Student Survey Regarding On-Line Classes During and Post Covid-19 Period

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Abstract- The whole world will have a portion of the syllabus for online classes even in the post COVID situation. Since it is a drastic change in education system, a survey was conducted to know the opinion about online classes from the students. This paper will highlight the behaviour of learning process of class room and online teaching from the student's point of view. It is based on online teaching and tests conducted during last three months. It shows the student standpoint of view and also the future of education scenario in post COVID -19 periods. The survey was conducted by considering about 10 important parameters of online teaching. This paper also shows the comparison of marks of class room test and online test for the same subject for same students. It points the need for some drastic change that are required to make online classes more effective during and post COVID scenario.

II. METHODOLOGY

A. The method of class room teaching just before COVID lock down

Class room teaching was done using LCD projector for this subject. The subject is ELEMENTS OF MECHANICAL ENGINEERING. The syllabus is in accordance with National Board of Accreditation, India. The course outcomes are written for the whole syllabus and all wordings are according to Bloom's taxonomy. The subject consists of four units which are made equal from the point of view of difficulty in understanding and also in terms of marks allotment in question paper. Two and a half units were covered before COVID lock down. One class room test was conducted and evaluated.

B. The method of online teaching during COVID lock down

Remaining one and a half units were covered by online classes, for the same students by the same teacher. For online class, different online services like were used. To make the students to understand the concept better, many video tutorials were done as supporting
materials for the necessary portions by the same teacher and were uploaded for the students to access.

C. The method of conducting tests

Question papers for both the tests were prepared identically by considering Bloom's taxonomy. Levels and course outcomes were indicated against each question. Question papers were having ten objectives of multiple choices with four options each. Each objective was having half mark each, totalling to five marks. Then there were five questions of five marks each and with one choice, totalling to 20 marks. In total, tests were for 25 marks. Test duration for both class room and online tests was 60 minutes. For online test, additional 20 minutes were given for the students to take photograph of each sheet, convert it in to a single pdf and finally to upload to Google class. Each students were asked to write their names and put signatures in all the sheets before taking photographs. Valuation of online test was done by the teacher by online only and the marks were awarded in the same manner as class room test.

D. The method used for conducting the survey.

Ten important parameters in the form of question to students were selected for the survey. Also, an average mark of the same students during the class room teaching is compared with that of the online test after the online teaching. The parameters are:
1. Understanding ability between online and class room teaching.
2. Convenience of learning between online and class room teaching.
3. Best advantages of online teaching from student perspective.
4. Most common disadvantages of online teaching from student perspective.
5. Effectiveness of online teaching for practical.
6. Need of laboratory.
7. During and post COVID situation, portions to be covered with online classes.
8. Promotion without exam during COVID.
9. Effectiveness of video tutorials as supporting material along with online class.
10. Regarding the change in syllabus during or post COVID situation.

The survey form was sent to the students for expressing their opinion by filling the appropriate answers. There were objective type questions with single selection and multiple check box selections. About 24 hours’ time was given for them to think and answer.

III. RESULTS AND DISCUSSION

The following graphs in the form of figures are the results of the survey. The discussion for each parameter is done along with the results.

Figure 1. Effective understanding through online class.

Nearly 88 percent of the students are of the opinion that class room teaching is a better method than actually understand the concept. About 12 percent of them are saying that they can understand better in online class. This depends upon their capability to hear and concentrate on online class.

Figure 2. Convenience about online class.

Obviously, about 78 % of the students are finding online classes more convenient for them, as they can sit at ease at home and take online class. This will avoid their long distance travel every day.
About 56% of the students are highlighting that it can be taken at any place. Also, just a mobile phone with net connectivity is enough as pointed by about 51%. About 2% express that it acts just as buffer in addition to class room teaching.

Note: all percentages added will not be 100 % because this is multiple check box type questions.

About 88% have pointed out that internet connectivity is the main problem. Nearly 67% say audio problems. Mainly, 35% are not having internet connectivity. 53% are expressing that interaction with the teacher is difficult. 40% of the students are finding difficulty in uploading pictures for the given assignment, due to slow internet speeds.

Note: all percentages added will not be 100 percent because this is multiple check box type questions.

Syllabus has to be altered to suit the online classes. About 25% say that totally new structuring of the syllabus is required. But about 25% each say that partial change from 10% up to 50% is required. The 75% change is not supported by many students, as they have supported complete change.
About 92% say that during COVID, they should be promoted without conducting regular classroom examination, as the students are likely to be exposed to COVID. Also, in that kind of atmosphere, they cannot write the examination to the fullest of their actual ability.

Many portions of the online classes will be supported by video tutorials in which there will be no interaction. But the student can accesses the uploaded content any number of times at any convenient time. About 30% say that it is 70% effective, given along with online classes.

Note: all percentages added will not be 100% because this is multiple check box type questions.

This is for a temporary scheduling of syllabus, for which about 59% percent say that it is required.

This is in view that some educational institutions are planning to conduct *three slots in a day, each with four hour duration for separate batches of students*. This is to avoid crowding and to maintain social distancing among students.

Class room test and online tests were conducted for the same students for same subject and similar portions. Normal valuation was done for class room test and Online valuation was done for online test.

The graph shows log average of trend line of the marks rather than point to point line joining individual marks. It is very clear that performance of online test is much better compared to class room test. It also indicates that the merit ranking of the students remain same for both the tests. That is, the student who was scoring more marks still maintains the same rank but marks of each student is better compared to his/her marks of class room test.

**CONCLUSION**

- The important conclusions drawn from the above results and discussions are:
  - If we improve net connectivity, online class is also good during or post COVID situations.
  - Practical class should be done in regular laboratories only.
  - All students are to be provided with net accessibility, along with better equipments.
  - Students will score more marks for the same type of questions written in same duration.
  - Performance of students improves significantly in online tests.

**REFERENCES**


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