SURVEY OF STUDENT PERCEPTIONS OF REMOTE ONLINE TEACHING IN AN UNDERGRADUATE GENERAL DEGREE AWARDING INSTITUTION

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ABSTRACT
Educational institutions across India have been closed owing to the contagious COVID-19 pandemic. Teachers and students are compelled to adopt the virtual mode of teaching and learning. A student perception survey on remote online learning was carried out in an undergraduate college offering general degree education. The survey revealed that most students were satisfied with the quality of instruction and their learning. Students experienced internet connectivity issues which are predominant in rural areas. Findings suggest that governments and educational institutions must improve technological facilities so that students get used to blended learning, which is an approach that combines face-to-face and online learning experiences. Moreover, steps must be taken to ensure that teachers are trained to adopt the best online teaching methods to make the sessions more interactive and interesting.

INTRODUCTION
Schools and colleges across India have remained shut in response to the nationwide lockdown enforced since 24th March, 2020 to contain the spread of the contagious Coronavirus. This pandemic COVID-19 is forcing educational institutions to experiment with remote online teaching and learning. Most of the Higher Education Institutes in India have resorted to online mode of instruction. Educational institutions are trying everything possible to make sure that students' education continues unabated. With the number of positive COVID cases in India growing each day, it is unlikely that educational institutions will reopen until the situation is safe. This means that educational institutions will have to continue to transact curriculum online. However, this was not the kind of experience that most people ever dreamt of. A large number of teachers who have never had any experience of teaching online are now forced to adopt this in their teaching. It is important to observe that the sudden shift from face-to-face education to online teaching, termed as emergency remote teaching, is quite different from online education (WADIA (2020)). The latter is a well-researched practice of instructional design apt for online delivery that most of the higher educational institutions in India have not adopted. The importance of a strong teacher presence and course design that is unique to and suitable for online delivery cannot be overstated for online students (Stone and Springer (2019)). If the number of COVID-19 cases continues to increase, teachers will have to consider this distinction if they need to offer online classes in the coming semester.

Many faculty members and students still believe that online education is inferior to face-to-face teaching. Despite studies to the contrary, online learning has a reputation for lower quality than face-to-face learning (Hodges et al. (2020)). That is why many students opt for off-line education even though umpteen number of excellent online education platforms like Coursera, edX, SWAYAM, and others are available and economically viable. Another reason why students prefer off-line education is inadequate computing facilities and internet access. According to a recent survey conducted by the ranking agency Quacquarelli Symonds (QS), 72.6 percent of the more than 7,500 students surveyed use mobile phone hotspots to access the internet, a solution that UNESCO classifies as "low-tech." Only 15.87 percent of students had access to the internet, and even those who did had problems with connectivity, power, and signal strength. Of those using mobile hotspots, nearly 97 percent faced poor connectivity or signal issues. This problem is severe in India, where only 30% of the population owns a smartphone. Unfortunately, these students are now compelled to learn in online mode due to the pandemic COVID-19. How can this online remote teaching impact the students' academic performance and their satisfaction levels on the course? We will have to wait few more months to get answers to these questions. A survey was carried out to understand student perceptions of online remote teaching in a prestigious undergraduate college offering general degree education in the Udupi district of Karnataka State. This paper documents student perceptions on learning satisfaction, instruction quality, challenges faced, technical issues, etc., during the emergency remote online teaching (EROT).

SURVEY METHODOLOGY
A survey instrument to record student perceptions along with their background characteristics was prepared and administered to about 1500 students studying in an undergraduate college affiliated to Mangalore University

offering general degree education in the Udupi district, Karnataka State, India, using Google forms. As many as 884 students returned the forms duly filled. Analysis of the responses was carried out using an open-source R software employing descriptive Statistics.

RESULTS AND DISCUSSIONS

Respondents were students of a general degree awarding institution situated in Udupi District of Karnataka State. Among the respondents, 656 (74%) were women students, 21 (2.4%), 514 (58.1%), 214 (24.2%) and 135 (15.3%) students pursuing BA, B.Com, B.Sc. and BBA programs, 362 (41.0%), 142 (16.1%), 380(43.0%) are having family income less than 20,000, more than 50000 and between 20000 and 50000, 486(55.0%), 205(23.2%) and 193 (21.8%) students are residing in Rural, Semi-urban and Urban areas respectively. The average family size of students is 4.62. To a question regarding previous exposure to online courses, 675 (76.0%) said that they had not taken any online courses in the past, where as138 (16.0%) and 71(8.0%) said that they had taken one course and two or more courses. 466 (53%) students scored more than 80%, 38 (4%) scored below 60% and 380 (43%) scored between 60% and 80% respectively in the previous semester exam. With regard to the class size during the off-line classes, 378 (43.0%), 64 (7.0%), 442 (50.0%) reported that it was between 35 and 75, less than 35 and more than 75 respectively. Visual presentation of the background characteristics of students can be seen in Figures 1 and 2.

BACKGROUND CHARACTERISTICS OF SAMPLE RESPONDENTS

Respondents are students of a general degree awarding institution situated in Udupi District of Karnataka State. Among the respondents,656 (74%) are women students, 21 (2.4%),515 (58.1%,214 (24.2%) and 136 (15.3%) students pursuing BA, B.Com, B.Sc. and BBA programs, 362 (40.9%),142 (16.0%),382(43.1%) are having family income less than 20,000, more than 50000 and between 20000 and 50000, 423 (47.7%),407(45.9%),37(4.2%),19(2.1%) belonging to General, OBC, SC, and ST categories, 49(5.53%),791(89.28%),44(4.97%),2(0.23%) students are followers of Christian, Hindu, Muslim and Other religions, 486(54.9%),206(23.3%) and 194 (21.9%) students are residing in Rural, Semi-urban and Urban areas respectively. The average family size of students is 4.62. To a question regarding previous exposure to online courses, 676 (76.0%) said that they had not taken any online courses in the past, whereas 139 (16.0%) and 71(8.0%) said that they had taken one course and two or more courses. 467 (53%) students scored more than 80%, 39 (4%) scored below 60% and 380 (43%) scored between 60% and 80% respectively in the previous semester exam. With regard to the class size during the off-line classes, 380 (43.0%), 64 (7.0%) , 442 (50.0%) reported that it was between 35 and 75, less than 35 and more than 75 respectively. Visual presentation of the background characteristics of students can be seen in Figures 1 and 2.

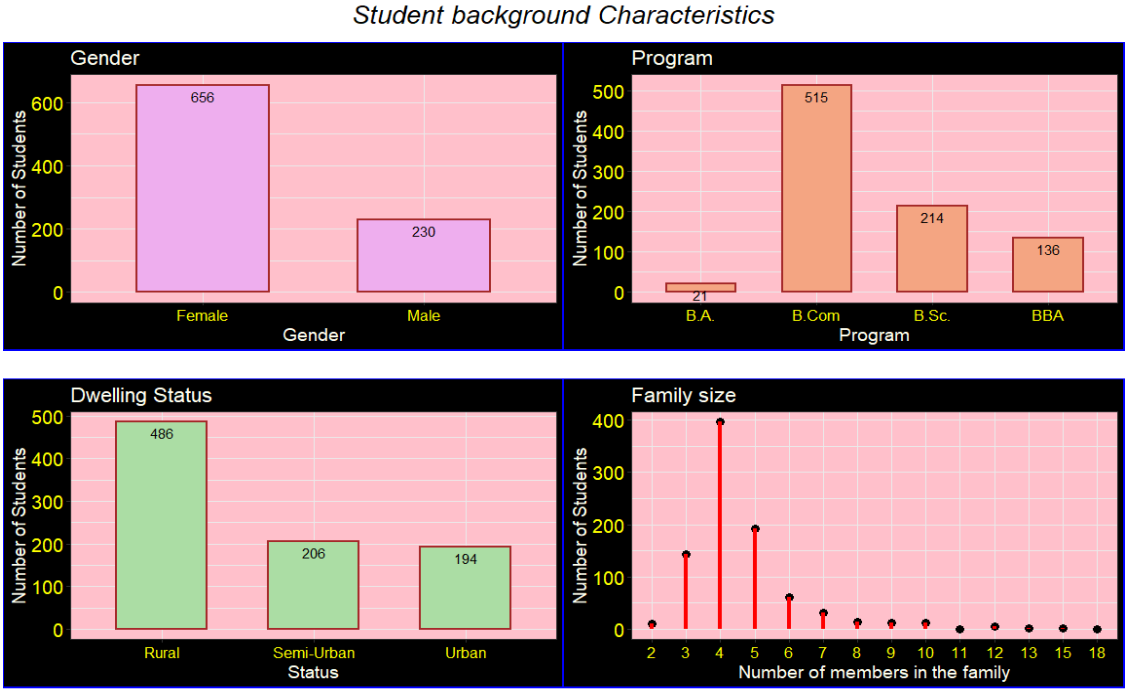

Figure 1: Student Background Characteristics

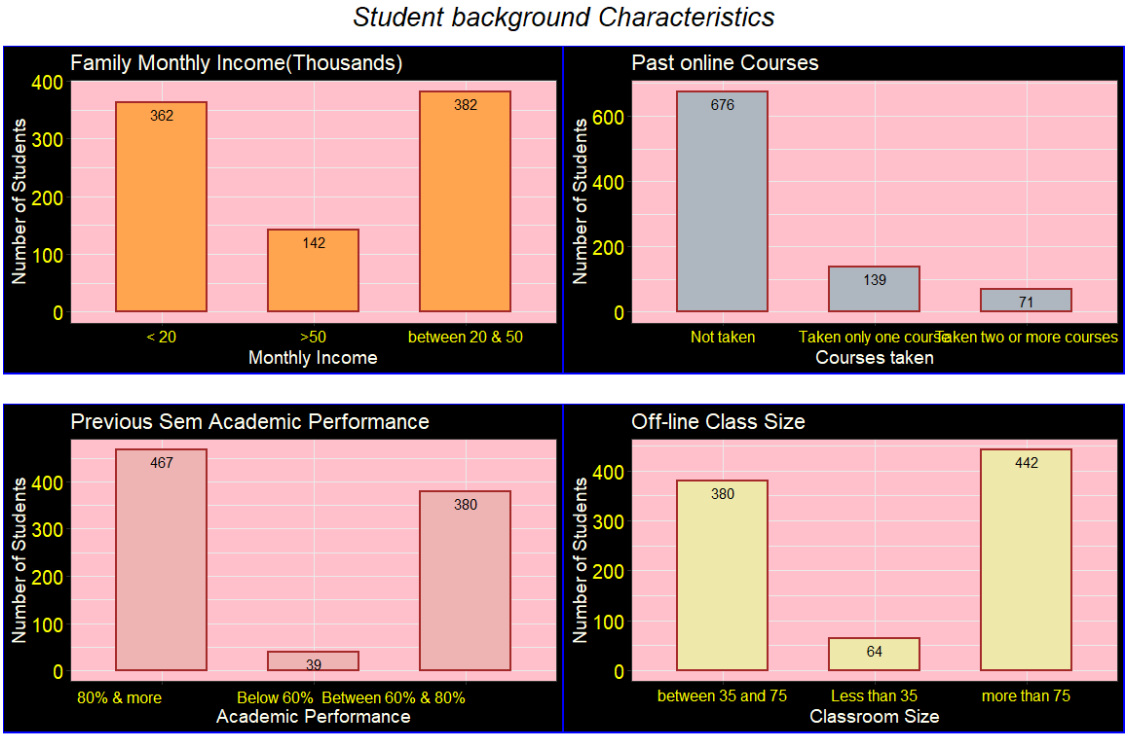

Figure 2: Student Background Characteristics

It is evident that most respondents are women students residing in rural areas religiously affiliated to Hindu religion, having a modest family income, and either belonging to general or other backwards category. Only a few respondents have previous exposure to the online class environment. Also, these students have shown excellent academic performance in the previous semester examination even though they studied in large classrooms.

INTERNET CONNECTIVITY ISSUES

The digital divide has long been a source of concern, referring to unequal access to technology and how people use digital resources differently. The social and employment status of individuals is often a factor in the digital divide. People from lower socioeconomic backgrounds and those living in rural areas are less likely to have access to computers and the internet. Moreover, some students may have more technical devices at their disposal than others. Uneven access can lower digital literacy rates, putting students at a disadvantage in educational settings (Gillis and Krull (2020)). Working and learning from home requires internet access. Students would be unable to participate in online classes if their internet connection was unreliable or non-existent. Some of the most common internet issues students encounter are the loss of internet or data during online classes, the inability to access study materials, poor audio or video quality, the lack of internet access in all areas of the house during peak hours, and the presence of too many concurrent users. To understand student experiences, students were asked to respond to questions such as where and which device they are using to access online lectures and whether any Internet connectivity issues were experienced that interfered with learning. Results are given below.

Out of 884 students, 804 students (91%) reported using their smartphones to tune into online lectures. The remaining have access to devices such as computers and tablets. 816(93%) students reported that they access online lectures from the comfort of their home. Fig. 3 gives experiences of students residing in urban and rural areas regarding internet connectivity issues that interfered with learning.

Figure 3: Connectivity Issues by Dwelling Status

We observe from Figure 3 that both rural and urban students have reported internet connectivity issues that interfered with their course participation. Still, it appears that more students are affected in rural areas.

REMOTE ONLINE TEACHING METHODS

To reduce the spread of the novel Coronavirus, educational institutions worldwide moved rapidly to transfer various courses from on-campus to online, making online learning (e-learning) a compulsory teaching and learning process. Putting learning materials on the internet is not the same as teaching online. Teachers must adapt content and teaching methods to the new mode of delivery to engage the students in the learning process. To achieve this, adequate expertise, skills, and ICT equipment must be ensured (Aristovnik et al. (2020)). Courses offered online in response to a crisis or disaster are significantly different from well-planned online learning experiences. Moving a course intended for face-to-face delivery to a fully online "remote teaching" environment presents several challenges, including communication, pedagogy, and student interaction. Teachers will have to prepare well in advance for online lectures improving the course content and instructional methods. Students reported that teachers have adopted live and recorded lectures, discussions, quizzes, and assignments and recorded videos when asked about pedagogy teachers have adopted in their remote online teaching. Figure 4 provides a visual representation of student responses.

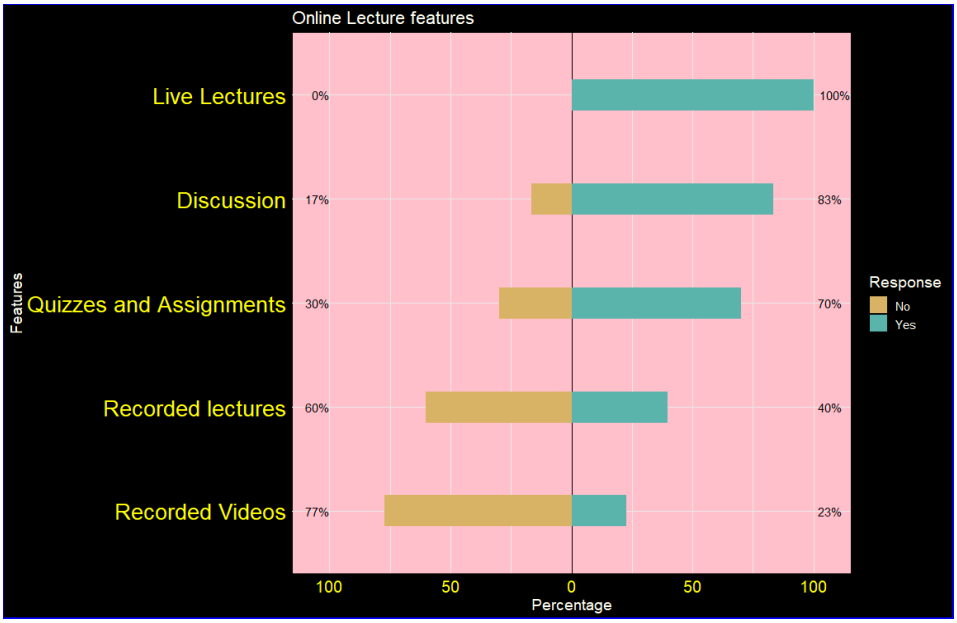

Figure 4: Online Lecture Features

Every respondent reported that teachers used live lectures for content delivery. Along with live lectures, teachers have adopted discussions, quizzes & assignments, and recorded lectures. It may be noted that only 22% of students reported that recorded videos were used by teachers.

STUDENT PERCEPTIONS ON QUALITY OF REMOTE ONLINE TEACHING

The survey asked students to rate their satisfaction with multiple aspects of online teaching quality, as shown in Figure 5.

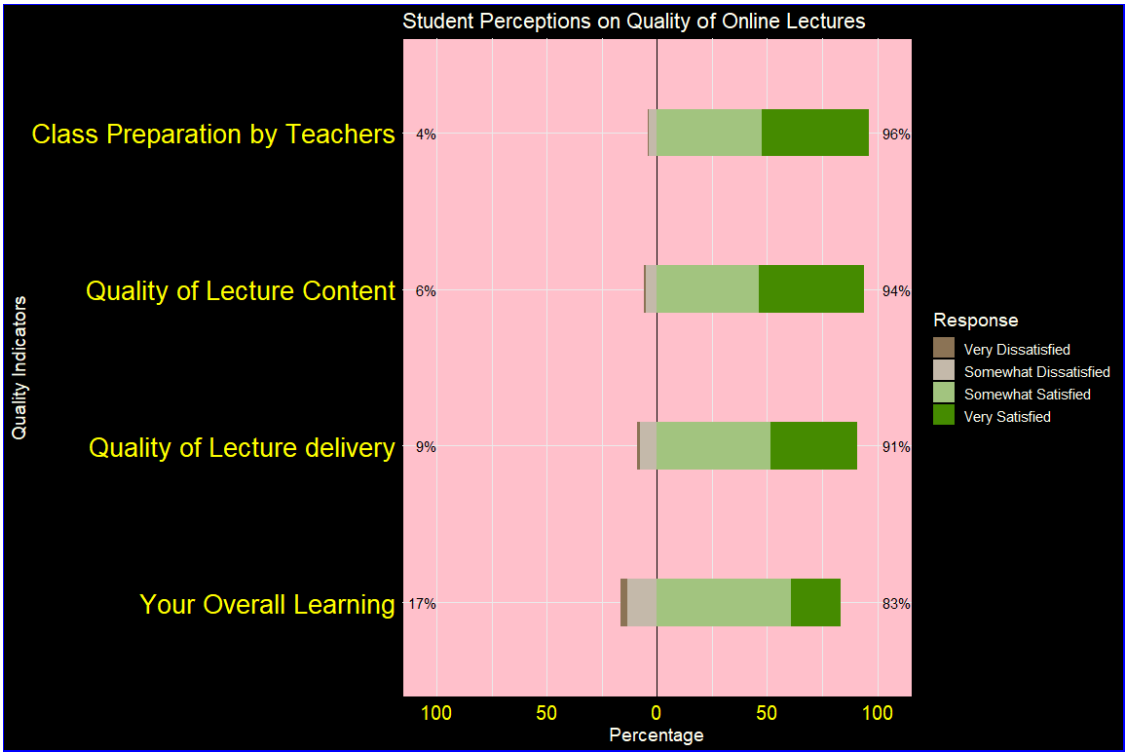

Figure 5: Student Perceptions on Quality of online lectures

More than 90% of the students reported that they are either very satisfied or somewhat satisfied with the teacher's preparation for online classes, lecture content, and lecture delivery. However, 17% of students said they are either very dissatisfied or somewhat dissatisfied with their learning in the course. It is to be noted here that students did not blame their teachers for their dissatisfaction.

CHALLENGES FACED BY STUDENTS DUE TO REMOTE TEACHING

As the COVID-19 pandemic has unfolded, students across the country have been exposed to remote learning for an extended period now. It almost seems like learning independently from home is the new normal. According to Gillis and Krull (2020),), most students faced obstacles to learning due to the pandemic, such as distractions, increased anxiety, and a lack of motivation, particularly female and first-generation college students. Course design, learner motivation, time management, and comfort with online technologies impact the success of an online learning experience, as found in a survey by (Song et al. (2004),) (2004). Also, survey participants indicated that technical problems, a perceived lack of community, time constraints, and the difficulty in understanding the online courses' objectives as challenges. (Means, Neisler, and others (2020)),), in their survey, reported that the most severe problem students faced are staying motivated when they did not have the structure of regular class routines. Internet connectivity, family distraction, anxiety, and a lack of space were found to be barriers to effective online teaching in a survey of medical students' perceptions of effective online teaching during the COVID-19 pandemic. Furthermore, these students reported a lack of motivation, difficulty concentrating, difficulty asking questions, and a lack of contact with peers during the online teaching-learning process (Dost et al. (2020),Niemi, Kousa, and others (2020)).In this study opinion of students was sought on these issues. Figure 6 provides a visual presentation of the responses.17% of the students reported that the most severe problem is sustaining interest throughout the session. For about 16% of students finding a quiet place for online classes was a challenge.

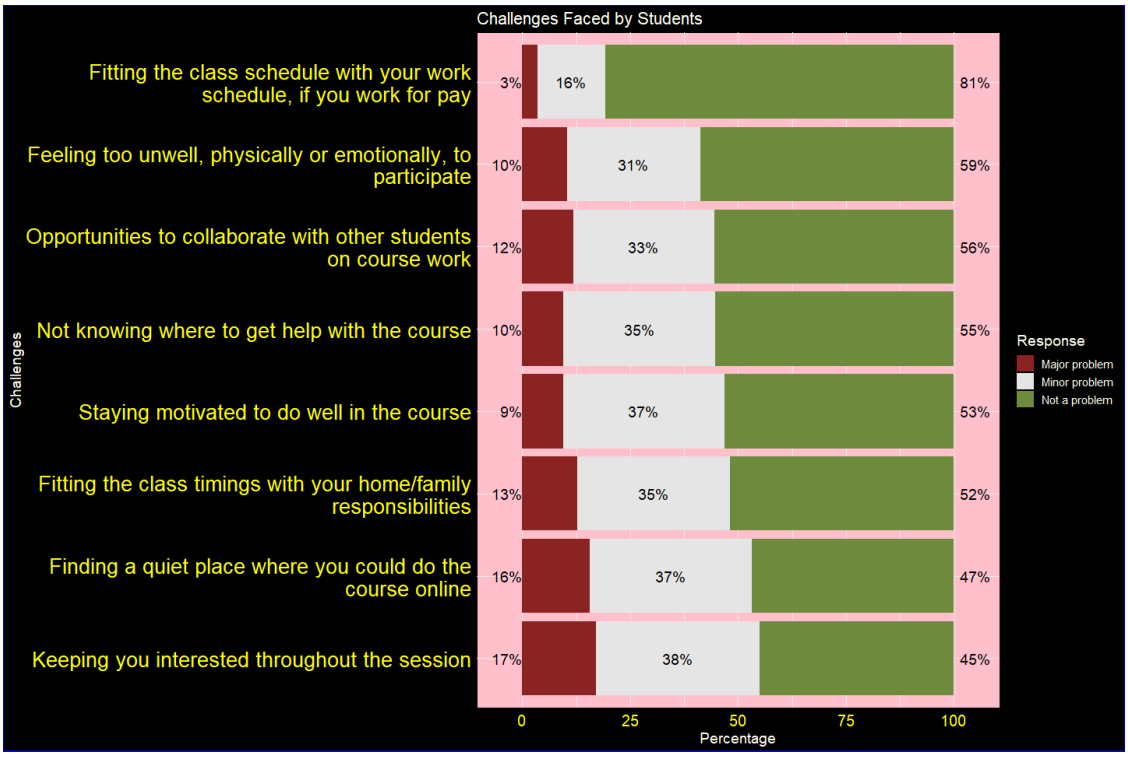

Figure 6: Challenges faced by Students

LEARNING SATISFACTION LEVELS OF STUDENTS WITH DIVERSE BACKGROUNDS

In a study, Loton et al. (2020) found no highly dissatisfied or poorly performing student sub-groups due to remote online teaching. According to (Means, Neisler, and others (2020)) learning satisfaction levels associated with the unplanned transition to remote instruction during COVID-19 were not uniformly distributed across college students. In this study, only 17% of students reported that they are either very dissatisfied or somewhat dissatisfied with their learning during this emergency remote online teaching (EROT). Nevertheless, an effort was made to identify which student group contained most number of dissatisfied students. Figures from 7 to 13 provide a visual presentation of the distribution of learning satisfaction levels of students belonging to various groups.

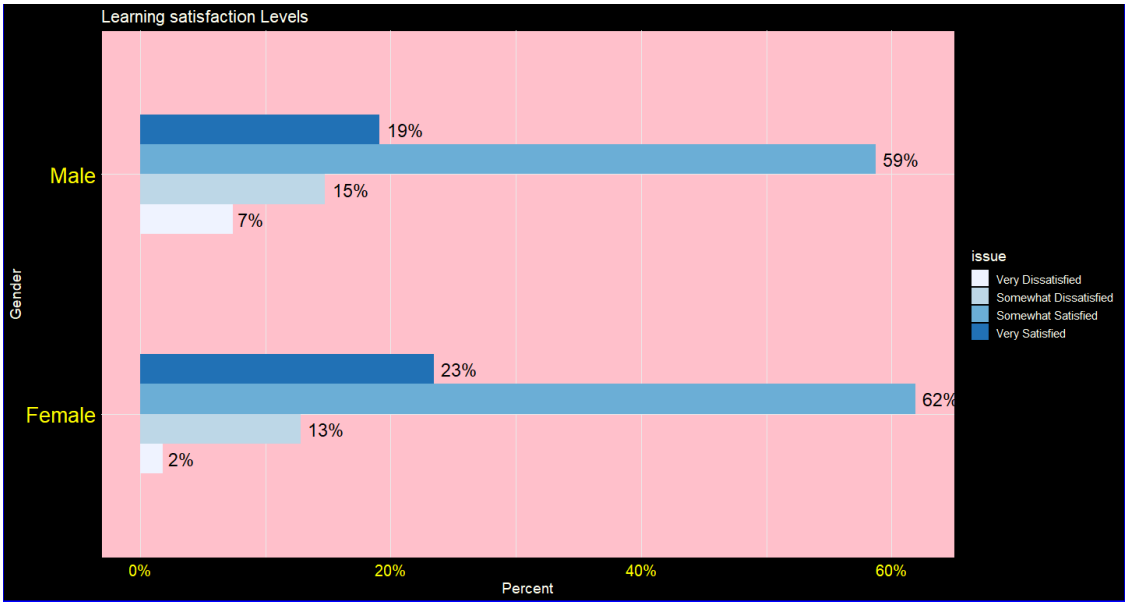

Figure 7: Learning Satisfaction levels by Gender

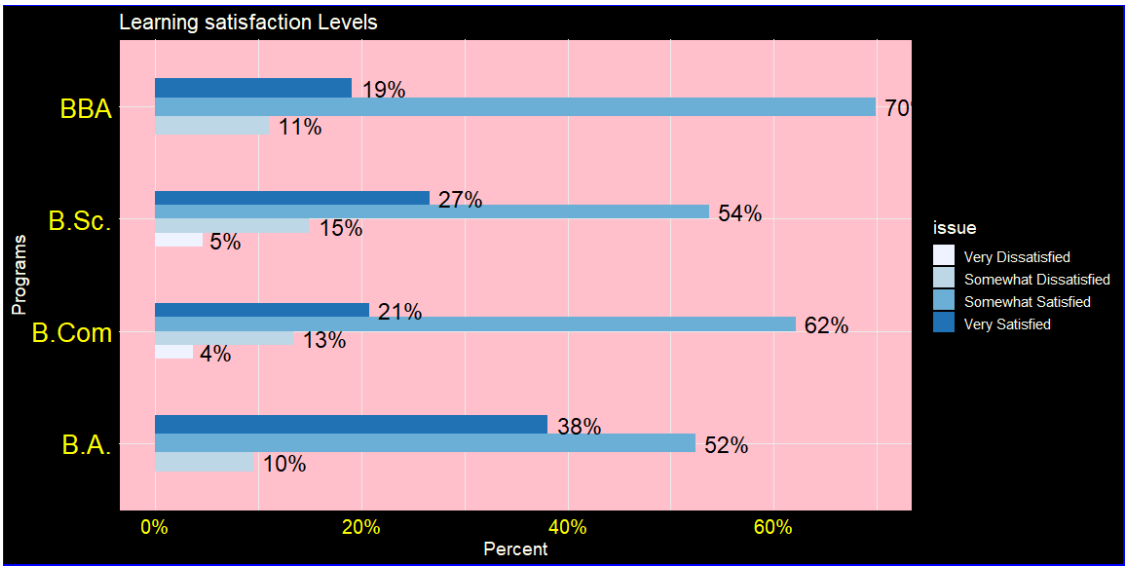

Figure 8: Learning Satisfaction levels by Program

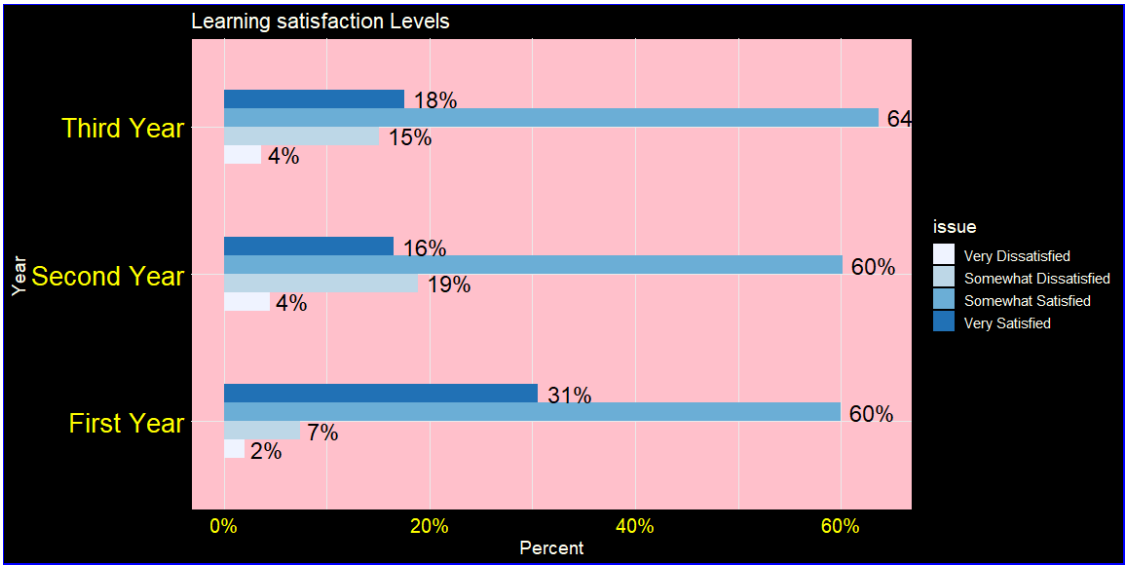

Figure 9: Learning Satisfaction levels by Year of Study

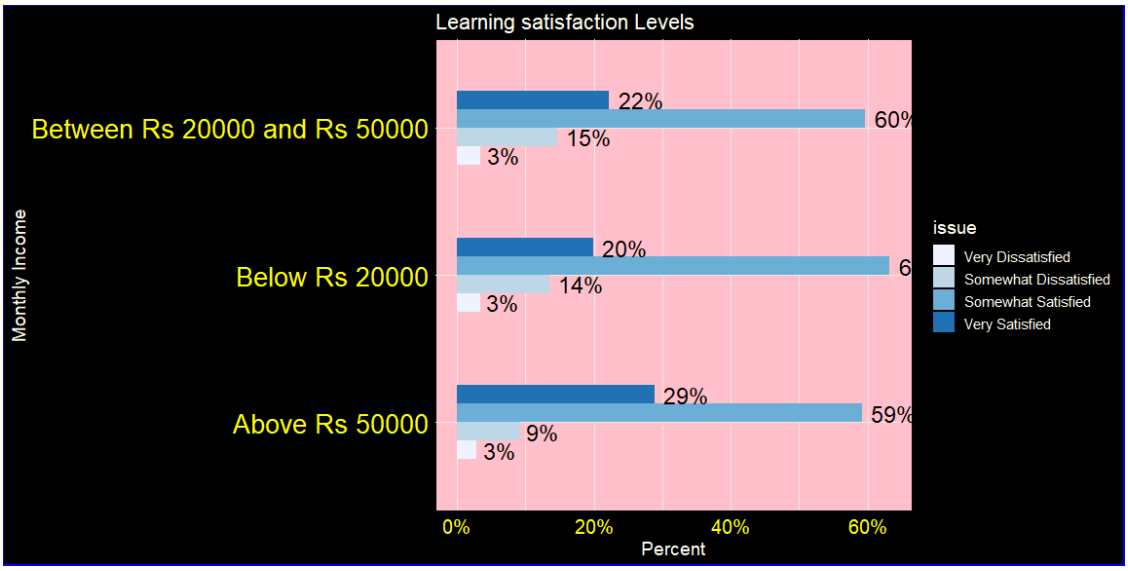

Figure 10: Learning Satisfaction levels by Family Monthly Income

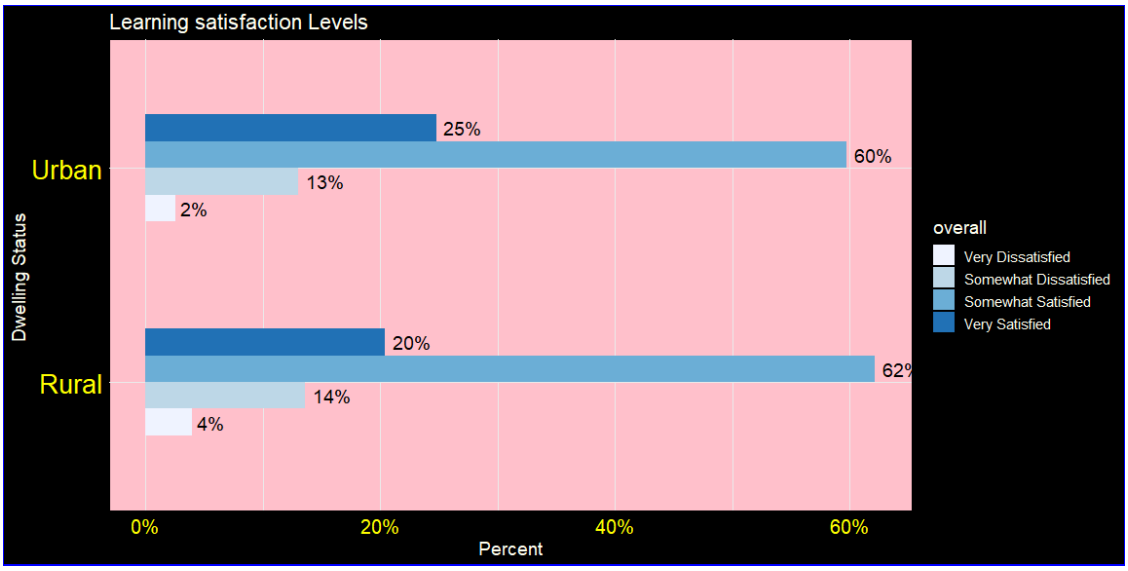

Figure 11: Learning Satisfaction levels by Dwelling Status

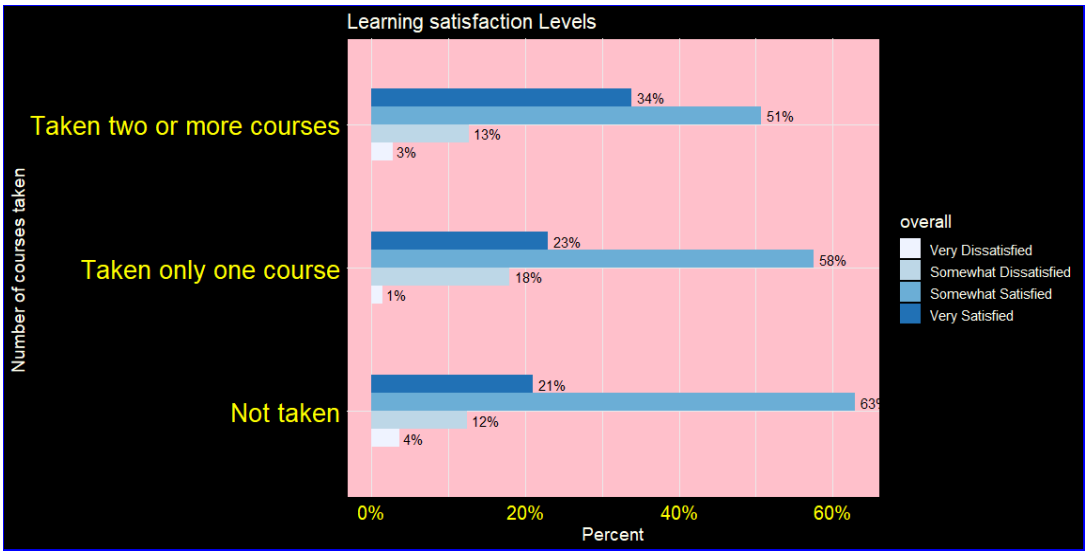

Figure 12: Learning Satisfaction levels by Online Courses taken previously

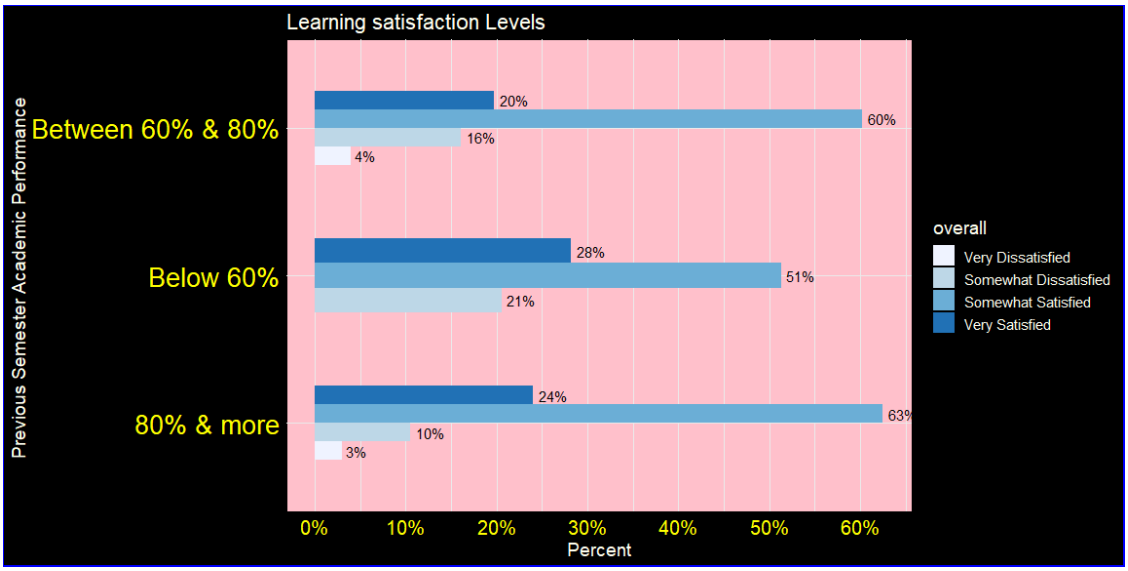

Figure 13: Learning Satisfaction levels by previous semester Academic Performance

Following observations can be made from these figures.

- More number of women students (23%) very satisfied with EROT when compared to males (19%)*
- More B.A. stream (38%) students are very satisfied with EROT compared to other streams. This may be due to the fact that B.A. programme has subjects that are theoretical in nature.
- More Freshers (30%) are very satisfied with EROT in comparison to their seniors. This may be because these students never experienced off-line classes in the college.
- A higher percentage of students belonging to high-income groups (29%) and students living in urban areas (25%) are very much satisfied with EROT. This might be because of the better facilities these students have in accessing online classes.
- A very significant point to be noted here that a larger percentage of students who have taken two or more online courses previously (34%) are very much satisfied with EROT.
- It is rather surprising to observe that a large percentage of students with not-so-good academic performance in the previous semester (26%) have expressed satisfaction with EROT.

CONCLUSIONS

Most of the Higher Education Institutes in India have resorted to online mode of teaching in response to the closure of educational institutions due to the pandemic Covid-19. In a way, teachers and students are compelled to adopt an online mode of teaching and learning. This survey on "Student perception on emergency remote online teaching" was carried out in an undergraduate college offering general degree education affiliated to Mangalore University. It was found that the majority of students are using smartphones from their homes to access online classes. Both urban and rural students experience internet connectivity issues, but the problem is more prevalent in rural areas. Teachers have been using various methods such as live lectures, discussions, quizzes and assignments, recorded lectures, etc., for transacting curriculum online. More than 90% of the students reported satisfaction over the quality of instruction. This shows that teachers are doing a great job in this institution and prepared themselves for the online mode of teaching. Subjects that are theoretical in nature can be taught effectively using online mode of teaching. A smaller percentage of students reported that they have problems sustaining interest throughout the session and finding a quiet place to access online classes. Analysis of students' learning satisfaction levels belonging to various groups revealed that a larger percentage of students who have taken online courses previously expressed a higher level of learning satisfaction. This suggests that the promotion of online courses among the students is essential so that learning is not disturbed in situations that warrant educational institutions' closure. The above findings suggest that Governments and educational institutions should develop technical infrastructure so that students become accustomed to blended learning, which is a way to integrate face-to-face and online learning experiences. Moreover, steps must be taken to ensure that teachers are trained to adopt the best online teaching methods to make the sessions more interactive and exciting.

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