognition system: the group from the IT department presented their work on the development of Dzongkha speech recognition system that can take in speech data to produce Dzongkha text. The group presented the mobile app they had developed backed by a robust AI model that helps in conversion of Dzongkha speech to text.

At the end of every presentation, the panel of judges provided invaluable feedback to each group member and the program concluded with remarks of gratitude from the research officer.

Blood Donation Campaign

CST Rovers, in collaboration with the Bhutan Red Cross Society (BRCS) Bhutan, recently initiated a blood donation campaign at the College of Science and Technology (CST). The event, which was held on April 22nd, saw participation from about hundreds of donors, including students and staff of CST. We received staff from JDWNRH and Phuntsholing hospital for the event.

The campaign was a resounding success, with many people coming forward to donate blood and contribute to the cause. The campaign's objective was to raise awareness about the importance of blood donation and to encourage people to become regular donors. The campaign also aimed to help address the shortage of blood in the country.

The event was organized by CST Rovers and BRCS Bhutan, who worked tirelessly to ensure that everything ran smoothly. The organizers were pleased with the turnout and the support from the CST community. They thanked all the donors and volunteers who made the campaign a success.

Teachers Day, 2n2023
Samten Lhendup

On May 2nd, the College of Science and Technology celebrated Teachers Day, coinciding with the birth anniversary of His Majesty the Third Druk Gyalpo Jigme Dorji Wangchuck, revered as the "Father of Modern Bhutan." The event was a delightful occasion to express gratitude towards our teachers, who play a crucial role in shaping our future. The college organized an engaging celebration, featuring captivating dance performances and melodious singing by our talented students. The program included a traditional Machang ceremony, inspiring speeches highlighting the significance of the day, and lively dances set to popular songs in Nepali, Hindi, and Dzongkha. Additionally, there were mask dances, enjoyable games, a lottery draw, and the presentation of certificates to honor the esteemed councilors.



The event witnessed a remarkable turnout, with teachers, students, faculty, staff, and even the Singaporean transformation team actively participating in the festivities. The vibrant atmosphere was charged with enthusiasm and happiness. The student councilors demonstrated exceptional organizational skills, ensuring a seamless flow of activities. The venue was adorned with captivating decorations, and the sound and lighting arrangements were flawlessly executed, creating an enchanting ambiance.

This celebration holds immense significance for our college community. It promotes cultural appreciation and understanding among students from diverse backgrounds, providing a platform for them to showcase their talents and receive recognition for their artistic endeavors. Furthermore, it fosters pride in our cultural heritage and nurtures a sense of unity and inclusivity within the college.

Despite few challenges during the planning and execution, such as sound system disruptions and time constraints, the organizing committee effectively resolved them through effective problem-solving and teamwork. Valuable lessons were learned, emphasizing the importance of early



planning, efficient task delegation, and preparedness for unexpected circumstances.
This year's Teachers Day celebration was a resounding success, leaving a lasting impact on everyone involved. It showcased the rich cultural diversity and immense talent within our college, instilling a sense of belonging and deep appreciation for our shared heritage. The day was filled with joy, gratitude, and a profound recognition of the invaluable contributions made by our teachers.

Reading Fest
Neeraj Nepal

On Friday, May 12th, 2023, the literary club of College of Science and Technology organized a "Reading Fest ", which turned out to be a great success. The festival was intended to promote the reading culture on campus and enhance students' metacognitive skills while providing a platform for them to showcase their creativity. It was also the last literary activity for SS2023.



Eight classes from eight different departments of Third years participated in the event. These classes presented their interpretations and understanding of the books they had read in the form of wall magazines, role plays, enactments, or dramatizations. The presentations were a testament to the students' creativity and critical thinking skills.

The event was well-attended by students, faculty, and staff, who were impressed by the level of engagement and talent displayed by the participants. The presentations were diverse and thought-provoking, and they demonstrated the students' passion for reading and literature. After careful consideration, the judges announced the top three presentations, which were awarded attractive prizes. The winners were ecstatic and proud of their achievements.

The Reading Fest was a resounding success, and it achieved its objectives of promoting literacy, enhancing creativity, and fostering critical thinking skills. The event was a testament to the importance of reading and its role in developing well-rounded individuals. The college is committed to promoting a reading culture on campus and plans to organize similar events in the future to encourage students to engage with literature and explore their creativity.



Flipped Classroom Model

Karma Yangdon, Lecture

In the past, the common teaching and learning practice in Bhutanese education system was to familiarize the concept or topic and assign a few related subject matter tasks to students. At the end of every lesson, the students' works were assessed and marked based on their performance with feedback and little follow-up, resulting in minimal learning in a class of 40-plus students. These students are accustomed to such a learning environment. When they attain college, students are expected to work on their own with little support from the tutors, unlike in schools where teachers put more effort into meeting the learning outcomes set for the particular lesson. Although the Ministry of Education introduced Transformative Pedagogy to the Bhutanese Education system in 2016, most educators were skeptical over the suitability of transformative pedagogy due to contextual factors such as curricular design, overcrowded classrooms, and the heavy workload of teachers (As cited in Dorji, et. al., 2020).



Similarly, the colleges of the Royal University of Bhutan have imbibed reforms in the education system. One of its kind is, to hire scholars and skilled experts in teaching and other fields such as science, technology, and business to train the college faculties and build strong foundations to bring variations to the whole education and learning environment of colleges and one among them is the College of Science and Technology. They have introduced the concept of teaching any class or lessons using Flip Classroom or instructional mode, expected to be pulsating by the end of the 2023 Spring Semester. The Flipped learning classroom setup has emerged as a unique approach for almost all lecturers, even though some of them have learned while pursuing Post Graduate Diplomas in Higher Education at Samtse College of Education as teacher trainees.

Of all, the concept of flipping the classroom is a relatively challenging task for college tutors. Although it was recently introduced to the college, some of these teaching pedagogies were familiar yet inapplicable to the specific subject matter. Having attended several workshops on Flipped classrooms before the actual classes began, the shared understandings among the faculties are; flipped classroom model means substituting lecture lessons by engaging students meaningfully in active learning activities, such as providing reading materials or video clips to be read or watched at home and spend the class hours for discussion and questioning and answering sessions.



However, there is a skeptical view on contextual issues and their benefits for learners. Therefore, this brings to question whether the flipped classroom mode, in the long run, would enhance undergraduates' knowledge acquisition and cognitive levels.

However, the two high school chemistry teachers; Aaron Sam and Jonathan Bergman from Colorado proved why teachers must flip and were the first to popularize the flipped classroom model in 2007. The teachers or lesson designers can merge flipped classrooms with Bloom's Taxonomy Thinking Level to examine learners' cognitive abilities.



For example, before the actual class, the teacher can let students work on take-home tasks that engage them in two lower levels of cognitive work (remembering and understanding). During class hours, they can work on higher cognitive levels (applying and analyzing) learning in the presence of peers and teachers. After the class hours, they can further work and take charge of their learning, focusing on two other thinking levels (evaluating and creating). This also helps students assess their own learning pace and progress in responsibility. To infer, Flipped Classroom approach benefits the whole spectrum of education; tutors to speak the language of today's students, allows students to pause and rewind their teacher, increases student-lecture interaction, allows students to real differentiation, and changes classroom management.

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