Evaluating Online Teaching During COVID-19 Through Faculty Perceptions - An Empirical Study

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ABSTRACT

The world crippled due to Corona outbreak, and everything came to standstill. The implementation of lockdown and social distancing completely paralyzed the global activities. Entire education system all over the world, shifted from traditional face to face learning to online teaching-learning method as a panacea during the time of crisis. "We are in this together - We will get through this together "was the positive thought of every teacher and student, when the suspension of in-campus activities and transmission to online education was declared in all educational institution in almost all countries, as part of the curfew measures taken to curb the Covid -19 Pandemic.This paper makes an attempt to identify holistic picture of whether transition to online teaching was successful, highlighting the pros and cons of online teaching during Covid-19 through the perceptions of teachers of Mangalore. The paper employs both quantitative and qualitative approach. An online survey was conducted. The findings from the study suggest that, though pandemic utterly disrupted an education system, the pros-online teaching, being the only option for continuation of academic activities was whole-heartedly adopted by dedicated teachers and it overweighed the cons, especially in current global scenario. Though overnight shift to online teaching was not easy and face to face with virtual blended interaction was preferred the most.

1. Introduction

Books, blackboards are used as teaching aid under, the traditional classroom education. Classrooms equipped with white boards, projectors or audio-visual display equipment and digital boards constitute modern classroom education. But, the learning environment created, using internet and video/audio and text communication and software, is a online education. The education system in India, is a blending of traditional and modern classroom education and requires the students to attend the classes on regular basis. The old education system and new education system, though both are related, yet there is a drastic difference in their practical applications. The old education system focused on theoretical aspect of learning, and lacked skill for practical implementation of learning. But today's modern education system not only balances both, theoretical and practical learning, but are also in-line with new modern technologies, which is a need of hour, in today's employment market, when students join the work force after their education.

Due to the outbreak of Covid-19, educational institutes were closed worldwide. Covid-19 was declared as pandemic by WHO officially on march 12 ,2020. Covid-19, a severe acute respiratory syndrome, originated in Wuhan city of China, which spread among individuals during close contact, resulted in millions of deaths worldwide. To get control over covid-19, precautionary measures such as maintaining social distancing, quarantine process, hygiene and sanitation was taken.

During the pandemic, to promote social distancing, educational institutions were closed worldwide, and teachers were confronted with the need to adapt to online teaching. Although, strangely, children are found to be protected from virus, but they were the

sources of spread, which was the main reason for prolonged closure of schools and colleges. In a situation where the students were not allowed to go schools, colleges and institutions, stakeholders and management of educational institutions had no other option, but to move from traditional to online education, by making use of internet technology, thus transition to online teaching and learning from a traditional classroom teaching inevitable.Covid-19 pandemic urged most higher education institutions worldwide to shift to online teaching and India was no exception.

A study was undertaken, to find out whether the transition from classroom teaching to online teaching during the pandemic was successful, , and to what extent teachers have successfully mastered these challenges, by surveying 62 faculty, teaching in various institutions, evaluating their experience of online teaching, challenges and opportunities faced by them and recommending solutions for a better online education system.

2. Objective

- To Enlist the views of educators on online teaching system during lockdown.
- To find out teacher's satisfaction level, due to transition from onsite to online lectures.
- To analyse from the educator's perspective, merits and demerits of online teaching and put suggestions for improvement.

3. Methodology

The primary data for the study was collected from the respondents of Mangalore city for measuring the success rate of transition from onsite to online lectures. The data was collected using a structured questionnaire with open and close-ended questions, from a sample of 62 respondents through an online descriptive survey. Random sampling method is adopted and samples are selected from Mangalore representing the teaching faculty from various educational institutes. The data collected from the respondents are coded, tabulated and analyzed into logical statements. Descriptive statistical tool-

percentage is being used to arrive at findings and conclusions. Secondary data is collected from the available literature, journals and web search.

4. Review Of Literature

Jeong, H. C., & So, W. Y. (2020). in their study "Difficulties of online physical education classes in middle and high school and an efficient operation plan to address them."adopted qualitative case study method to examine the difficulties of online physical education classes in the context of coronavirus disease 2019.The problems identified were, the value of physical education not adequately conveyed through online education, teachers lack expertise in operating online physical education classes, they suggested that value of physical education can be communicated through strategic learning. For active participation of the students, the evaluation processes should be less formal.

S.Wang,N.Bajwa,R.Tong et al .,(2021) in "Transitioning to Online Teaching" outlined some elements of online teaching, to be practiced by the educators, in order to be successful such as technical professional development, overcoming time and skill constraints, creating online forums, where the teacher can respond to queries or post -challenge problems from time to time (Wang, 2011).

Lokanath Mishra et al., (2020) conducted a survey study entitled," Online teaching-learning in higher education during lockdown period of COVID-19 pandemic" to examine the challenges faced by the teachers and students of Mizoram University, in adapting to the online teaching -learning process during COVID -19 pandemic. The sample comprised of 78 faculty members and 260 students in a descriptive survey. Data from the study reveal that even though efforts were made to connect with the students through digital tools, online teaching -learning mode is in its infancy. Excellent domain knowledge, proficient computer knowledge, communication skills, clarity of expression, emotionally connect with the students and other necessary skills to deal with the demands of online

platforms and the ability to resolve small issues during and after the online classes are found as online teaching skills and techniques needed to teach through online mode in this pandemic. (Lokanath Mishra, 2020).

Pravat Kumar Jena(2020) ,in his study, "Impact of pandemic COVID -19 on education in India", highlighted the positive impacts of COVID-19 such as blended learning, enhanced digital literacy, improved use of electronic media for sharing information, better time management .The negative impacts of COVID-19 as pointed were, educational activity being hampered, unpreparedness of teachers/students for online education, the gap between rich/poor and urban/rural were enhanced due to online teaching-learning method. He discussed the various measures taken by Govt. of India to provide seamless education in country and stressed access to technology and internet being an urgent requirement, must reach to the remote region, marginalized and minority groups for effective delivery of education. (Jena, 2020).

Gunjun Verma (2020) in her work entitled," COVID-19 and Teaching: Perception of School Teachers on Usage of Online Teaching Tools." Analyzed the experience of school teachers regarding usage of online teaching tools during pandemic (COVID-19). Findings of the study revealed that majority of teachers believed that usage of online teaching tools, benefitted students positively online as compared to the traditional methods. It was difficult to capture the attention of students and keep them engage. And again, lack of personal touch and interaction was an issue in virtual classroom. (Gunjan Verma, 2020).

5. Analysis And Interpretation Of Data

Table 1: DEMOGRAPHIC DETAILS

Demographic Details		FREQUENCY	PERCENTAGE
Age:	Below 30	12	19.40%
	31-40	15	24.20%
	41-50	29	**46.80%**
	51-60	6	9.70%
	Total	62	100.00%
Gender:	Female	28	45.20%
	Male	34	**54.80%**
	Total	62	100.00%
Designation:	Lecturer	13	21.00%
	Assistant Professor	20	**32.30%**
	Associate Professor	10	16.10%
	Professor	14	22.60%
	School teacher	5	8.10%
	Total	62	100.00%
Affiliation: School/University/Institute:	Private	46	**74.20%**
	Public	16	25.80%
	Total	62	100.00%

Teaching category:	School	4	6.50%
	Undergraduate	29	**46.80%**
	Post graduate	29	**46.80%**
	Total	62	100.00%
Years of experience in teaching	1 - 5yrs	20	32.30%
	6 - 10yrs	9	14.50%
	11 - 20yrs	25	**40.30%**
	Above 20yrs	8	12.90%
	Total	62	100.00%

It can be seen from the above table that maximum respondents belong to age group of 41-50 years. Out of 62 faculty respondents of Mangalore ,54.8% of them are male respondents and the remaining are female respondents. Regarding the designation,32.3%of respondents belong to the category of assistant professor followed by 22.6% who were professors.74.2% respondents teach in a private affiliated college. An important aspect to be noted in the teaching category is that , majority respondents teach college students and 40.3% of respondents have teaching experience of 11-20 years and 12.9% above 20 years of teaching experience.

Table 2: Level of education and the range of student who attended.

Level of education	Range of students who attended	
	Minimum	Maximum
Post Graduate	10	600
Under Graduate	26	240
School Students	15	250

Based on this, we can draw an inference, that more no of P.G. Students were having access to online and it can be said that since, they were well acquainted with the system, they were in a position to get education

Table 3: Details about transition to online

		Count	Column N %
1. How did you teach the course before Covid-19 outbreak?	Face to Face	52	**83.90%**
	In a hybrid fashion	10	16.10%
	Total	62	100.00%
2. As a result of Covid -19 whether you had to shift your face-to-face classroom teaching to an online platform?	No, none of it	1	1.60%
	Some, of my teaching	8	12.90%
	Yes, all of it	53	**85.50%**
	Total	62	100.00%

3. To what extent did your institution decide that you need to transit your face-to-face subjects' classes to an online platform?	It was expected.	16	25.80%
	It was mandatory	44	**71.00%**
	It was not mandatory	2	3.20%
	Total	62	100.00%
4. Did you get any of the following support from your college /University to conduct virtual classes?	No support	17	27.40%
	Technological support	30	**48.40%**
	Training on the use of ICT	15	24.20%
	Total	62	100.00%
5. How would you describe your overall familiarity with online teaching prior to covid -19?	V. Poor	3	4.80%
	Poor	11	17.70%
	Neutral	21	**33.90%**
	Good	18	29.00%
	Excellent	9	14.50%
	Total	62	100.00%
6.According to you, what is ideal number of hours per session	30 min	3	4.80%
	45 mins	12	19.40%
	1hr	39	**62.90%**
	2hr	8	12.90%
	Total	62	100.00%
7.According to you, what is ideal number of sessions in a day	1	8	12.90%
	2	27	**43.50%**
	3	17	27.40%
	4	10	16.10%
	Total	62	100.00%

Based on the above table, we can draw a conclusion that before covid, 83.9% respondents were teaching the course face to face ,because of Covid-19, 85.5% had to shift to online platform, and it was mandatory for 71% respondents.48.4% respondents got technical support from their respective college/university,33.9% respondents had a mixed response for their overall familiarity with online teaching prior to Covid-19.Maximum respondents 41.9% ,were taking 4-6 hours of virtual classes during a week. 62.9% respondents are of the opinion that ,1 hour is the ideal number of hours per session and 43.5% respondents support for 2 sessions as ideal in a day.

Table 4: Respondents perception about online teaching

Attributes	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Easy to conduct.	10	16.10%	25	**40.30%**	12	19.40%	13	21.00%	2	3.20%

Convenient and flexible	9	14.50%	13	21.00%	16	25.80%	20	**32.30%**	4	6.50%
Enables to connect with students effectively.	10	16.10%	33	**53.20%**	11	17.70%	8	12.90%	0	0.00%
Satisfied with online communication tools.	6	9.70%	17	27.40%	21	**33.90%**	18	29.00%	0	0.00%
More satisfied teaching online as compared to other communication methods.	17	27.40%	25	**40.30%**	17	27.40%	3	4.80%	0	0.00%
Would like to continue teaching online even after Pandemic.	13	21.00%	21	**33.90%**	15	24.20%	11	17.70%	2	3.20%
Traditional offline teaching and online teaching can go hand in hand	4	6.50%	11	17.70%	9	14.50%	24	**38.70%**	14	22.60%
Technical problems do not discourage me from taking online classes.	10	16.10%	20	**32.30%**	10	16.10%	20	**32.30%**	2	3.20%
Experience with online teaching was better than expected	3	4.80%	8	12.90%	16	25.80%	31	**50.00%**	4	6.50%

Majority of the respondent, 40.3 % disagreed, they found it very difficult to conduct online classes, very few respondents ,32.3% found online teaching convenient and flexible. Majority of the respondents 53.2% felt online teaching doesn't enable them to connect with students effectively. According to the empirical research that we had conducted, there is a mixed reaction for this particular sentence, they are happy with online communication tool. 29 % of them agreed to the fact that it is a very good tool, whereas 27.4% disagreed. Larger portion of respondent 33.9% are unable to decide whether they are happy or unhappy with online classes as a medium of communication. 40.3% respondents disagreed, teaching online is satisfactory. 33.9% disagreed to continue teach online after pandemic. There was a positive response, with 38.7% respondents agreeing for blended teaching. The response of the people is very biased, 32.3% respondents are having equal response, like and dislike, over technical problems do not discourage them from taking online classes, depending upon on

on the situation they are. 50% of respondents felt that their online classes exceeded their expectation.25.8% were undecided about it.

Table 5: Experience with regard to conducting virtual classes:

		Count	Column N %
A) Students' participation in the virtual classes.	All the students were interacting	3	4.80%
	Majority of the students were interactive.	12	19.40%
	None of the students were interacting.	7	11.30%
	Some of the students were interactive.	40	**64.50%**
	Total	62	100.00%
B) Students learning through virtual classes.	Average: Learning neither worse nor better than usual.	40	**64.50%**
	Good: they are learning more than usual.	8	12.90%
	Poor: not learning as well as usual	14	22.60%
	Total	62	100.00%
C) Your feelings towards online teaching.	Great: "I feel I'm teaching better than usual."	3	4.80%
	Neutral: "I feel my teaching is as good as usual."	35	**56.50%**
	Poor: "I feel I'm not teaching as well as usual"	24	38.70%
	Total	62	100.00%

From the above table, we can conclude that all the respondents found difficulty in conducting online classes. Most of the respondents ,64% felt that, only few of them are responding, and rest of them are not corresponding during the course .64.5% respondents felt that there was no change in the methodology of learning through virtual classes.56.5% teachers did not feel any difference, but 38% of them feel that, there is a change.

Table 6 : Opinion with respect to the following in future:

1. Offering virtual courses / degree	Agree	23	37.10%
	Disagree	39	**62.90%**
	Total	62	100.00%
2. Include virtual teaching component in the existing courses.	Agree	33	**53.20%**
	Disagree	29	46.80%
	Total	62	100.00%
3. Conducting online examinations	Agree	20	32.30%
	Disagree	42	**67.70%**
	Total	62	100.00%
4. Include technology enabled self-learning modules in some subjects	Agree	45	**72.60%**
	Disagree	17	27.40%
	Total	62	100.00%
5. Virtual classes will be the norm in the future.	Agree	32	**51.60%**
	Disagree	30	48.40%
	Total	62	100.00%

The table presents the opinion of the respondents about the future, 62.9% respondents disagree for offering degree in virtual courses. 53.2% respondents agree for including virtual teaching in the existing course.67.7% disagree for conducting online examinations in the coming days. High positive response, with 72.6% respondent agreeing for technology enabled self-learning modules in some subjects. Very few respondents 51.6% have a perception, virtual classes will be the norm in the future.

ASSOCIATION OF DEMOGRAPHIC VARIABLES AND EFFECTIVENESS OF VIRTUAL TEACHING

| | | Is online teaching effective? | | | |
| | | No | | Yes | |
		Count	Row N %	Count	Row N %
Age:	Below 30	9	75.00%	3	25.00%
	31-40	8	53.30%	7	46.70%
	41-50	13	44.80%	16	55.20%
	51-60	4	66.70%	2	33.30%
Gender:	Femal	17	60.70%	11	39.30%
	Male	17	50.00%	17	50.00%
Designation:	Lecturer	8	61.50%	5	38.50%
	Assistant Professor	12	60.00%	8	40.00%
	Associate Professor	6	60.00%	4	40.00%
	Professor	5	35.70%	9	64.30%
	School teacher	3	60.00%	2	40.00%
Affiliation: School/University/Institute:	Private	26	56.50%	20	43.50%
	Public	8	50.00%	8	50.00%
Teaching category:	School	2	50.00%	2	50.00%
	Undergraduate	17	58.60%	12	41.40%
	Post graduate	15	51.70%	14	48.30%
Years of experience in teaching	1 - 5yrs	13	65.00%	7	35.00%
	6 - 10yrs	4	44.40%	5	55.60%
	11 - 20yrs	11	44.00%	14	56.00%
	Above 20yrs	6	75.00%	2	25.00%

TEST RESULTS

Is online teaching effective? with Following parameters	chi square value	d.f	p	
Age:	3.496	3	0.321	NS
Gender:	0.712	1	0.399	NS
Designation:	2.68	4	0.613	NS
Affiliation: School/University/Institute:	0.204	1	0.652	NS
Teaching category:	0.319	2	0.853	NS
Years of experience in teaching	3.725	3	0.293	NS

THERE IS NO SIGNIFICANT ASSOCIATION BETWEEN DEMO AND OPINION ON EFFECTIVENESS OF ONLINE TEACHING (ALL P VALUES >0.05)

6. Enlisting Views Of Educators About The Online System:

- Class room teaching are better than virtual teaching. It is a very passive mode of teaching.
- Did not enjoy teaching, as not much of interaction is possible with the students.
- Difficult to convey the message to students and it effects the mental health of students.
- The students have an edge as there is no way to monitor if they are attending the class. They log in and disappear.
- Not effective especially for practical classes
- Not adaptable to our country where not all have good network connectivity and students need to pay high cost for the data plan as well.
- Proper training at the institutional level surely would have helped to conduct the online classes in a better form. Rural students without technology were not able at attend classes regularly
- Students and faculty both have to be trained on ICT.
- During this pandemic virtual class was the only option and excellent solution, which is a good alternative that made us to look into and learn technologies that not only help students but also motivates them.
- Initial classes were difficult but later on went fine.. Great learning experience, . forced everyone to adapt to new normalcy.
- We could complete the portion and we're able to contact students in times of distress

7. Findings:

There was mixed response from the participants regarding the success of transition of classroom teaching to online teaching. Most of the teachers encountered similar kinds of challenges and issues.

- Some respondents felt happy due to utilisation of time in conducting online classes during lockdown period. Though initially they faced some difficulty in conducting online classes but later got acquainted with and conducted the classes smoothly
- Teachers who had entered the teaching profession within the recent years., were relatively competent in using online teaching applications. Many educators uploaded the recordings of online classes in website for further references of learners.
- But at the same time some teachers faced challenges in adapting to online teaching. Significant challenges were related to network issues, technological infrastructure of the institutions, lack of technological pedagogical knowledge, due to unexpected declaration of lock down, financial issues relating to renumeration and expenditure towards internet data package were experienced.
- Since the learners were present at scattered places during online classes, it became difficult to draw their attention towards the subject matter during online classes. So, most of them were of the opinion that class room teaching are better than virtual teaching, due to lack of interactions.

Ultimately, teachers' competence and teacher education opportunities to learn digital competence contribute to teachers' mastery of the challenges of the specific situation.

8. Suggestions

- Hands -on-campus- based technology training, a faculty development programme in online teaching, Curriculum interwoven with ICT, can not only build confidence technological tools and digital resources for creative and innovative problem solving.
- Small classes, two-way audio and video, can provide more personal, classroom-like learning experience.
- Uploading of lecture videos and chat transcripts for students who occasionally miss the class due to internet issues .can be sent to students to review the lesson as and when necessary.
- To make virtual classes more interesting following methods can be adopted stimulation, games, case studies, Problem-Based Learning Projects, Guided Design which emphasizes independent research, uploading recorded video

demonstrations, Flip classroom teaching can be adopted in virtual classes.

- Though the teaching is online, teachers should create friendship and enlighten the environment of the groups, apps or any platform through voice call if possible.

- Government/educational institutions should provide free low-cost -high-intensity internet facility to all educators, to encourage online teaching.

- Ministry of Higher Education, should formulate a standard policy, monitor, evaluate and review the method used in teaching and upgrade to maintain the quality of online teaching.

9. Conclusions

To conclude, based on the critical evaluation of survey outcomes, it is evident that, Online teaching has reinforced new styles of teaching. It not only enhanced personal and professional growth of many teachers, but helped them to connect geographically diverse students through virtual classroom, during this pandemic current global scenario, overweighing all the cons, the transition was indeed a success, 50% respondent agreed that their experience with online teaching was more satisfied than expected ,though technological support, infrastructure availability, faculty and student's perception play a significant role, in the effectiveness of online mode of teaching. The changing paradigm of online teaching needs further research to advance in online teaching. With rapid growth of internet technologies ,various improvements and activities are needed to enhance and gain the full benefits of online teaching, and keep the wheel of teaching-learning moving and not hamper our education system, if we are faced with other crisis like pandemic in future.

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