

Voices of Student-Teachers on Teacher Education During Covid-19 Pandemic: A Case Study of D.El.Ed Students

Sumbul Khalil*
Urvashi Gupta**

Abstract

The Government of India declared a countrywide lockdown of all educational institutions on 16th March, 2020, due to the spread of Pandemic COVID-19. A year has passed since then when the entire educational system in India, including school and higher education institutes switched from face to face mode of teaching learning to virtual mode. The educational institutions chose to operate partially or completely through online mode acting according to the circumstances and ease of lifting of the lockdown. In the present study, student teachers of D.El.Ed participated to share their experiences and reflections related to classroom teaching- learning (online and traditional), assignments and assessment, workshops, School Experience Programme (SEP) and overall learning in a teacher education course during COVID-19 pandemic.

Keywords: COVID 19 pandemic, student teachers, Teacher Education programme, online teaching-learning, School Experience programme

Introduction

The pandemic arising due to the novel coronavirus, originating in Wuhan city of China in 2019, was to change the face of the world. While it claimed many lives, it brought about a change across the world in the daily lives and lifestyle of the people who survived. Hardly any sphere of our lives has been left untouched by its effect and the Indian education system is no exception. It experienced a sudden shift from traditional face-to-face mode to a virtual mode.

Many research studies poured in during this one year contributing to the body of knowledge on the impact of the pandemic on education. Schleicher (2020), in a report on Impact of COVID-19 on education of OECD countries, highlights that the most marginalised groups are at a risk of falling

behind during the pandemic. The report also brings to notice the decrease in financial expenditure on education in the near future. It notes, ‘...spending on education may be compromised in the coming years. As public funds are directed to health and social welfare, long term spending on education is at risk despite short term stimulus packages in some countries. Private funding will also become scarce as the economy weakens and unemployment rises.’ The news may not be good, but in developing economies like India, Maslow before Bloom, seems to be the way as of now.

Other themes that have emerged from studies are a need for change in pedagogy for online teaching (Pokhrel&Chetri, 2021; Carillo& Flores,2021), problems of affordability and accessibility of online infrastructure (Carillo& Flores, 2020; Pokhrel&Chetri,2021;

* Sumbul Khalil, Department. of Education, School of open Learning, University of Delhi, sumbul021@gmail.com, ORCID No.- 0000-0002-2084-3174

** Urvashi Gupta, Asst. Professor, D.I.E.T (Dist. East), SCERT, Delhi, ORCID No. - 0000-0002-5520-4831

Mishra et al, 2020), problems of learners of distractions, domestic violence, financial constraints (Ravichandran & Shah, 2020 cited in Pokhrel&Chettri, 2021; Mishra et al, 2020), challenges of teachers while conducting a class in virtual setting (Pokhrel&Chettri, 2021; , 2020; Joshi, 2020; Gupta & Gupta,2020) and perceptions of student teachers who were left stranded in the middle of school internship (Varela &Desiderio, 2021; Dickeson, 2021; Weber, 2021) or adapting to online teaching of pre-kindergarten/kindergarten children during school internship(Kim,2020). Some studies have highlighted the positive and negative impact of COVID-19 on education (Jena, 2020; Gupta &Goplani, 2020) while others have explored the perceptions and experiences in online classrooms (Ahammad, 2021; Jain &Soriya, 2021; Das, 2021).

Review of Literature

Based on the review of studies conducted on teachers and students in higher education and student-teachers specifically, certain themes have been identified and this section has been arranged accordingly.

Studies related to Classroom teaching-learning(traditional and online)

Carillo& Flores(2020) note that effective online teaching and learning is subjective to the development of a student presence which enhances supportive and productive interactions, mediating the learning process across presences. Teachers had to adapt to new pedagogical concepts and modes of delivery of teaching, for which they may not have been trained (OECD,2020).

Joshi (2020) studied the challenges faced by faculty members on switching to digital teaching during the lockdown period. The findings reveal a problem of student engagement (chatting, switching off camera purposely, listening passively, casual attitude of the students towards

online attendance, etc.). Teachers reported drain in time and energy as both academic and technical issues needed to be taken care of. Some teachers preferred making their own videos and the process of recording, compressing, and uploading was exhausting. Teachers accepted that they were unable to resolve the doubts of students completely and fulfil students' satisfaction level due to varied challenges faced by them in the initial stage of online teaching-learning (Mishra et al, 2020).

Gupta & Gupta (2020) noted that it was difficult to replicate peer learning, participation in extracurricular activities and sports, experiential learning and development of emotional intelligence and leadership ability. Lack of parental guidance for the young is a challenge when both parents are working (Pokhrel&Chettri, 2021). Das (2021) reported a decrease in student attendance however student queries in online class had increased.

Das (2021) found that classroom teaching (face-to-face) mode was rated best. Although classroom teaching through direct mode was nearer to traditional classroom teaching, yet indirect teaching mode was found more useful in this study. This was due to the removal of space and time constraints of traditional classroom teaching. Ahammad (2021) found online teaching has positive effects on the teaching-learning process of the learners. In this study, 73 per cent found online learning useful in Higher education. Fifty eight per cent believed that academic performance has improved with the initiative of online learning method. Seventy seven per cent reported that their institutions provided online learning material while Zoom App was voted as the most useful online app for teaching-learning.

Jain &Soriya (2021) also found eighty seven per cent students preferred the blended format of learning. ANOVA analysis revealed that use of online platforms for higher education is independent of age and educational qualification of learners. However, it was also found that science

students spent more time in online learning than commerce, humanities and others. Results obtained from the study on post graduate students demonstrated positive perceptions towards blended learning. Study revealed that students were optimistic about incorporation of Blended learning in Higher Education. Therefore, with the help of technology, blended learning can be used as an alternative approach in teaching-learning in order to motivate students (Badre&Badre, 2020).

Studies related to Assignments and Assessments

Sintema, (2020) expected the level of academic performance to drop for classes held for both year-end and internal exams because of decreased contact hour for learners and lack of consultation with teachers when facing difficulties in learning/ understanding. Mishra,*et al.* (2020) warn that not understanding the individual difference of the students may result in biased conclusions specifically as online teaching mode which is in its infancy, may not meet its desired end. Pokhrel&Chetri (2021) note that authentic assessments and timely feedback are essential components of learning, but educators in Bhutan were challenged for authenticity of work and actual learning as assignments and examinations were conducted from home. However, in the Indian context, in Higher Education, mixed results were found. Joshi (2020), in her study reported that the rate of submission of assignments was poor. (20% on time, 5% late, rest never). Contradictory to this, Das (2021) found a higher rate of submission and higher 'A' graders than traditional classroom teaching through online teaching via both direct and indirect mode. In her study, 43 per cent of the difficult access group and 16.1 per cent in the zero access group (groups based on access to online infrastructure) performed better through online teaching via indirect mode. The difference in the results may be attributed to the time periods during which

data was collected. While Joshi gathered the data from 20 faculty members, over a period of 8 days in April, 2020, when lockdown was in its initial phase in India, Das collected data from undergraduate college students for a period of two months from March to May 2020.

Studies related to School Experience Programme

The School Experience programme, had started or was about to start in many countries, when their states announced closure of schools due to the spread of novel coronavirus. Some student-teachers worked remotely if they were quarantined, while some worked as substitute teachers while their teacher was quarantined (Weber, 2021). Some student-teachers expressed worry and frustration over not being able to complete student teaching in the classroom, while others appreciated their experiences of switching to online teaching/ remote teaching. They learnt the importance of parental involvement, technological proficiency, student inequities, screen fatigue and creating bonds in a virtual setting (Varela &Desiderio, 2021; Weber, 2021). Tse (2021) writes that keeping students motivated and getting kids to talk on Zoom was a challenge. Similar findings were reported by Dickenson (2021) and Weber (2021).

Learning subject content is a major purpose for online teaching (Yildiz and Isman, 2016) and Kim (2020), experimented with student teachers in an early childhood education practicum through online mode, teaching music to pre Kindergarten/ Kindergarten students. The findings reveal that student teachers experienced feelings of success in learning about processes about online teaching and had developed confidence in utilising technology and managing a group of children 'properly' online. Student teachers still needed to develop their presentation skills through online mode as these are different from classroom teaching and their students always mentioned the hands-on

activities as their favourite part of the lesson. Dickenson (2021) also mentions that some student teachers felt more prepared to teach their own class and can use some techniques that they have learnt virtually in the near future. In blended learning, smaller class size helped to know students better. "They had just been black boxes for so long", remarked one student teacher (Weber, 2021; Tse, 2021).

Studies related to Workshops

Studies directly related to workshops in teacher education during this period were not available. However, studies on laboratory work reveal that laboratory and practical work was difficult because it required systematic demonstration of the whole process in the presence of students (Mishra et al, 2020), while no lab work could be carried out during lockdown which was regarded as a huge drawback. (Das, 2021)

It is evident from the above review of literature that very few studies have been conducted on student-teachers in India during the COVID-19 pandemic. Therefore, this paper attempts to describe the experiences of student teachers enrolled in D.El.Ed (2019-2021).

Research Questions

The research questions for this study are:

1. What experiences did the student-teachers have regarding classroom teaching?
2. How were these experiences compared to traditional classroom teaching?
3. What experiences did the student-teachers have regarding assignments and assessments?
4. How do student-teachers describe their experience regarding the School Experience Programme?
5. What experiences did the student-teachers have regarding Workshops that are conducted as a part of the Teacher Education Programme?

6. What are the reflections of student-teachers on their learning during the COVID-19 pandemic?

Methodology

In this study, data was collected from D.El.Ed second year students (2019-2021). A questionnaire with objective type questions was administered and an interview was conducted on the participants to describe their experiences and reflections on teacher education programme during the pandemic. Mixed method approach using convergent parallel design (Creswell, 2012) was used for analysing both quantitative and qualitative data. Based on the themes identified during the literature review and corroborating them with teacher education curriculum, a theme-based questionnaire was developed and was followed by an interview of participants to compare it with the findings of quantitative data (data from questionnaire). This step was thought to be significant as there are student teachers from both English and Hindi medium and any discrepancies arising due to language barrier can be ruled out.

In order to maintain validity of the qualitative data, a technique of peer debriefing (Lincoln and Guba, 1985) was used.

Findings

In this study, 54 D.El.Ed students from the 2019-2021 batch from a government D.I.E.T participated. The students from this batch were considered ideal for the study as they had experience of studying a Teacher Education course in both traditional/ face to face mode and online mode.

Experiences related to Classroom teaching – learning (traditional and online)

With respect to classroom teaching-learning, the student-teachers considered Physical/ traditional/ face-to face mode to be the best.

These findings are supported by studies of Das (2021). Reasons for this preference were more because of the challenges faced by them during online teaching learning. The students pointed out that the student becomes a passive learner in this mode of learning. Concept clarity through online teaching is not the same as in a physical classroom. The teacher is unaware whether the student is attentive and mentally present in an online classroom. These findings are in contrast to findings of Ahammad(2021), Jain &Soriya (2021), Badre&Badre(2020), who found online and blended learning in higher education to be preferred by students.

Many studies have reiterated the issue of accessibility and affordability of online infrastructure (Carillo& Flores,2020; Pokhrel&Chetri,2021; Mishra et al, 2020). Das (2021) had classified the sample on the basis of access to online facilities. In the present study, 53.7 per cent had easy access to online infrastructure, i.e., they owned phones, tablets or laptops with good data connection while 44.4 per cent students had difficult access, i.e., had to borrow phone or laptop etc., from others or experienced poor data speed and connection. However, one of the student-teachers remarked, “I had my own phone and it was a distraction. While attending classes online, I was tempted to open other apps on the phone.”

46.3 per cent attended the same number of classes as in a physical classroom, while the same percentage attended fewer classes than in a physical classroom. These findings are in contrast to findings of Das (2021) who found a decline in attendance in online classes.

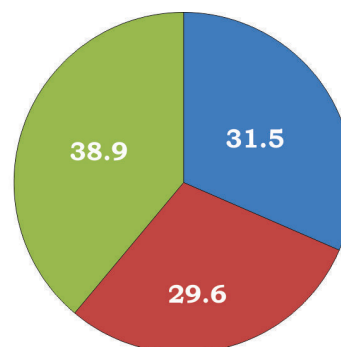
57.4 per cent students felt that the online classroom environment was worse than the physical classroom. They cited lack of interaction, issues of internet connections as reasons. A few respondents shared, “Sometimes students disconnect purposely, sometimes make excuses for disconnection”. Some complained of audio or video not playing or being incompatible with their devices. Joshi (2020) reported similar results

in her studies. 79.6 per cent of the students, however, empathised with the teachers who were not conversant with technology as online teaching-learning pedagogy was new for them also.

With respect to queries and doubts during online teaching and learning, 40.7 per cent student-teachers felt that there was no difference between physical and virtual classroom in terms of answering queries or clearing doubts.29.6 per cent opined that the teachers were easily accessible and cleared doubts better than in a physical classroom, while 27.8 per cent found that it was difficult to access the teacher and they did not answer queries or cleared doubts satisfactorily. 1.9 per cent said that teachers do clear doubts but physical mode is far better.The findings of this study is in line with the findings of studies of Mishra,*et al* (2020).

Experiences related to Assignment and Assessments

38.9 per cent of the students found the assignments in online teaching mode to be less interesting than physical mode while 29.6 per cent found it to be the same as physical mode. A very few percentage of the students found the assignments to be interesting in this mode. Student-teachers shared that mostly assignments were to be made in the form of PPTs, which were easy to make. However, some complained of eye strain while typing assignments on the phone.



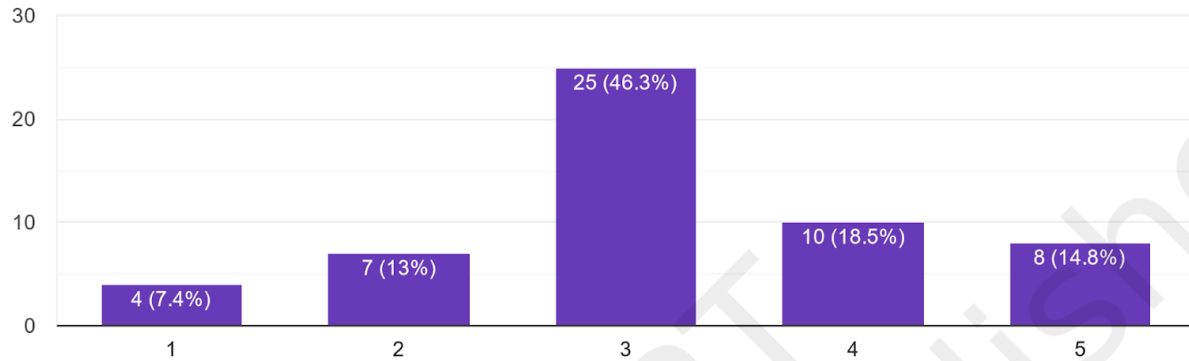
- More interesting than physical mode
- Less interesting than physical mode
- Same as physical mode

With respect to time consumption, on a scale of 5, the maximum rating was 3 (46.3% of students), i.e., it was the same

when compared to time consumption for preparation of assignments in physical mode.

Rate your preparation of assignments w.r.t to time consumption.

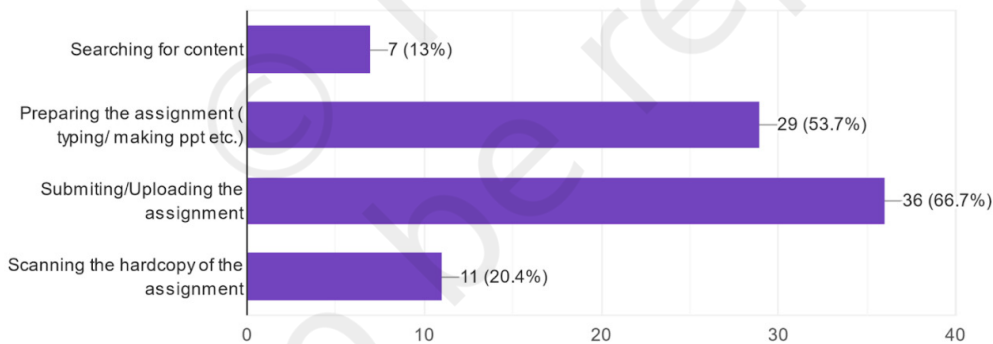
54 responses



The most difficult part in making assignments was rated to be submission or uploading of assignments.

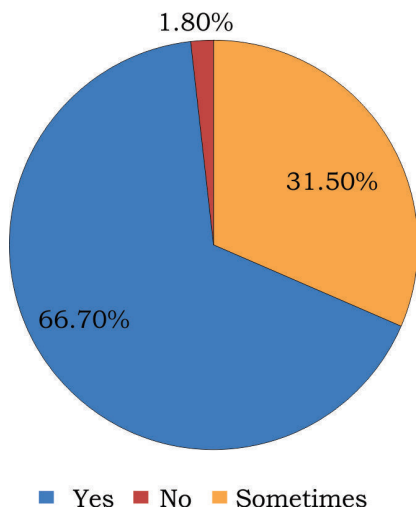
What was the difficult part in making the assignments? (can choose more than one option)

54 responses



66.7 per cent of the students submitted the assignments timely, while 31.5 per cent of the respondents could sometimes make it on time.

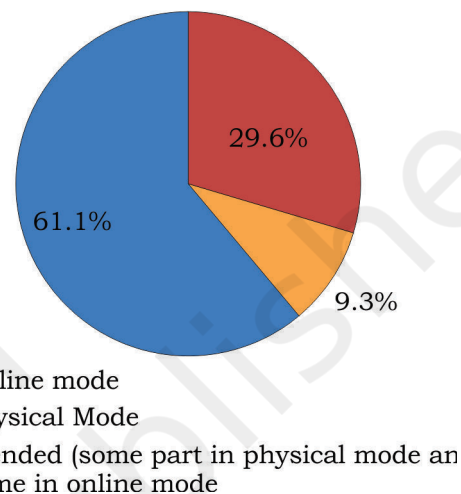
Were you able to submit the assignments on time?
54 responses



Student-teachers shared, “Making assignments is faster in online mode because phone typing is predictable and content is available on the internet which can be easily copy - pasted. But, uploading assignments was an issue. We had to message our teachers regarding the problem. Scanning assignments through the phone was difficult. Sometimes

it required a laptop or desktop. Late submissions were due to uploading issues”. In studies of Joshi (2020), very poor rates of assignment submission were found. However, Das (2021) had reported similar findings.

In terms of ease of conduction, as a student your preference for conduction of examinations
54 responses



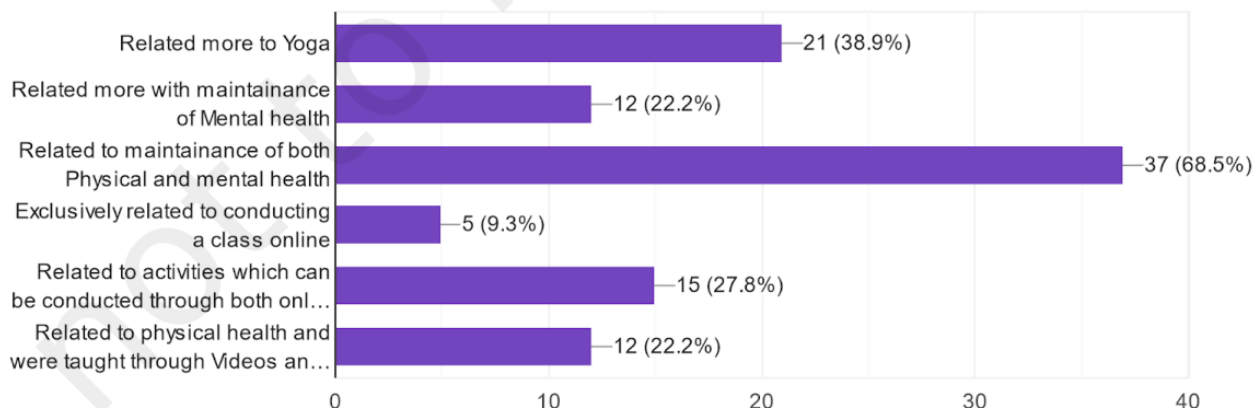
In terms of ease of conduction, as students, they preferred online mode for conduction of exams.

Experiences related to Workshops

Workshops are an important part of the Teacher Education Curriculum. It provides

2. The Workshops related to Health and physical education were- (can choose more than one option)

54 responses



the student-teachers with hands-on experience about preparation of Teaching- Learning Material(TLM), practical subjects like Art Education, Work Education and Health & Physical Education.

Workshops conducted for making TLM for online class were interesting (38.9%) but difficult to follow and make (37%). 33 per cent agreed that they required a new approach when compared to preparing TLM for a physical classroom.

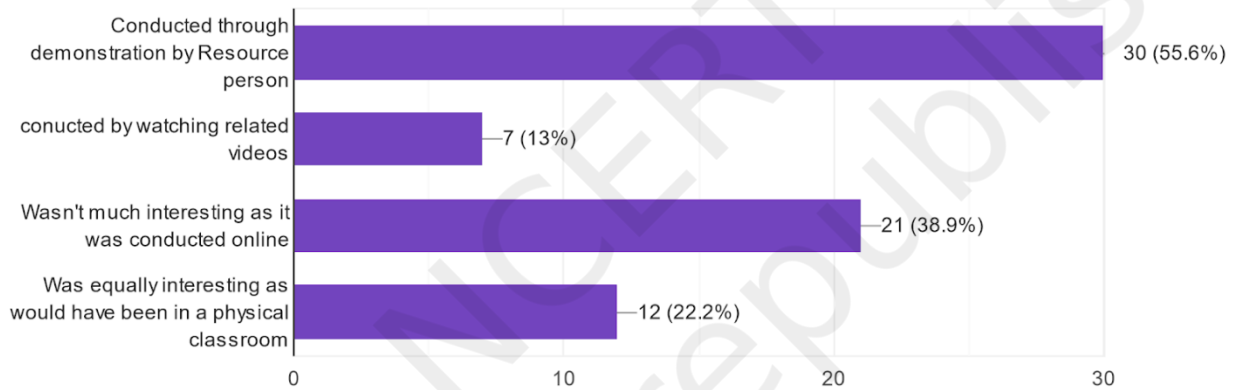
Workshops related to Health and physical education this year were related to Yoga and

maintenance of both physical and mental health (68.5%). It was followed by workshops related to activities that can be conducted in both physical and virtual modes. However, these were fewer in number compared to workshops on Yoga and maintenance of both physical and mental health.

Workshops related to Performing Arts education were Conducted through demonstration by Resource person and were not much interesting as they were conducted online(38.9 %).

3. Workshops related to Performing Arts education were-

54 responses

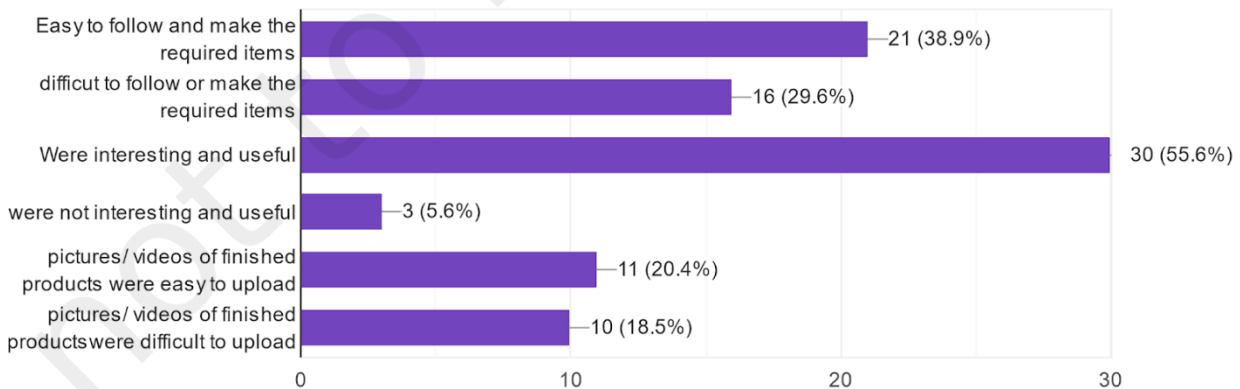


Workshops related to Work Education and Art Education were interesting and

useful (55.6%) and easy to follow and make the required items(38.9%).

4. Workshops related to Work Education and Art Education were-(can choose more than one option)

54 responses



Sharing their experiences, the student-teachers said that they found online workshops to be good but in face to face mode one could ask practically to show/ demonstrate again. “In online workshops there is nobody to identify your mistake or demonstrate again as compared to physical mode”. While some students switched on video or audio during the workshop, it used to be a disturbance.

“Workshops conducted online were based more on lecture method than activity method”, complained one student-teacher.

For Work Education and Art Education workshops, they received a message a day before for materials to be arranged. However, on the day of workshops only few students used to be present with materials.

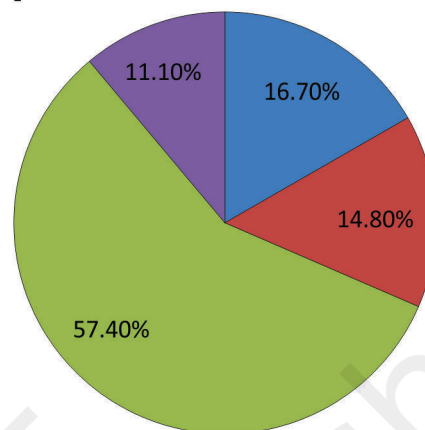
In pre pandemic times, workshops conducted were considered better because students were learning and performing in front of teachers, performing group activities and getting inspired by others’ creativity also.

Speaking on the financial front, the student-teachers said, “It was economical otherwise, but arranging for materials in lockdown and data consumption was an issue”.

Some student-teachers did not find the workshops conducted online to be interesting and attended them for attendance sake.

After attending workshops on Art education, Work Education and Health & Physical Education, 16.7 per cent of the student-teachers felt confident of carrying out activities in a Physical classroom while 14.8 per cent were confident of carrying out activities in an online classroom. 57.4 per cent student-teachers opined that they were confident of carrying out activities in both physical and online classroom and 11.1 per cent did not feel confident of carrying out activities in any type of setting.

After attending workshop on Art education, Work Education and Health and Physical Education– 54 responses



- I am confident of carrying out activities in physical classroom
- I am confident of carrying out activities in online classroom
- I am confident of carrying out activities in physical and online classroom
- I am NOT confident of carrying out activities in any type of setting

Since studies on workshops conducted in online mode for Teacher Education during pandemic times are not available, these findings will help to fill the gap in literature.

Experiences related to School Experience Programme (SEP)

Gray (2019) writes about the importance of preservice teaching in a study on first year student-teachers who reflected on their experience to develop effective classroom management systems (cited in Varela and Desiderio, 2021). Smith and Rayfield (2017) and Aglazor (2017) reiterate the importance of student teaching as an opportunity of transformative experience (cited in Varela and Desiderio, 2021).

The School Experience Programme (SEP) was conducted in physical/ face-to-face mode in 2019-2020 (pre-pandemic) in government schools. However, due to the

pandemic, the schools have remained closed for students since March 2020, in India for elementary school students. Therefore, for the session 2020-2021, SEP was conducted online and the peers (D.El.Ed students) acted as students from school (simulated practice teaching).

The major challenges faced during SEP were hectic schedules as daily two to three lesson plans had to be delivered and making related ppts, related TLM were challenging. Pupil participation or motivating them to attend classes was a major challenge. It got the highest percentage of votes (50%). 44.4 per cent students also experienced difficulty in conducting classes online. "Network issues were there. I had to move to the terrace or other places for connectivity", remarked one student-teacher. Concerns of affordability and accessibility of online infrastructure have been raised and discussed in studies of Carrillo & Flores, (2020), Pokhrel&Chetri, (2021) and Mishra et al., (2020).

"Student interaction was poor which led to frustration", added another. Tse(2021) had also reported similar findings. "Since peers acted as students, framing of questions was challenging", shared another student-teacher.

Making TLM for online classes was voted as another major challenge(48.1%). In terms of preparation of TLM for online classes,44.4% of student-teachers rated it 3 on a scale of 5. Showing concrete objects as TLM was difficult in online classes.

The student-teachers felt that real students from school should be for practice teaching. "One gets a feeling of real teaching and gets actual responses", said one student-teacher." A sense of responsibility/ accountability was more in physical mode,"shared another.

Incomplete supervision and feedback is a major challenge in teacher education. (Kumar & Azad,n2016 and Yan & He, (2010). Sharing their experiences about online supervision of lesson plans, the student-teachers felt that supervision was better in physical mode. 57.4 per cent felt feedback

from the supervisor was timely and detailed while 40.7 per cent got timely and brief feedback from their supervisor. Khalil (2020) warns that under no circumstances the student-teacher should be left unsupervised as they may make conceptual mistakes while delivering the lesson plan either due to lack of confidence or inexperience. The supervisor should also ensure that all lesson plans are checked by subject experts before delivering them in the class.

Varela and Desiderio (2021) write, "Educator preparation programs are also encouraged to view this experience and student-teacher responses as an indication of the necessity to revamp teacher training to include and enhance use of technological resources and related pedagogical strategies. Preservice teachers must now be equipped to plan and deliver instruction virtually, to assess student learning and differentiate for students from a social distance, and to effectively collaborate with parents and colleagues online."

Reflections on overall learning during COVID-19 Pandemic

Reflecting on their experiences about their learning as student-teachers in COVID-19 pandemic,74.1 per cent student-teachers were glad that the pandemic happened during Teacher Education course as they got to learn alot about online teaching-learning. 61.1 per cent of the student-teachers considered technical proficiency to be very important for future teachers. These findings are supported by studies of Varela &Desiderio (2021) and Weber (2021). 70.4 per cent of them rated difficulty in adapting to online pedagogy as 2 on a scale of 3.

31.5 per cent rated their learning during the pandemic as fair, 27.8 per cent felt good, 25.9 per cent were satisfied while 14.8 per cent were unsatisfied with their learning.

However, 77.8 per cent felt confident about taking a class in any type of setting. Dickenson (2021) and Kim (2020) had reported similar results.

They expressed that they had a lot of opportunities to explore. "We were not just sticking to books, but had to think out of the box. It boosted our creativity." Another student added, "In a physical classroom, students are asked to search and study certain topics beforehand. The response rate is poor. However, in online class, students can search at the very moment". "We got to learn a lot about technology. We usually studied from books, but now we use ppts and videos etc. as study materials also".

Conclusion

Through this study an attempt was made to present the voices of student-teachers about their academic experiences during COVID19 pandemic. They have shared their experiences and reflections related to classroom teaching-learning (online and traditional), assignments and assessment, workshops, School Experience Programme and overall learning in a teacher education course. Some of these experiences are similar to previous studies in Indian or global contexts, a few were completely new, filling the gap in literature. Since student-teachers are an important stakeholder of Teacher Education courses, their voices and experiences hold significance in revamping and designing Teacher Education curriculum worldwide.

Findings of the present study reveal that the offline mode was preferred in all aspects taken up in this study. However, it cannot be ignored that going into an online mode completely was the only possible alternative against 'no education at all' in these times of crises. As a nation, we have invested in the digital infrastructure and have sped up the process of online learning. In this regard, the pandemic has turned out to be a blessing in disguise. The best way ahead is to strengthen blended learning as an option. The government and NGOs have to work together to reduce the digital divide. Mukherjee and Kuri (2021) have identified

lack of awareness, financial instability, occupational uncertainty, low educational qualifications of parents, etc., as significant factors of the digital divide. Providing the students with good quality digital devices and access to internet connection at affordable rates will definitely resolve a major chunk of the problem.

Qazi, *et al* (2020) highlighted the relationship between use and access to online classes and student's satisfaction level as a possible reason for not favouring online learning. Reducing and removing the barriers of accessibility is an important step before considering blended learning as an option.

Blended mode of learning brings out the best of both face-to-face and online mode. With reference to the recommendations of NEP 2020, UGC has also released a concept note on Blended mode of Teaching and Learning. The colleges and universities are allowed to teach some percentage of the courses through online mode.

Technology however should also be used judiciously and not for the sake of boasting of modernity. SEP should also be conducted in this mode so that the prospective teachers are well equipped with both online and offline pedagogies for classroom learning and assessments. Khalil (2020) points out that student-teachers' experiences during teaching practice shapes their attitude towards the profession. More than 3/4th student-teachers participating in this study have shared that they were confident of taking classes in any type of setting. They considered the pandemic to be an opportunity to learn online pedagogies as a part of their curriculum. The prospective teachers have also considered technical proficiency to be of importance as future teachers. Since the learners have shown a positive attitude towards online learning despite facing challenges, it can be hoped that they would accept the blended form of learning with open arms.

References

- Ahammad, F. (2021). Online Learning Initiatives and its Effects on Teaching-Learning Process During the Covid-19 Pandemic. *The Online Journal of Distance Education and e-Learning*. 9(1) 144-155.
- Aglazor, G. (2017). The Role of Teaching Practice in Teacher Education Programmes: Designing Framework For Best Practice. *Global Journal of Educational Research*, 16(2), 101-110.
- Badre, P. &S.Badre, (2020). Blended Learning - A Study On Student's Perception About Suitability of The Framework For Higher Education. *The Online Journal of Distance Education and e-Learning*.8(2), 72-79.
- Carrillo, C., &Flores, (2020). COVID-19 and Teacher Education: A Literature Review of Online Teaching and Learning Practices. *European Journal of Teacher Education*, 43(4), 466-487. <https://doi.org/10.1080/02619768.2020.1821184>
- Creswell, J. (2012). Educational Research. *Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Fourth Edition. Pearson. 540-542.
- Das, D. (2021). E-Learning Amid Covid-19 Pandemic Situation : A Case Study. *The Online Journal of Distance Education and e-Learning*.9(1), 47-59.
- Dickeson, K. (2021). Student Teaching During A Pandemic. *Evolving Education Styles With The Times*. NBC.26. Green Bay. Scripps media Inc.
- Gray, P. L. (2019). Mitigating the apprenticeship of observation. *Teaching Education*, 1-20
- Gupta, A. and Gupta, V.(2020). Reshaping Education. The COVID-19 Has Led To Some Elements of Teaching-Learning Changed Completely. *The Hindu*.
- Gupta, A., & M.Golplani. (2020). Impact of Covid-19 on Educational Institutions in India. *The Online Journal of Distance Education and e-Learning*.Purakala, 31(21), 661-671.
- Jain, R. &S.Soriya, (2021). Integrating The Education With The Technology - Rise In Demand For Online Education In India. *The Online Journal of Distance Education and e-Learning*.9(1), 112-124.
- Jena, P. K. (2020). Impact of Pandemic COVID-19 on Education in India. *International Journal of Current Research (IJCR)*, July. <https://doi.org/10.31235/osf.io/2kasu>
- Joshi, J. (2020). Towards Investigation of Issues and Challenges in Faculty Transitions To Online Instructional Environment Amidst Covid- 19 : AQualitative Study. *The Online Journal of Distance Education and E-Learning*, 8(4), 239-247.
- Kim, J. (2020). Learning and Teaching Online During Covid-19: Experiences of Student Teachers in an Early Childhood Education Practicum. *International Journal of Early Childhood*, 52(2), 145-158.<https://doi.org/10.1007/s13158-020-00272-6>
- Khalil, S.(2020).Improving Practice Teaching in Primary Schools for School Internship Programme. *Voices of Teachers and Teacher Educators*. NCERT. Vol.IX. Issue II (pp.72-84)https://ncert.nic.in/pdf/publication/journalsandperiodicals/vtte/VTTE_Journal_2020_December.pdf
- Kumar, P. and S.Azad, (2016). Teacher Education in India: Some Policy Issues and Challenges. *International Journal of Advance Research and Innovative Ideas in Education*. Vol(2), 6, 1217-1224.
- Mishra, L.,T. Gupta, , &A.Shree, (2020). Online Teaching-Learning in Higher Education During Lockdown Period of COVID-19 Pandemic. *International Journal of Educational Research Open*,1(June), 100012. <https://doi.org/10.1016/j.ijedro.2020.100012>
- Mukherjee, A. and P.K. Kuri, (2021). Impact of Covid- 19 on education system in India: Challenges, Opportunities and tasks ahead. *The Online Journal of Distance Education and e-Learning*. 9(4) 461-470.
- Pokhrel, S., &R.Chhetri, (2021). A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning. *Higher Education for the Future*, 8(1), 133-141.<https://doi.org/10.1177/2347631120983481>
- Qazi, A., K.Naseer, , J.Qazi, , H.AlSalman, , U.Naseem, , S.Yang, G. Hardaker, &A.Gumaei, (2020).Conventional to Online Education During COVID-19 Pandemic: Do Develop and Underdeveloped Nations Cope Alike?*Children and Youth Services Review*, 119, 105582. <https://doi.org/10.1016/j.childyouth.2020.105582>

- Ravichandran, P., & Shah, (2020). Shadow Pandemic: Domestic Violence and Child Abuse During the COVID-19 Lockdown in India. *International Journal of Research in Medical Sciences*, 08(08), 3118. <https://doi.org/10.18203/2320-6012.ijrms20203477>
- Sintema, E. J. (2020). Effect of COVID-19 on the Performance of Grade 12 Students: Implications for STEM education. *EURASIA Journal of Mathematics, Science and Technology Education*, 16(7). <https://doi.org/10.29333/ejmste/7893>
- Smith, K. L., & J. Rayfield, (2017). Student Teaching Changed Me: A Look at Kolb's Learning Style Inventory Scores Before and After the Student Teaching Experience. *Journal of Agricultural Education*, 58(1), 102-117.
- Tse, K. (2021). Student Teachers Adapt to Pandemic in Classrooms. *The Daily Illini*. The Independent Student Newspaper At The University Of Illinois.
- Yan, C., & C. He, (2010). Transforming The Existing Model of Teaching Practicum: A Study of Chinese EFL Student Teachers' Perceptions. *Journal of Education for Teaching: International Research and Pedagogy*, 36(1), 57-73. doi:10.1080/02607470903462065
- Yildiz, E. P., & A. İşman, (2016). Quality Content in Distance Education. *Universal Journal of Educational Research*, 4(12), 2857-2862.
- Varela, D. G., & Desiderio, M. F. (2020). Perceptions of COVID-19 Pandemic Impact on the Student Teaching Experience. *Research in Higher Education Journal*, 39, 1-12.
- Weber, L. (2021). Student Teachers Navigate Pandemic with Students, Mentors. Education students at Montana State University were learning, along with their teacher-mentors, as schools navigated the COVID-19 pandemic. *Bozeman Daily Chronicle*.