



Impact of remote teaching-learning practices on students stress: A mixed method enquiry

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Abstract

The main objective of this paper was to study the impact of remote teaching-learning practices on students stress with relation to their Gender and Locality. Keeping in view the nature of the present study the researcher adopted the mixed method research design. Here investigator was used purposive random sampling method and selected 150 faculty members from three rural areas higher education institutions (Sukinda Degree College, Sukinda, Dharamsala Degree College, Jaraka and B.B. Mahavidyalya, Chandikhole) Jajpur District of Odisha and two urban areas higher education institutions from Cuttack District (Ravenshaw University, Cuttack and J.K.B.K Government Degree College). For the propose of the study researcher use self-developed semi-structured questionnaires on Students stress for data collection whereas, Percentage, Mean, SD were used for quantitative data analysis and thick descriptions was used for qualitative data analysis. It was found that majority of both urban areas and rural areas faculty members reported that long time studying at home environment and non-involvement of peer groups and teachers and bad impact on their eyes by watching constantly to the mobile during online class leads to develop the feelings of stress and depression among the students whereas, because of high cost of data pack leads to stress and depression among the rural students mentioned by the rural faculty members. Further it was found that both urban areas and rural areas faculty members reported that, build their carrier properly, direct contact with teachers and friends, classroom interaction were main reason for motivation towards for offline class than that of online class.

Keywords: Remote teaching-learning, students stress, gender and stream

Introduction

On March 11, 2020 World Health Organisation (WHO) declared Covid-19 as a pandemic. It affected more than 4.5 million peoples worldwide(WHO),(Wang *et al.*, 2020;Naik *et al.*, 2021^[30]; Malhotra,2021;Patel,2021^[35];Kasar.A.B *et al.*,2021). In India, the first affected case of Covid-19 was detected on 30 January 2020 in the state of Kerala (Wikipedia, 2020; Jena, 2020^[17]). On August 24, 2021, there were 213,469,613 active cases with a death count of 44, 57,090 in the world (World meter, 2021). On the same date, India reported 32,474,773 cases and 435,050 deaths (MoHA, 2021).Due to the pandemic situation all the level of Educational institution remained closed in India. According to UNESCO, 63 million teachers were affected in 165 countries (Orfan *et al.*, 2021). A total of 1.3 billion learners around the world were not able to attend schools or universities, and approximately 320 million learners are affected in India (Rawal, 2021; Wikipedia, 2021^[38]; Malhotra, 2021; Patel,2021^[35];Kushwaha, A.K. *et al.*, 2021). Due covid-19 in order to maintain the teaching-Learning process, suddenly Traditional-teaching –Learning process shifted to the Emergency Remote Teaching - Learning Process(Fordjour.O *et al.*,2020).From different Research studies it was observed that most of the Educational Institution have adopted Emergency Remote Learning via online learning platform, to replace most if not all, face to face theoretical lesson (Aristovnik,A. *et al.*, 2020), Adnan and Anwar,2020; Aguilera and Hermid, 2020; Hodges *et al.*,2020). Online Learning and Emergency Remote Learning, both are different from each other. Typically, online learning is regarded as well as planned from the beginning and designed with a lengthy process (Hodges, H. *et al.*,2020; Ergulec,2019;Palloff & Patt,2013) on the other hand ERL required a hurried and temporary shift in instructional delivery due to crisis and complete the syllabus of students (Kerzic, D. 2020;Sharma,C.R. *et*

al.,2020; Kit Ho.IM *et al.*, 2021)whereas, Millman (2020) explaining the situation as Emergency Remote teaching and learning or "pandemic pedagogy". "The main objective is not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis" (Hodges *et al.*, 2020;Rahiem,D.H.2020)^[37].It is also helpful where students were suffering from conflict, violence and war. To accommodate the new ways of delivery, emergency learning involves many adjustments as to communicate with teachers, how students interact with each other, how the students access the materials, ask questions, submit assignments, and engage in discussions.

It is also helpful where students were students are suffering from conflict, violence and war. The two scenarios are summarized in the Table 1below.

Rationale of the Study

Research studies conducted by (Chandra, 2020^[12]; Alateeq, Aljhani & AlEesa, 2020^[3]; Nambir, 2020; Rotas & Cahapay, 2020^[39]; Alqabhani, Almuwais, Benajiba & Almoayad,2020^[6]; Hashemi, 2021; Klapproth, Federkeil, Heinschke & Jungmam, 2020^[22]; Alghamdi & Ali, 2021^[4]; Zaidi, Gul & Ahmad, 2020; Pandey, Gul, Canete & Rocha, 2021^[34]; Malik & Javed, 2021^[25]; Son, Hegde, Smith, Wang & Sasangohar, 2021; Kansal, Gautam, Chintalapudi and Jain & Battineni, 2021^[18]) were pointed out that remote teaching-learning practices during Covid-19 have increased students stress and mental health. (1) The data derive from early stages of the pandemic through online survey; (2) a relatively small sample and homogeneous group; and (3) focusing chiefly on a restricted number of aspects of a

student's life such as academic work or life issues, a student's mental health, or a combination of both. In addition, most of the studies concentrate on a single higher education institution. Moreover, findings of most of the studies based on online survey data collected either from students or from teachers who are accessed via internet. The present study has focused on the teachers' perspective about the impact of remote teaching-learning practices on students' stress. Handful research studies have been conducted on teachers about their perception towards Online Learning (OL). The investigator has come across very few studies on the above dimensions in Odisha Higher Education. So, keeping in view the above areas of research, the investigator felt that there is need to undertake a research study on impact of the remote teaching-learning Practices on students Stress. Again it was observed that maximum research studies have been conducted Stress faced by the higher education Students with regards to the Online Teaching Learning process during COVID-19. Most of the studies have been used Qualitative and Quantitative Method in their research work and very few research studies have been conducted by using mixed method. Therefore, further studies are required to conduct on same dimension but by using Mixed Method Research.

Statement of the Problem

Thus, problem of the study was titled as "Impact of Remote Teaching-Learning Practices during COVID-19 on Students stress in Higher Education Institutions".

Objectives of the Study

Keeping in view the requirement of the study, the following specific objectives was stated:

1. To study the faculty members perception about impact of remote teaching-learning practices during COVID-19 on students stress in relation to their gender and locality.

Research Questions

1. How did male and female faculty members perceive the impact of remote teaching-learning process on students Stress?
2. How did urban areas and rural areas faculty members perceive the impact of remote teaching-learning on students Stress?

Research Methodology

Design of the Study

Keeping in view the nature of the present study the researcher adopted the Mixed Method Research Design.

Population and Sample of the Study

The target population of the study was all Higher Education Institution Faculty Members of Odisha. The accessible population was all the Higher Education Institution Faculty Members of Jajpur District and Cuttack District of Odisha. In this present study the investigator was used purposive random sampling method and selected 150 faculty members from three rural areas higher education institutions (Sukinda Degree College, Sukinda, Dharamsala Degree College, Jaraka and B. B. Mahavidyalya, Chandikhol) Jajpur District of Odisha and twourban areashigher education institution from Cuttack District (Ravenshaw University, Cuttack and J.K.B.KGovt Degree College, Cuttack).

TableNo.2 Gender and Location wise Sample description

Tools Used for Data Collection

For the purpose of the study investigator was used self-developed semi-structured questionnaires on students stress for data collection.

Procedure of Data Collection

In the present study the investigator was collect data personally. The investigator was visited the selected higher education institution from Jajpur District and Cuttack District to collect the data from faculty members.

Techniques of Data Analysis

Here investigator adopted convergent parallel design. In quantitative techniques the investigator used statistical techniques like Percentage, Mean, SD analysis whereas in qualitative techniques a thick description was used.

Data Analysis and Interpretation

Table No.3 shows that faculty members perception about impact of remote teaching-learning on students' stress with relation to location. From the table it was observed majority of the faculty members from both the urban areas (66.65% with mean of 3.66) and rural areas (68.95% with mean of 3.72) perceived as 'Agree' and 'Strongly Agree' with regards to 'Because of offline class Students are relieved from mental havoc relating to their future carrier prospects' with SD 1.01 and SD 0.99 respectively. Further it was analyzed that majority of the faculty members from urban areas (78%) perceived as 'Agree' and 'Strongly Agree' with regards to 'Demanding offline classes due to home environment is not suitable for learning' with mean 2.19 and SD 1.04 respectively whereas, high majority of the faculty members from rural areas (80.45%) perceived as 'Agree' and 'Strongly Agree' with regards to the same statement, with mean 1.96 and SD 0.95 respectively. Furthermore, it was observed that just more than two quarter of faculty members from urban areas (63.48%) were 'Agreed' and 'Strongly Agree' with regards to 'Due to prolonged usage of mobile phone cause of headaches' with mean 3.60 and SD 1.09 respectively on the other hand high majority faculty members from rural areas (80.45%) perceived as 'Agree' and 'Strongly Agree' with regards to the same statement, with mean 3.87 and 0.89 respectively. From the table it was observed majority of the faculty members from urban areas (74.61% with mean of 3.80) and almost all faculty members from (94.24% with mean of 4.24) perceived as 'Agree' and 'Strongly Agree' with regards to 'Students are free from stress due to not depending upon any technology like internet, smartphone' with SD 0.97 and SD 0.62 respectively.

This finding is in corroborated by the Zaidi, Gul & Rocha, 2020 [48]; Chandra,2020 [12]; Alateeq, Aljhan, & AIEesa, 2020 [3]; Nambir,2020; Rotas & Cahapay, 2020 [39]; Alqabhani, Almuwais, Benajiba & Almoayad, 2020; Klappprath,2020; Hashemi, 2021 [6]; Malik & Javed 2021 [25]; Son, Hegde, Smith, Wang & Sasangohar, 2021. All the above review stated that the most common reasons for filling stress during class. The reasons are (unsuitable connectivity, inadequate learning material, Vague learning contents, overloaded classes, poor peer communication in the class, watching constantly to the mobile very much, bad home environment and high cost of data pack on the other hands some studies like Alghamdi & Ali, 2021 [4]; Pandey,

Gul, Canete & Rocha 2021^[34] highlighted that online examination are making students stress free.

From the qualitative data furthermore it was analyzed that maximum urban areas faculty members argued that because of the following reasons students are filling stress and depression in online class (1) long time studying at home environment and non-involvement of peer groups and teachers leads to develop the feelings of stress and depression among the students, (2) impact on their eyes by watching constantly to the mobile and very much harmful to use mobile every day, on the other hand it was observed that some faculty members from urban areas were argued that because of the following reason students were not filling stress and depression in online class. (a) because, so many students are using mobile phone for academic purpose, (b) online class giving multimedia content which is most suitable for students for understanding concept, (c) online platform giving opportunities to the students for their own pace, (d) acquainted with the mobile use and misuse and online education is efficient during COVID-19 pandemic.

Furthermore it was observed from the qualitative data maximum rural areas faculty members argued that because of the following reasons students were filling stress and depression in online class (a) because of high cost of data pack, (b) long time studying at home environment and non-involvement of peer groups and teachers leads to develop the feelings of stress and depression among the students, (c) bad impact on their eyes by watching constantly to the mobile and very much harmful to use mobile every day. On the other hand, it was observed that some faculty members from rural areas were argued that because of the following reason students were not filling stress and depression in online class (a) It is easy for them to attain online class at home, (b) because it creates interesting, (c) online class giving multimedia content which is most suitable for students for understanding concept and (d) join in different online mode learning platform.

Table No.4 shows that faculty members perception about impact of remote teaching-learning on students stress with relation to gender. It was observed majority of the male faculty members (70.21% with mean of 3.75) and more than two quarter female faculty members (64.28% with mean of 3.60) perceived as 'Agree' and 'Strongly Agree' with regards to 'Because of offline class Students are relieved from mental havoc relating to their future carrier prospects' with SD 1.07 and SD 0.86 respectively. It was observed majority of both male faculty members (78.71% with mean of 2.06) and female faculty members (76.78% with mean of 2.05) perceived as 'Agree' and 'strongly Agree' with regards to 'Demanding offline classes due to home environment is not suitable for learning' with SD 1.05 and SD 0.89 respectively. Furthermore, it was observed that majority of male faculty members (76.59%) were perceived as 'Agree' and 'Strongly Agree' with regards to 'Due to prolonged usage of mobile phone cause of headaches' with mean 3.76 and SD 0.98 respectively on the other more than two quarter female faculty members from (67.85%) perceived as 'Agree' and 'Strongly Agree' with regards to the same statement, with mean 3.75 and SD 1.00 respectively. Again, it was observed high majority of the male faculty members (87.23% with mean of 4.14) and also high majority female faculty members (83.24% with mean of 3.91) perceived as 'Agree' and 'Strongly Agree' with regards to 'Students are

free from stress due to not depending upon any technology like internet, smartphone' with SD 0.81 and SD 0.81 respectively.

This finding is corroborated by the Zaidi, Gul & Ahmad, 2020^[48]; Chandra, 2020^[12]; Alateeq, Aljhani & AIEesa, 2020^[3]; Nambir, 2020; Rotas & Cahapay, 2020^[39]; Alqabhani, Almuwais, Benajiba & Almoayad, 2020; Klapproth, Federkeil, Heinschke & Jungmam, 2020^[22]; Hashemi, 2021; Malik & Javed, 2021^[25]; Son, Hegde, Smith, Wang & Sasangohar, 2021. All the above review stated that the most common reasons for filling stress during class. The reasons are (unsuitable connectivity, inadequate learning material, Vague learning contents, overloaded classes, poor peer communication in the class, watching constantly to the mobile very much, bad home environment and high cost of data pack on the other hand, some studies like Alghamdi & Ali, 2021^[4]; Pandey, Gul, Canete & Rocha, 2021^[34]; highlighted that online examination are making students stress free.

From the qualitative data furthermore it was analysed that majority of male faculty members argued that because of the following reasons students are filling stress and depression in online class (a) no directly contact with teachers and students, (b) lack of student teacher interaction and motivation, (c) buffering of teacher and students voice due to poor internet connectivity, (d) heavy work load or assignment, (f) memory storage full due to downloading teaching learning materials, (g) limited two ways communication between the teacher and students, (h) it affects to their eyes by watching constantly to the mobile, (i) long-time staying at home and non-involvement of peer groups and teachers, (j) long hour setting in front of laptop and mobile screen create irritation among students on the other hand it was observed that some male faculty members were argued that because of the following reason students were not filling stress and depression in online class. (a) because so many students are also using their mobile and laptop for the purpose of academic uses, (b) sit at home to attend online classes, acquainted with the smart phone use and misuse, (c) some students are homesick and some students are techno savvy, (d) they are given freedom whether join or not join in the classes.

Furthermore it was observed from the qualitative majority female faculty members argued that because of the following reasons students were filling stress and depression in online class (a) students interaction zero, (b) doubts are not clear properly because network issues, (c) due to online class students suffering like headache and eye side effects, (d) cause of psychological depression and economic hardship (e) peculiar atmosphere in the home, (f) online class boring in nature, (h) need balance in between class and household works, (i) content transaction is not good in online class on the other hand few female faculty members argued that because of the following reasons students were not filling stress and depression in online class (a) exposed to a number of online platforms to study at your own pace, (b) according to their own way either by sleeping on bed and eating food etc., (c) setting normal no need to panic, (d) online class gives them same amount of knowledge and ideas, (e) attend the class in their home environments

Main findings of the Study

Faculty members perception about impact of remote teaching-learning on students stress with relation to location

- a. It was found that high majority of rural areas members were perceived as “Agree” and “Strongly Agree” that students are free from stress in offline class due to not depending upon any technology like internet, smartphone in offline class and no need of prolonged usage of mobile phone whereas, majority of urban areas faculty members were ‘Agree’ and ‘Strongly Agree’ with regards to due to remote teaching-learning class havoc relating to their future carrier prospects, unsuitable home environment and due to prolonged usage of mobile phone cause of headaches were mention that students were free from stress and depression in offline classes.
- b. It was found that majority of both urban areas and rural areas faculty members reported that long time studying at home environment and non-involvement of peer groups and teachers and bad impact on their eyes by watching constantly to the mobile during remote teaching-learning class leads to develop the feelings of stress and depression among the students whereas, because of high cost of data pack leads to stress and depression among the rural areas students mentioned by the rural areas faculty members.
- c. Again, it was found that both majority urban areas and rural areas faculty members argued that students were not filling stress due to online class giving multimedia content which is most suitable for students for understanding concept and easy to attain classes at home and activity based, face-to-face discussion and getting direct opportunity to clear doubts, less chance for cheating were the main reason for making better students attention in offline class than that remote teaching-learning class.

Faculty members perception about impact of remote teaching-learning on students stress relation to gender

- a. High majority of both male and female faculty members perceived as ‘Agree’ and ‘Strongly Agree’ with regards to “Students are free from stress due to not depending upon any technology like internet and smartphone”. It was found that majority of the male faculty members perceived as ‘Agree’ and ‘Strongly Agree’ with regards to “In offline class Students are relieved from mental havoc relating to their future carrier prospects”, „Demanding offline classes due to unsuitable home environment” and “prolonged usage of mobile phone cause of headaches”.
- b. It was found that more than two quarter female teachers perceived as ‘Agree’ to ‘Strongly Agree’ with regards to in offline class Students are relieved from mental havoc relating to their future carrier prospects, and “prolonged usage of mobile phone cause of headaches”.
- c. It was found that both male and female faculty member highlighted that lack of student teacher interaction and motivation in remote teaching-learning class, long hour setting in front of laptop and mobile screen create irritation among students, due to remote teaching-learning class students suffering like headache and eye side effects and remote teaching-learning class boring in nature were main reason for stress and depression among the students during remote teaching-learning class.

- d. It was found that male faculty members mentioned that buffering of teacher and students voice due to poor internet connectivity, heavy work load or assignment, memory storage full due to downloading teaching learning materials, long-time staying at home and non-involvement of peer groups and teachers were main reason for students filling stress and depression during class.
- e. It was found that majority female faculty members argued that because of the following reasons students were filling stress and depression in remote teaching-learning class, doubts are not clear properly because network issues, high cost of data pack, peculiar atmosphere in the home, content transaction is not good in remote teaching-learning class.
- f. It was found that both some male and female faculty members were highlighted that acquainted with the smart phone use and misuse, homesick and techno savvy nature of student, exposed to a number of online platforms to study at your own space and attend the class in their home environments were main reasons students are free from the mental stress and depression.

Educational Implication of the Study

Based upon the findings of the present study and in the light of the experience gained during the conduct of the present appraisal, some suggestions have also been given for carrying out further research in the same field. These suggestions are given below.

- Government should provide special funding for capacity building initiatives for rural areas and urban areas education institutions, such as the set-up of student support services or learning and teaching centers.
- Offer financial help for purchasing computers and Internet packages to students from socio-economically disadvantaged backgrounds.
- The government should launch and incentivize teacher training programs for both rural area and urban area faculty members at the national and state level, especially for improving the digital skills of the teaching workforce and introducing to specific pedagogies for online teaching.
- Governments should establish robust evaluation mechanisms through which to assess student and stakeholder satisfaction with the education system.
- A permanent service should be established at all educational institutions to answer student and staff questions related to both technical (e.g., access to online platforms) and content issues (such as for instance student assessment).
- When designing e-assessment, developers must consider the reliability of the program and its safety along with ensuring its fairness among all students
- In order to develop good attendance of the students in the offline classroom teacher should use multi-media content which making offline teaching so interesting.
- In order to bring attention more in offline class teachers should follow the blended format of teaching inside the classroom
- Government should arrange different counseling programs for the students by which they can free from stress.

- The tool used in this study have been developed by the research herself and these are not standardized tool
- The sample of the study is small or limited to three rural areas institutions and two urban areas institutions, so the study may not be generalize.

Conclusion

The overall picture of the study reveals that all the aspects of academic activities influenced by the remote teaching. It is accepted as best alternative method during COVID-19 pandemic. Due to remote teaching the student's attendance is also affected. Bothe the rural and urban faculty member as well as both male and female faculty members are reported because of online assessment students are filling stress free. Furthermore, it was conclude that all the faculty members were reported that students were filling stress and depression in remote-learning class due to students zero interaction, doubts are not clear properly because network issues, due to online class students suffering like headache and eye side effects, cause of in psychological depression and economic hardship, peculiar atmosphere in the home, remote teaching-learning class boring in nature, need balance in between class and household works and content transaction is not good in remote teaching- learning class.

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