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Students' Perception towards Online Courses Offered For Civil Engineering Students during Covid-19 Pandemic

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ABSTRACT
The Coronavirus 2019 (Covid-19) epidemic is increasingly more spreading throughout the world and has been declared an epidemicby World Health Organizations. This compels educational establishments to issue a lockdown policy on-campus activitiesby emphasizing at online learning (virtual learning) process. This study aims to perceive the belief of civil engineering college students in the direction of the effectiveness of virtual learning implementation during the Covid-19 pandemic.The research was conducted through online with the help of questionnaire developed in Google Forms. Data were collected from 30 respondents and further calculated by using techniques such as column graphs and bar graphs. Most of the respondents replied that they are satisfied with the online courses provided to them during this pandemic.

Keywords: Online Courses, Civil Engineering, Covid-19, Corona virus, virtual learning

I. INTRODUCTION

In the first months of 2020, because of the health emergency triggered by Covid-19 pandemic at a global level, maximum coaching facilities around the world were compelled to modify their teaching methodologies and flip them into new techniques compatible with on-line studying.

Most universities scrambled to alter and follow virtual structures needed for online learning. However, a few latest research seem toagree that the teaching establishments were not organized for the sort of surprising shift to Emergency Remote Teaching (ERT). There is an increasing number of stories shared round the world analyzing how this situation has affected teachers and college students, specially centered on primary and secondary education, however not so many on the higher education stage.

In these occasions, every college adopted special solutions, typically including specific software for distance studying, consisting of video call applications, and giving preferred tips and instructions so that the lecturers knew a way to adapt their coaching activities.

Nevertheless, the lecturers had been finally who had to take the selection on how to particularly put into effective online teaching, turning their conventional teaching techniques into on line studying by using new tools, consisting of video calls or screencast videos, and implementing new varieties of interplay with the scholars with the aid of using virtual forums or online organization tutorials. Thus, the digital tablet has validated to be a valuable tool for coaching and interacting with learners.

Transforming conventional face-to-face coaching into distance teaching is not trivial, neither for the lecturers, nor the students. Some elements ought to be tailored, such as the teaching substances, the equipment used for their interaction mechanisms with the students. All this implies that both components, college students and lecturers, should adapt to their each day work, due to the fact that they must learn how to use new gears and the way they interact with each other.

II. LITERATURE REVIEW

Bennett & Bennett, 2002; Goodwin, 1993; Hara & Kling, 1999 have concluded in their findings that effectiveness of online learning is dependent on student perception and learning outcome. Quality of online education can be enhanced if the student is tech-savvy and skilled in computer.

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Thurmond, Wambach, Connors & Frey (2002)had opined that there are some questions which have been unanswered regarding the factors like relationship between computer skill and learning outcome of the student in online teaching methodology.

Petrides (2002) found in his research that students think deeply while responding answers in writing as compared oral responses. This is a big significance of online learning.

Vonderwell (2003) has briefed in his findings that students have become serious and tuned their mindset for new ideas as the writings reflect the deep thought process while learning online in a non-synchronous manner.

Chizmar and Walber's (1999)have concluded in their research that teaching has to be exceptionally good in online mode of learning which can help the pupils to pick and choose the right approach to learn according to their suitability.

Clark (2002) stated in his research that content plays a major role in online learning. In order to have qualitative and productive learning the content should be clear, purposeful, lucid, distinctive which would generate interest in students to show inquisitiveness to know more and more.

Hara and Kling (1999)investigated and found in a case study that students feel dejected if they do not get immediate response from their teacher. They lose interest in study and sometimes feel frustrated. Not only the teacher but also the student must be very proactive in maintaining that bridge which exists between a teacher and student and vis versa for the continuity of learning process. This is a big challenge in online learning process.

Woods (2002)inferred in his study that students feel physically isolated as far as communication process is concerned in online education process. In such cases the instructor must play a big role in ensuring the uninterrupted communication between him and his student.

RESEARCH METHODOLOGY

This research study was based on a survey made online. A structured questionnaire was used for data collection. An online survey on google forms was designed to determine students' perception towards online courses for civil engineering students during this covid-19 pandemic. 30 respondents from various states were selected as sample. Data were analyzed by simple percentage analysis and charts using Excel.

OBJECTIVES OF THE STUDY

- To find out students' satisfaction towards various civil engineering courses offered during this pandemic.
- To know how helpful these courses were during this pandemic.

III. ANALYSIS AND INTERPRETATION

Based on data collected from 30 respondents from the city of Bhubaneswar the following analysis has been made and we have found that out of 30 respondents 22 belong to 18-25 age group, and 8 only belong to 25-30. So mostly the study is made on the youths of the city. Table -1 represents the number of respondents belong to different age groups and the same is also represented in chart-1.

Table -1- Age of Respondents

AGE	NO OF RESPONDENTS
18-25	22
25-30	8

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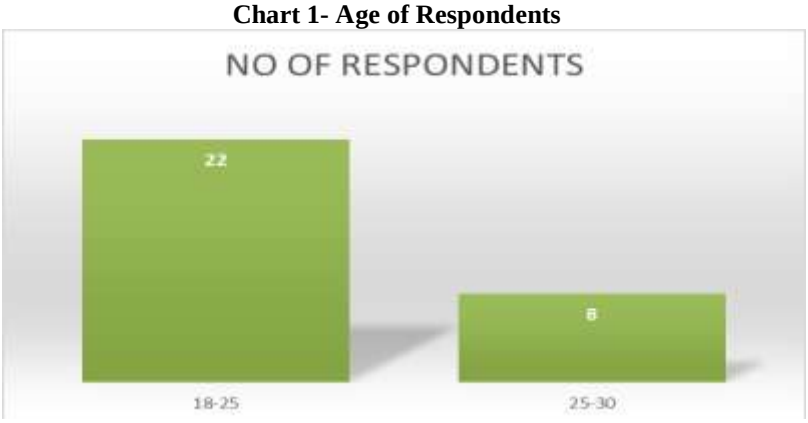
Chart 1- Age of Respondents

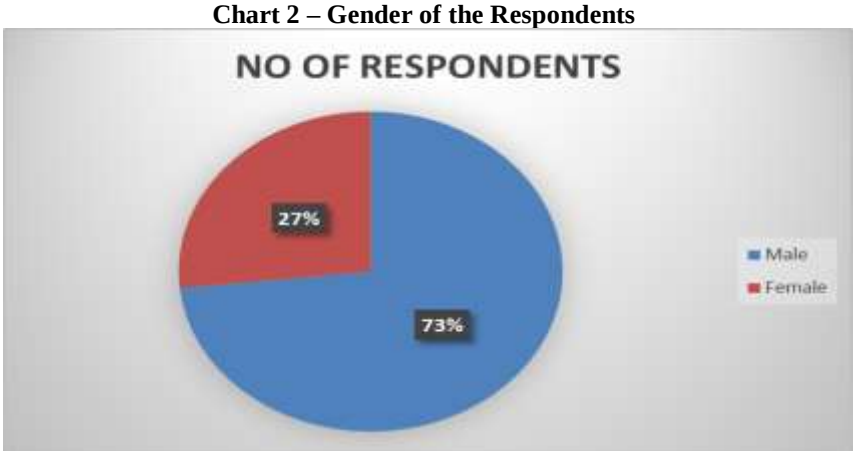


It has been found that out of 30 respondents 8 are female and 22 are male. Table -2 below is depicting that. It is also clearly seen from the chart-2 that majority of the respondents are male.

Table 2- Gender of the Respondents

GENDER	NO OF RESPONDENTS
Male	22
Female	8

Chart 2 – Gender of the Respondents



It has been found that (Table – 3) out of 30 respondents 13 felt very good followed by 10 Good and 7 Excellent. The number of respondents shared what they feel about Online education that can be clearly seen from Chart-3.

Table-3 - Feeling overall about online Education

FEELING OVERALL ABOUT ONLINE EDUCATION	NO OF RESPONDENTS
EXCELLENT	7
GOOD	10
VERY GOOD	13

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Chart-3-Feeling overall about online Education

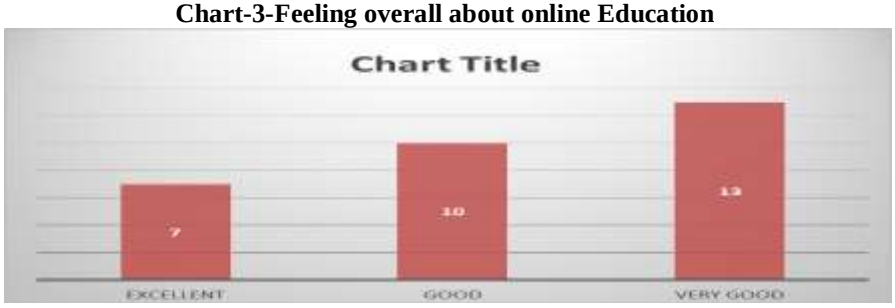

Table -4 shows number of respondents according to their device using for distance learning. The maximum respondents were Laptop users in comparison to Desktop, Smartphone and Tablet. Chart-4 shows that majority of the users were Laptop users**.**

Table-4- Device using for distance learning

DEVICE USING FOR DISTANCE LEARNING	NO OF RESPONDENTS
Desktop	8
Laptop	15
Smartphone	3
Tablet	4

Chart-4-Device using for distance learning

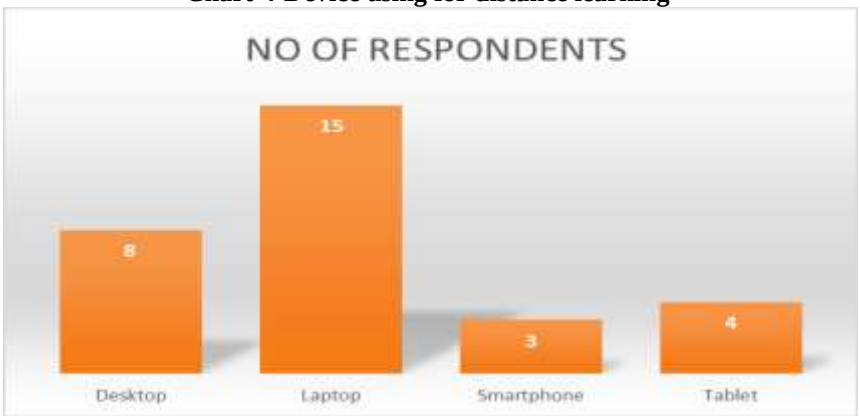

Table -5 shows number of respondents according to their time spend on each day on these courses. The maximum respondents spending 3-5 hours (60%) followed by 5-7 hours (30%),1-3 hours(6.67%)and 7+hours(3.33%). Chart-5 shows that majority of the respondents spending time was 3-5 hours daily.

Table-5- Time spend on each day on this courses

Time Spend On Each Day On This Courses	No Of Respondents	Percentage
1-3 hours	2	6.67%
3-5 hours	18	60.00%
5-7 hours	9	30.00%
7+hours	1	3.33%

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Chart-5- Time spend on each day on this courses

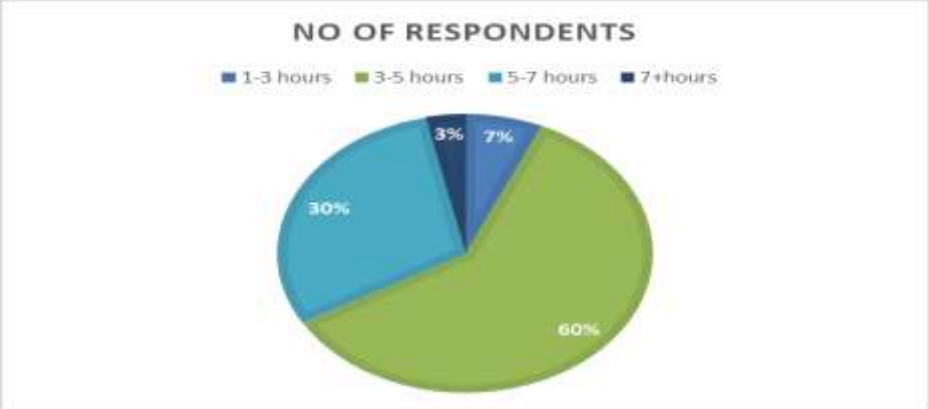

Table -6 shows number of respondents according to how helpful have these courses to them. The maximum respondents said that it is Moderately Helpful (50%) followed by Extremely Helpful (33.33%), Slightly Helpful (13.33%) and Not at all Helpful (3.33%). Chart-6 shows that majority said that it is Moderately Helpful for them.

Table-6- How helpful have these courses been

How helpful have these Courses been	No of Respondents	Percentage
Extremely helpful	10	33.33%
Moderately helpful	15	50.00%
Not at all helpful	1	3.33%
Slightly helpful	4	13.33%

Chart-6- How helpful have these courses been

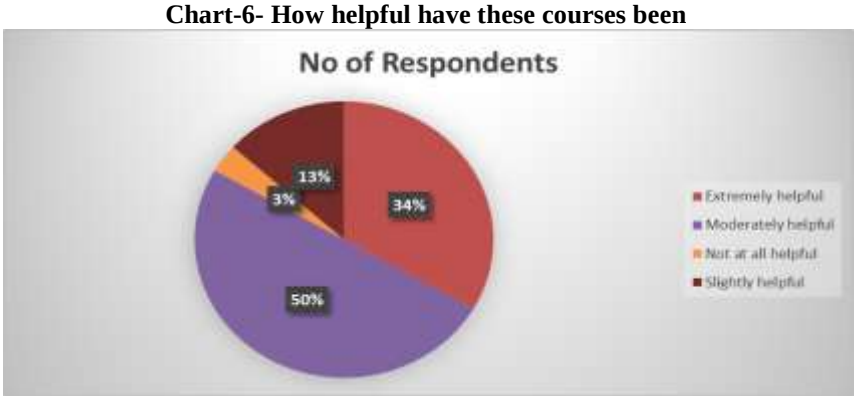

Table -7 shows number of respondents according to how much they got satisfied with the courses offered to them. The maximum respondents said that they were Extremely Satisfied (36.67%) followed by Moderately Satisfied (33.33%), Slightly Satisfied (23.33%) and Not at all Satisfied (6.67%). Chart-7 shows that the majoritywere Extremely Satisfied with the courses.

Table-7- How much they satisfy with the courses

Satisfaction	No of Respondents	Percentage
Extremely satisfied	11	36.67%
Moderately satisfied	10	33.33%
Not at all satisfied	2	6.67%
Slightly satisfied	7	23.33%

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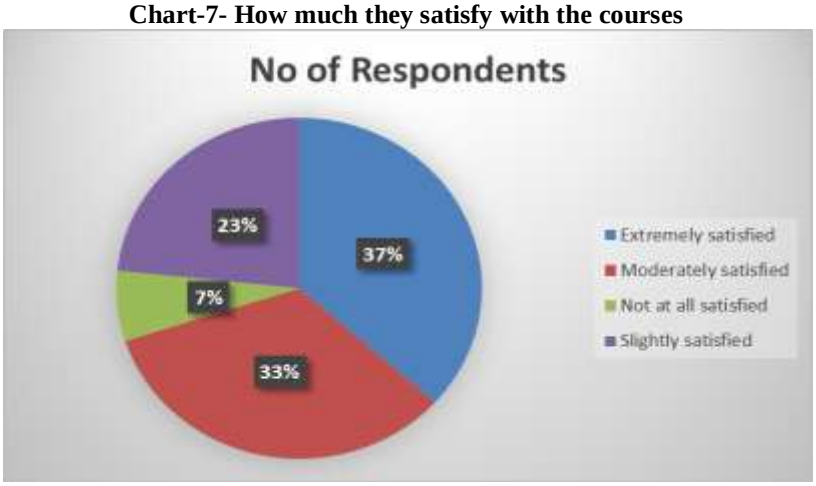
Chart-7- How much they satisfy with the courses



IV. CONCLUSION

Based on the analysis, the belief of civil engineering students on the effectiveness of the virtual learning implementation during COVID-19 pandemic can be concluded as follows:

a) The implementation of online learninghave been found to be effective totally based on civil engineering scholar's belief, especially in basic engineering and structural subjects inside the civil engineering subject.

b) Despite the civil engineering college students have been pretty an enthusiasm because of its technical challenge and time flexibility, there are some problems in virtual learning implementation. As we have seen still 30% students were not satisfied with the courses.

c) There were five most important problems we have come across during the study within the implementation of virtual learning, which can be: 1) The level of understanding, 2) The interaction all through digital learning procedures include the interaction among lecturers and college students as well as the interaction among the scholars themselves, and 3) Cost of internet,facilities and access of internet.

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