

College Activities during the Covid 19 Pandemic

Punya Prasad OLI, Kriti Kajol CHUDAL, Nepal

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1. SUMMARY

Nepal had lockdown in March 25, 2020 and had lockdown two times after that. It suspended teaching in physical presence and commenced online education from March 23, 2020 via Microsoft Teams or Zoom software. The software license was purchased and ID code number was provided to each lecturer and student.

Presentations and attendance of students was recorded. Lecturers were asked to prepare power point presentation, share with students and present with live discussion. The hybrid learning techniques had been quite effective to some extent for carrying out the educational programs like semester classes and examinations. During the time of prohibitory orders, online classes, internal examinations were carried out and monitored from college while as physical university examinations. Practical / labs works were carried out physically following government instructions and safety measures. Assessments were carried online with due surveillance. Scanned hand written papers were asked to be mailed or physically written papers of students were examined depending on the seriousness of the situation. Infected students were kept in separate isolation room(s) during physical examination.

Virtual learning had become a must during the crucial lockdown stage. The online education has drawbacks of lack of suitable hardware/software, failure of internet, electricity and distractions on home-based pedagogy. Steady and gradual implementation of online classes, virtual assessments and university examinations contributed to a year loss/ gap year of many students. There will be no shortage of lecturers and students who may join to the classes from anywhere.

This paper tries to pinpoint the repercussions induced by Covid 19 on the execution of the classes, examinations and college activities were superintended amidst of the ongoing Covid 19 Pandemic. It aims to study the effectiveness of the applied measures and access the potential course of actions that could be implement in a better way for future references in case of such widespread casualties.

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2. BACKGROUND

COVID-19 is considered as a pandemic as declared by WHO which had been expeditiously amplifying all-round the globe causing deaths of thousands of human kinds. It continuously rebounded with different variants causing imposition of lockdowns and prohibition orders almost across the globe. Nepal had lockdown for the first time in March 25, 2020 and two times after that. The COVID-19 pandemic has led to a significant loss of lives worldwide and presents an exceptional challenge to public health, food systems, poverty, education system and overall existential crisis led by economic and social interference.

There have been 978,634 confirmed Covid 19 cases with 11, 951 death and 43,757,928 administered vaccine doses reported to WHO in Nepal from January 3, 2020 to April 14, 2022.

3. INTRODUCTION

The effect of aftermaths of Covid 19 has been experienced in the education sector in top notch level after health and economy. It suspended teaching in physical presence and commenced online education. The pandemic has changed the pattern of education for the learners of specially school grades till the undergraduates as they had to totally switch from physical classes to the virtual learning platform. This transition came up along with several pros and cons. It was challenging task for both veteran and novice lecturers as they were in the same league, obliged to find out different learning methods to best fit for students and their academic courses.

4. NEED OF ONLINE EDUCATION

Technology of Geomatics engineering is changing rapidly and students need to study various subjects which need veteran experts of these subjects. It is difficult to bring experts physically in the classroom as we had limited physical conditions and experts on various subjects.

During Covid19 pandemic, the online education was arranged for students as well as lecturers. We found it useful when the lecturers were unable to come to class physically or in remote locations outside Kathmandu valley or away from the college. Now, it was required to arrange some classrooms for online education, so that shortage of lecturers are overcome as well as education from experts is received or interacted with students and lecturers.

5. LOCKED DOWN PERIOD

Government of Nepal declared to suspended physical classes and examinations in March 19, 2020. With the first appearance of the 1st case of Covid19, in Nepal, in March 25, 2020, the locked down was imposed. To be specific about bachelor program of Geomatics engineering exclusively administered by Himalayan college of Geomatics Engineering and Land Resource Management under the affiliation of Purbanchal University, it was decided to conduct online education from November 23, 2020, May 5, 2021 and January 31, 2022 during serious Covid 19 situations, and physical/ practical classes were conducted during lean period, September18-30, 2021 of Covid19 cases.

Despite the fact of having most of the teaching staff infected by Covid19, virtual classes were commenced via zoom and Microsoft teams' platform with proper scheduling and guest lectures from various alternatively available experts from the survey department of Nepal.

However, there were no fatal cases of the student, staff or faculty members of the college.

5.1 Field Work

Field work is an important part of technical education specially based on surveying where students learn about planning various engineering survey works, instruments, techniques of surveying, assessment of precision, preparation of reports, presentation and defense of their report, viva assessments and field works.

Generally, it is carried out in closed camps and final year project is carried out in a real working environment with safety measures. Because of the lockdown, closed camps were arranged at survey sites and real work was carried out at engineering project site for 2-3 weeks period. This year (2022) survey site Bungmati, Kathmandu for Field Works and Sauraha, Chitwan for Project Work were used. This year, it was carried out 2 weeks in field, one week at college site and few weeks to write report, computation and map drafting. However, during the fall of the last year (2021), students were mostly bounded to conduct research based analysis and spatial analysis of various entities from the available satellite imageries and maps/documents obtained via survey offices. This was implemented for the final year project so as to reduce the physical survey works amidst of the ongoing extreme exacerbation rate of the Covid19

Some of the photographs of field works are attached below:



Fig. 1: Control survey



Fig. 2: Traverse survey



Fig. 3: Plane Table Survey,



Fig. 4: TS Detail survey

6. ADMINISTRATION AND ZOOM/ TEAMS MEETING

6.1 Zoom Meetings

During lockdown period, mass media used zoom meetings for interviews. The college also adopted same zoom meetings. It has free plan allowing 100 concurrent participants for 40 minutes time. It restricted time and recording problems aroused time and again. Upgrades were available by subscribing paid plan.

Many students were used to this zoom software and preferred it to use due to its simplicity. So, the college allowed them to use in the initial phases. The data, notes and power point could be easily shared. Some of the examples are shown below:

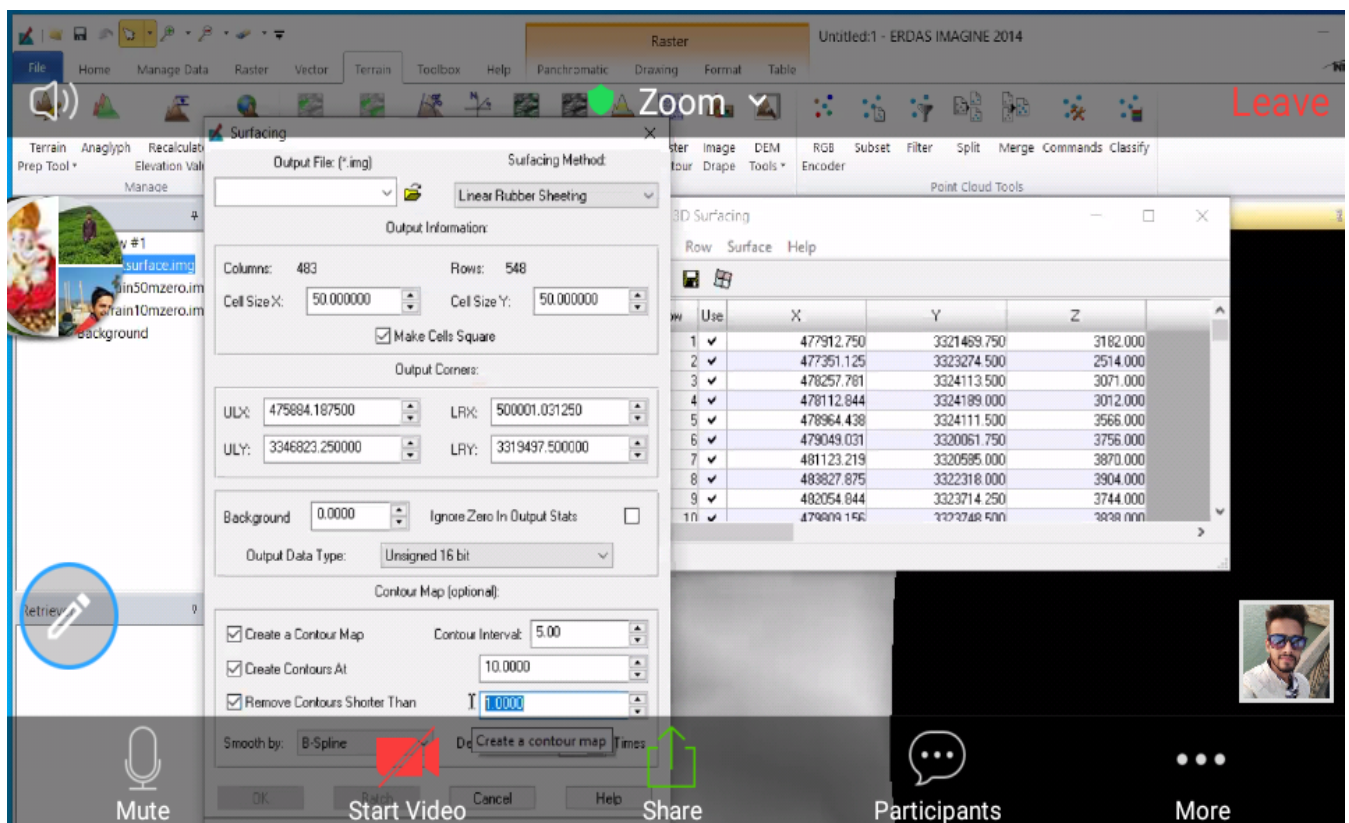


Fig 4. Zoom tabulate demonstration of DTM generation from spot heights & contours

6.2 Microsoft Teams

College also procured Microsoft Teams Software for a certain period and codes were supplied to students and lecturers. It covered all classes and students' attendance, materials and assignments. It is said to be limited to 50,000 links. The lecturers used both Zoom and teams software for teaching.

We were used to use power points presentations and prepared all the lecture in power points format and shared the presentation slides in both applications (zoom or teams). There was also interaction with students and most of the cases student remained mute. The courses was finished earlier than expected time period.

It was also noticed that some students shared their mobile phones and went to sleep in the winter mornings. It is difficult to control or concentrate on online study engagement during day time due to the home situation.

The weaker internet stability and limited outreach of electricity supply in the remote areas also served as major hindrances in the online education. It was expected that few minutes of disturbances was normal during 45-55 minutes class. Most of the students faced this problem and were deprived of receiving full knowledge via online medium. The examples of Teams presentation is given below:

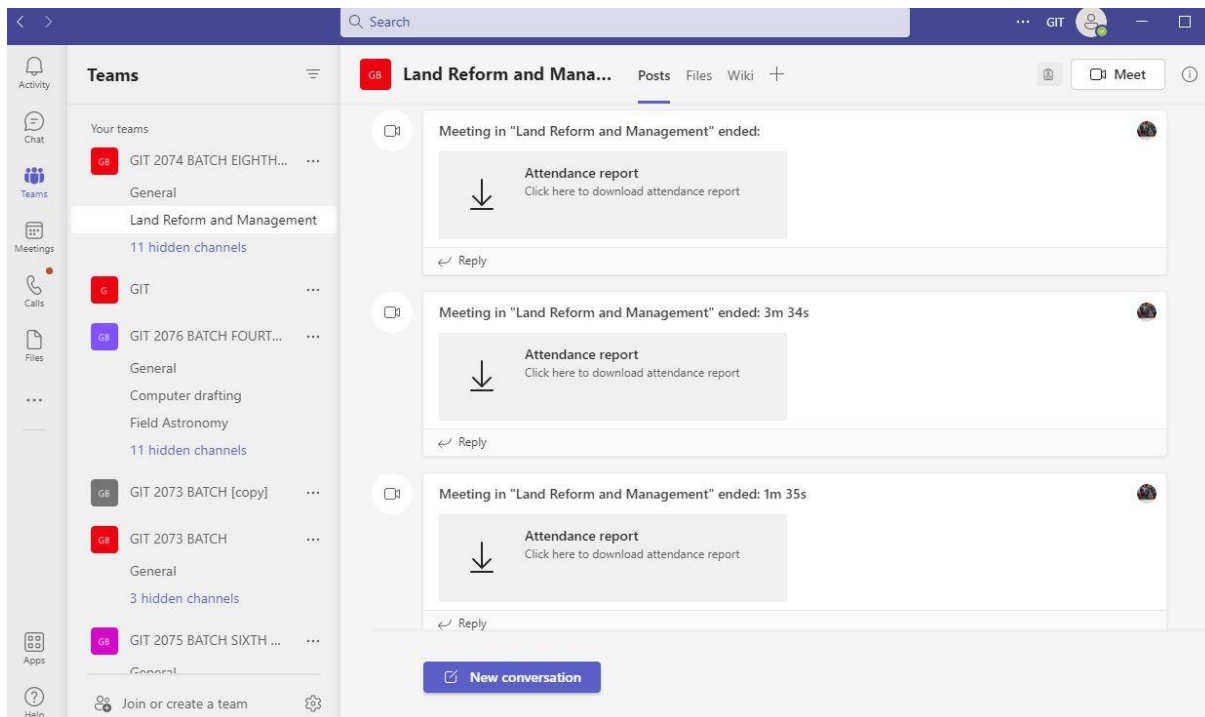


Fig 5 Microsoft Teams Format

7. ASSESSMENT AND EXAMINATION

Students were asked to carry out and submit their internal assessments by hand written papers in scanned pdf format through email. It would assess their activities as well as keep the record of hand writings to make sure of the individuals' engagement in appearing the examinations.

During the final examination, questions were set by lecturers, scrutinized and final questions were sent to students. Students wrote the answers on the paper in 3 hours' time for 80 marks evaluation out of 100 for each subjects. The final papers obtained from students within the allocated time frame were finally verified and submitted to the University Office of Examination Management within an hour via concerned college. Remaining points out of 20 marks were provided by the respective subject teachers through the internal evaluation processes (assignments, presentations, internal assessments, discipline etc...)

In the course of online education, examinees were connected with the invigilators in teams meeting. This was done for the surveillance through webcams as students were asked to turn on the video during the examination period to avoid the copying, plagiarism and third party assistance. Fewer copies of similar answers were also found of some handful of students. It was realized that some of them shared answers of certain questions despite the action of strict monitoring.

The examinations of second time was physically held in the presence of invigilators. It was said few students produced Covid19 positive test certificates and it was used as mal practice in examination as invigilators did not interned in the room regularly.

8. OUTCOME

During lockdown period in March 25, 2020 to January 2022 (2076 Chaitra 25 to Mangsir 2078) 2 semester examinations, one online and one physical was carried out. During the lean Covid period, September 18-30, 2021 one practical Field Work/Project completed and half of the class teaching of 3rd semester was completed. It was found that those student passed the examinations during Covid19 period had the weakness of knowledge on practical works than a physical education. Many of the compartment examinees got a chance to clear their semesters due to the weaker online examination module. However, mere lack of skills and knowledge among the Covid batch was high as compared to students who got to appear for physical sessions and physical examinations.

9. CONCLUSION:-

Online education was necessary to conduct educational activities where teaching on physical presence was not possible. It had advantages of getting expert or senior lecturers when needed,

education activities were possibly carried out for the students and by the lecturers who were located anywhere in the countries and at any convenient time of students and lecturers. Internet facility and power supply were major disadvantages in developing countries, which was improved since the Covid 19 periods. In the engineering education, there were also weakness of grasping knowledge by the students. If we have to run on line engineering education, it needs assistant of assistant lecturer to educate them in detail or show the displays. It needed to develop smart classes to run online classes where blended education will help disseminate knowledge among students stationed as various locations.

10. REFERENCE

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11. BIOGRAPHICAL NOTES

Ms. Kriti Kajol Chudal is a student holding bachelor's degree in Geomatics engineering from Himalayan college of Geomatics Engineering and Land Resource Management, Nepal and presently working as a Geomatics Instructor in diploma school of Geomatics engineering.

Mr. Punya Prasad Oli is a former **Director General** of **Nepal Survey Department**, and presently active as a **Principal** of Himalayan college of Geomatics Engineering and Land Resource Management, **Consultant of ERM C Pvt Ltd**, and **President** of Nepal Institution of Chartered Surveyors(NICS).

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13. CONTACT ADDRESS

1. Punya Prasad OLI

President, Nepal Institution of Chartered Surveyors

Principal, Himalayan College of Geomatics Engineering and Land Resources Management,
Kathmandu, Nepal

Tel.9779841610545

Email punyaoli@gmail.com

Miss. Kriti Kajol CHUDAL,

Geomatics Instructor, Shree Secondary School, Diploma in Geomatics Engineering, Gadauli,
Khairani, Sindhuli, Nepal

Tel.9779849772564

Email kajolchudal@gmail.com