



Student satisfaction towards the virtual learning in Higher education Sector

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Abstract: Covid-19 outbreak has affected the world in various manner, which has not been experienced by the world earlier. Primarily it affects the health of people but along with this, livelihood of people, economy of nations, employment status in the country and education sector has also been affected by this pandemic. There is no such sector which remains untouched from the effect of COVID-19 outbreak. The whole world is facing numerous challenges due to these situations. A big section of students has also got affected by this but as the change is persistent; there are different strategies for different level of students. Education institutions are using different strategies for their students like there is different approach for primary students, secondary education students and higher education students. This paper assesses the student satisfaction towards the virtual learning approaches provided by their very institute or university. A sample of 202 students of different universities gathered through the Purposive Sampling, which has been provided the basis of analysis.

Key Words: COVID 19, Students satisfaction, higher education sector, Virtual learning

I. INTRODUCTION

In this prevailing situation, the whole education sector is facing challenges as most of the governments have temporarily shut the education institutions to contain the spread of virus COVID-19. Whether it's an institute or university or teachers or students, all the stakeholders are in trouble due the lockdown things in the country. Being the stakeholders of the education sectors, everyone is contributing their bit but the question is what our major stakeholder i.e. students think of the changes adopted by the HEI, are they ready to accept all those changes, are they ready to take up the regular studies even in this tough time and even if they have started with their studies, how satisfied they are, So to find out all those answers it becomes necessary to take these things in front and enquire about it.

There are many platforms which have been used by the government and educators to reduce the effect of disruption in the studies. Government has started with Doordarshan, All India radio and other community radio to provide as a source of education. HEI have also introduced their students to online or virtual learning platforms. Some of them have already been involved in that and some of them have just adopted the change and introduced those platforms. The platforms can be already recorded classes or live online classes through any of the medium like Zoom, Google meet team etc and in such a way all have tried to reduce the effect of the COVID outbreak. All those tools have their own requirements as well like the universities, educators and students all need to have high speed internet and education delivery platforms, the students need to have smart phones or tablets or laptops otherwise this will lead to more challenges for them.

It is important to find out that the students are satisfied with those current approached of virtual learning. If anything new has introduced then it is required to see the results and in case of studies when methods of teaching is changing constantly due to COVID-19 situations, the observed results will clear the picture about the execution strategies. In higher education sector, students are the one who can be considered as a major stakeholder and by assessing their satisfaction level, one can even observed the effectiveness of the new methods.

The term student's satisfaction has so many different dimensions. With every new study we get a new dimension as the scenario of studies, teaching pedagogy, teaching environment has been constantly changing by the time. Sometimes the factors which affect the student's satisfaction may be from outside the HEI such as health issues, financial difficulties and family related issues (Thompson & prieto,2013). Some other factors may be directly related to the HEI such as perceived lack of perceived lack of quality of education, high tuition fees, disappointing learning environment and university reputation, inflexible

schedule, bad location of intuition, etc. (Melinget al. 2012). Students satisfaction may get affected by different factors in different countries as well.

In today's world, the use of virtual learning is nothing new, but in the countries like India, this is believed to use the blend approach. It has been observed that there is no difference between students in developed countries and emerging countries in the sense, if service quality is good, students are satisfied, and if students are satisfied, they will remain loyal to the university. Universities providing e-learning services must ensure that the e-learning system's software and hardware are modern and compatible so that the e-learning system operates smoothly and reliably. There should be adequate and accurate e-learning system that means the information provided should be easily accessible and accurate enough. This will also lead to more student satisfaction during the e-learning. (Long Pham et al, 2019)

learner-instructor interaction, learner-content interaction, and Internet self-efficacy may be considered as good predictors of student satisfaction while interactions among students and self-regulated learning does not contribute to student satisfaction. Learner-content interaction explained the largest unique variance in student satisfaction. Additionally, gender, class level, and time spent online per week seemed to have influence on learner-learner interaction, Internet self-efficacy, and self-regulation. (Yu Chun Kuo et al, 2013)

II. LITERATURE REVIEW

Today's student demands knowledge up-lifting, not only the good grades and hence, they feel satisfied with the practical learning styles like case study method and problem based exercises through which they gain more learning (Gurpinar, E. et al., 2010). The theoretical knowledge preferred for the conceptual understanding but that need to be linked with the application in relative field. Baptista, R. et al (2014) also supported the same when they found positive effect of simulation technique on the learning level and satisfaction level of nursing students in Portugal. The simulations allow students to Decide, Apply and analyze the consequences and in the same manner, they learn through experience. Today's consumerist society wants all the modern facility along with the quality education and other academic factors. Modern amenities affects the satisfaction of modern student (Senior, C. et al., 2017).

The equipments, tools, software and other supportive gadgets as per the matter to be studied are considered very important as the level of easiness, comfort, safety while using the same contributes to the satisfaction level of the students. John, W Reinhardt (2018) also highlighted the positive role of equipments to the student's satisfaction level in Dayton. The comprehensive study also reflected the traditional factors which never changes for student's satisfaction and includes infrastructure, quality of teaching, assessment system, and feedback system (Burgess, A. et al., 2018). The quality of education, mode of delivery and assessment system can never be ignored for making the students more satisfied. Every student seeks value for money and hence need to facilitate with the placement opportunities against the fee and other infrastructural support for updated version of knowledge. Siming, L et al. in 2015 also emphasized on the factors of quality education for student's satisfaction and also added two factors that include teacher's preparedness and relationship between student and teacher. They found through their study in China. Sweeny, L in 2016 also supported these factors for the satisfaction of students at institution and found no effect of social status and income level of students with the same.

Along with the infrastructural factors, personal factors and well being of the students are equally important for raising their satisfaction level. The emotional connect between the institution and students, academic success and motivation from teachers contributes to the satisfaction level whereas depression, anxiety, and unrealistic expectations and lack of mental support negatively affects the satisfaction level of the students Wilcox, G & Nordstokke, D (2020). The students from other places than the institution, expects additional support to get adjust at new place and hence, institutional supportive environment and supportive polices also contributes to the satisfaction level of the students Korobova, N & Starobin, S (2015). The helping hand from the institution side can make the life of students comfortable and enriched in the institutional campus. This support can be reflected through the healthy relationship between the student and mentor (Siming, L et al. 2015).

Online teaching is increasing with the emergence of latest technologies and students are finding it more convenient but some factors like family commitments and employment factors are affecting the quality of online teaching and learning at both ends. The interaction factor which is more important for collaborative

learning is also affect the satisfaction level (Salam, M. &Farooq, M., 2020). If the online platform can provide interface for interaction, it can boost the satisfaction level of the students. The retention is found difficult in online platforms (Gazza, E. &Matthias, A., 2016) and the relationship of retention is witnessed positive and direct with the satisfaction level of the students (Sweeny, L. 2016). The retention rate is higher in first year in higher education system as factors vary from first year to last year (Ramos, A. et al., 2015). The first year students gives more preference to extracurricular activities with studies as they want to enjoy college life whereas in the last year, they give more preference to placement and assessment-feedback system to secure good career. They prefer a regular check on their performance which can be maintained through online portals and accordingly students can plan for their remedial actions (Ramos, A. et al., 2015).

Student's centric approach is an emerging strategy for enhancing the quality of service in higher education. It also attracts the required public interest(Stodnick& Rogers, 2008). The focus of such strategy is to consider the students as customers and being the service providers, the universities need to provide the best services for students in terms of education (Stodnick& Rogers, 2008), This leads to more satisfaction among students and improve the loyalty towards the university (Martinez-Arguelles &Batalla-Busquets, 2016).

Wolf, A. &Peyre, S. (2018) studied the satisfaction level of the students with the blackboard videos University of Rochester School of Medicine and Dentistry and School of Nursing. The data was collected from 30 students who were evaluated after going through 10 online modules during the summer vacations. The online modules were designed with the help of animated blackboard style videos. The results revealed the higher satisfaction level of the students with the online learning sessions.

Smith, R. et al. (2018) conducted a study to know about the mindset and perspective of Nursing students towards the educational satisfaction in Griffith University, Australia. They chose two separate multi level and high profile nursing education campus for the study in which seventeen demographically different students participated as the sample. The sample was drawn from different phases of the Nursing courses.The data was collected from the participants through semi structured interviews in different stages wherein the sample was asked for their experience of learning and associated satisfaction and dissatisfaction feeling with the same. The data was analyzed with the help of constructive grounded theory method and it was found that social context affects the nursing learning and make the journey valued learning. This valued journey was found more effective to determine the satisfaction and dissatisfaction level of students.

Vavasseur, A. et al. (2020) executed a study to know whether the blended learning as a mix of various aspects of teaching methodologies affects the student's satisfaction and engagement level or not. They conducted the study on the students of radiology courses in Columbia University, France. The study was conducted on 353 students of radiology from different batches who were chosen with the help of purposive sampling technique. The data was collected through pre and post evaluation of the students after facilitating them with 69 videos. The post test was conducted after 3 months and it was found that there was significant improvement in the scores of the students in post test evaluation and the satisfaction level was found 99%. It was recommended to induce flexible learning and adoption of various new teaching methodologies to improve the student's satisfaction and learning.

III. RESEARCH METHODOLOGY

Research Problem

As the Covid-19 broke out in the country , everything was shut , every sector gets affected by this. Suddenly all the higher education institutions have also got the instructions to hold the classes and slowly the duration of the lockdown has increased. As education gets affected by it, Institutions have quickly shifted to the solution and online classes have been considered as the best solution to this. During all those changes it was required to know the student's satisfaction towards the new approaches. This thought leads to the idea of this paper.

Research Gap

There are few studies has been done on student satisfaction and virtual learning but no such study have done yet during this kind of pandemic situation which arises due to COVID-19 .The factors affecting the

students satisfaction under these circumstances will be different so to explore this area, the study has been conducted.

Objective and hypothesis of the study

The primary objective of this paper is to assess the satisfaction level of students towards the online learning methods during the COVID -19 breakdown.

To study the level of satisfaction among students of higher education institutes, following hypothesis have been framed.

H₀₁: There is no significant difference in the satisfaction level of students on the basis of gender, Institution type, course and branch.

Research Design

Research Design: The study is descriptive in nature and conducted during April ,2020 to June,2020.

Sampling: A sample of 202 students have been taken into the consideration through the Purposive sampling method. The standard revised scale given by PoojaPaharia (2019) has been used for the purpose of data collection through questionnaires.

IV. DATA ANALYSIS AND INTERPRETATION

Frequency analysis and inferential nalaysis was used for the purpose of analyzing the data. The data analysis is present as under.

Summary of items considered as student satisfaction

Total 17 items were taken into the consideration for the purpose of measuring student satisfaction. These were broadly categorized in seven categories as follows:

Frequency and percentage wise analysis was done to identify the major factors contributing to students satisfaction (refer Table 1). 65% Students was in favor of Reference & retention (RR1) and 72 % students were favoring RR2 for their satisfaction. 76% of total respondentsbelieves that quality of education is an important factor to be considered for measuring students satisfaction. 80% of total respondents were considering mentoring facility, as an important factor of student satisfaction. 83% respondents believe that health and safety matters a lot, when it comes to student satisfaction. 82% Students was favoring Supportive learning environment and extracurricular activities for measuring the students' satisfaction whereas 66% students were considering infrastructure as a major factor contributing in students' satisfaction. It has been found that reference & retention was the least important factors with the value of mean 2.22 and Extracurricular activities was the most important factor with the mean value of 3.98, considered by the respondents.

Table 1 :Summary of items considered as student satisfaction

S. No.	Factors	Items
1	Reference & Retention	Readmission & Suggesting others
2	Quality of Education	Teacher's qualification, Delivery mechanism, Content development, Teaching methodology
3	Infrastructure	Library resources, Internet connectivity, Database, Classroom resources, Smart facilities.
4	Supportive Learning environment	Doubt-handling and tutorials, team assignments, Feedback and Assessment system
5	Health & Safety	Hospital facilities, security in hostels, Security measures in campus, entry and exit system.
6	Extracurricular opportunities	Sports and Cultural events opportunities, Sponsorship for external event participation.

7	Mentoring facility	Career counseling, Mentor-Mentee system, Anti-ragging cell.
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Table 2: Frequency Analysis

Demographic Details		Numbers	Percentage
Gender	Female	89	44.5
	Male	111	55.5
Institution Type	Private	145	72.5
	Government	55	27.5
Course Type	Undergraduate	148	74
	Postgraduate	52	26
Branch	Professional	126	63
	Technical	74	37

Table 3: Independent sample T - Test

Grouping Variables	Statistical Value	df	P	Lower	Upper
Gender	.575	198	.953	-.182	.194
Institution Type	.559	198	.711	-.247	.169
Course Type	.767	198	.316	-.319	.103
Branch	.042	198	.012	.055	.435

V. HYPOTHESES TESTING

It has been found that the statistical value of T- test is higher than the significant value so the null hypothesis will be accepted . This shows that there is no significant difference among students' satisfaction towards the Virtual learning system on the basis of gender, institution type and course type. The statistical value of T-test on the basis of branch is less than the significant value which shows that the null hypothesis will be rejected and there is a significant difference in students' satisfaction on the basis of their respective branches.

VI. DISCUSSION & CONCLUSION

Students satisfaction is an important factor while measuring the quality of higher educations and vice versa. In this crucial time, students are one of the major stakeholders whose interest are to be saved promptly. There should be some strategies to decrease the effect of pandemic on their studies and along with this, it should also be monitored that whether they are satisfied with all the changes and arrangements made by the institution or not. The study was conducted with the motive of knowing student's satisfaction towards the virtual learning system in the pandemic and result shows that there is no significant difference in students' satisfaction irrespective of their gender, institution type and course type but on the basis of branch, there is a difference in student's satisfaction.

REFERENCES

1. Adrian Burgess, Carl Senior and Elisabeth Moores (2018), A 10-year case study on the changing determinants of university student satisfaction in the UK, PLoS ONE, Vol.- 13(2), pp.1-15.
2. AdrienVasseur, FabriceMuscari, Olivier Meyrignac, MatthieuNodot, FabriceDedouit, Paul Revel-Mouroz, Louis Dercle, Laura Rozenblum, Lucy Wang, Charlotte Maulat, Hervé Rousseau, Philippe Otal, Laurent Dercle and Fatima-ZohraMokrane (2020) , Blended learning of radiology improves medical students' performance, satisfaction, and engagement, Insights into imaging, Vol-11 (1)

3. Aline Marcelino Ramos , Jamila Geri Tomaschewski Barlem , Valéria Lerch Lunardi , Edison Luiz Devos Barlem, Rosemary Silva da Silveira, Simoni Saraiva Bordignon (2015), SATISFACTION WITH ACADEMIC EXPERIENCE AMONG UNDERGRADUATE NURSING STUDENTS, *Texto & Contexto – Enfermagem*, Vol. -24 (1), pp 187-195
4. Ann Petrila, Oran Fireman, Leslie Schnoll Fitzpatrick, Robyn Wertheimer Hodas, and Heather N. Taussig (2015) Student Satisfaction With an Innovative Internship, *Journal of Social Work Education*, Vol-51(1), pp 121-135
5. Carl Senior*, Elisabeth Moores and Adrian P. Burgess (2017), “I Can’t Get No Satisfaction”: Measuring Student Satisfaction in the Age of a Consumerist Higher Education, *Frontiers in Psychology*, Vol-8, PP 1-3
6. Elizabeth A. Gazzaa*, April Matthiasb (2016), Using student satisfaction data to evaluate a new online accelerated nursing education program, *Evaluation and Program Planning journal*, 58 , 171–175
7. Erol Gurpinar, Mustafa Kemal Alimoglu, Sumer Mamakli, and Mehmet Aktekin (2010), Can learning style predict student satisfaction with different instruction methods and academic achievement in medical education?, *American Journal of Physiology - Advances in Physiology Education*, Vol. 34 (4), pp.192-196
8. Korobova, Nadia, Starobin, Soko S. (2015), A Comparative Study of Student Engagement, Satisfaction, and Academic Success among International and American Students, *Journal of International Students*, Vol-5 (1), pp-72-85
9. Long Pham, Yam B. Limbu, Trunk K. Bui, Hiet T. Nguyen & Huong T. Pham (2019) , Does e-learning service quality influence e-learning student satisfaction and loyalty? Evidence from Vietnam, *International Journal of educational technology in higher education*, vol.16
10. Lorraine Sweeney (2016), A Predictive Model of Student Satisfaction, *Irish Journal of Academic Practice*, Vol.5 (1), pp.8
11. Luo Siming, Niamatullah, Jianying Gao, Dan X, .Khurram Shafi (2015), Factors Leading to Students’ Satisfaction in the Higher Learning Institutions, *Journal of Education and Practice*, Vol-6 (31), pp 114-118
12. Maimoona Salam and Muhammad Shoaib Farooq (2020), Does sociability quality of web-based collaborative learning information system influence students’ satisfaction and system usage?, *International Journal of Educational Technology in Higher Education*, Vol.17(1)
13. Martinez-Arguelles, M., & Batalla-Busquets, J. (2016). Perceived service quality and student loyalty in an online university. *International Review of Research in open & distributed learning*, 17(4), 264-279
14. Meling, V., Kupczynski, L., Mundy, M., & Green, M. 2012. “The role of supplemental instruction in success and retention in math courses at a Hispanic serving institution.” *Business Education Innovation Journal* 4(2): 20-31.
15. Morgan R. Smith, Laurie Grealish, Saras Henderson (2018), Shaping a valued learning journey: Student satisfaction with learning in undergraduate nursing programs, a grounded theory study, *Nurse Education Today*, Vol. -64, pp. 175-179
16. Paharia, Pooja (2019), A scale development for student satisfaction: A perceived dimension of quality education, *Humanities and Social Sciences Reviews*, Vol.-7(1), pp. 360-366
17. Reinhardt, John W., Romine, Jarrett J. and Xu, Zheng (2020), Factors contributing to student satisfaction with dental loupes and headlights, *European Journal of Dental Education*
18. Ross Guest, Nicholas Rohde, Saroja Selvanathan & Tommy Soesanto (2018) Student satisfaction and online teaching, *Assessment & evaluation of higher education*, Vol.-43, Issue-7
19. Rui Carlos Negrão Baptista¹ José Carlos Amado Martins² Maria Fátima Carneiro Ribeiro Pereira³ Alessandra Mazzo (2014), Students’ satisfaction with simulated clinical experiences: Validation of an assessment scale, *Revista Latino-Americana de Enfermagem*, Vol. – 22(5), pp. 709-715.
20. Stodnick, M., & Rogers, P. (2008). Using SERVQUAL to measure the quality of the classroom experience. *Decision Sciences Journal of Innovative Education*, 6(1), 115–133. <https://doi.org/10.1111/j.1540-4609.2007.00162.x>
21. Thompson Lemaro R. and Leon C. Prieto. (2013), “Improving retention among college students: Investigating the utilization of virtualized advising.” *Academy of Educational Leadership* 17(4): 13-26
22. Wach, F.-Sophie, Karbach, Julia, Ruffing, Stephanie, Brünken, Roland, Spinath, Frank M. (2016), University Students' Satisfaction with their Academic Studies: Personality and Motivation Matter, *Frontiers in Psychology*, Vol-7, pp. 1-12.
23. Wilcox, Gabrielle and Nordstokke, David (2020), Predictors of University Student Satisfaction with Life, Academic Self-Efficacy, and Achievement in the First Year, *Canadian Journal of Higher Education*, Vol. 49 (1), pp. 104-124

24. <http://www.irrodl.org/index.php/irrodl/article/view/1338/2416>