Lived Experience of Virtual Learning Spaces amid COVID-19 Outbreak: A Case of Public Secondary Schools in Kashmir

Tariq Ahmad Wani¹, Showket Nabi², Habibullah Shah³

¹School of Education, Central University of Kashmir, Ganderbal, J&K
²School of Education and Behavioral sciences University of Kashmir, Srinagar, J&K
³Directorate Of Distance Education, University of Kashmir, Srinagar, J&K

Email: educationtariq@gmail.com¹, showketnabi.scholar@kashmiruniversity.net², habibullahshah@kashmiruniversity.ac.in³

Abstract

The global educational system collapsed amid COVID-19 pandemic from elementary to tertiary level, not only in India rather through out globe. The virtual educational space have been widely exposed during covid-19 pandemic. Due to excessive use of technology tools, there emerges a need to increase the knowledge of students' and teachers' experiences with virtual spaces. This study aimed to develop an in-depth understanding of teachers' and students' lived experiences about virtual learning spaces amid COVID-19 outbreak. This study was carried out in two public secondary schools in Kashmir using Phenomenology as a design. The research methods include semi-structured interview and focus group discussion. Five students and five teachers participated in the study. The findings revealed that virtual learning spaces differ from physical learning environments in terms of freedom, flexibility, and collaboration. Furthermore, results depicted that Covid-19 brought change in perception among students and teachers regarding traditional built classroom space as being the sole conducive learning space. However, in virtual spaces participants experienced lack of emotional interactivity and complexity.

Key Words: Education, Virtual Space, Learning, lived experiences and Covid-19 Pandemic

1. INTRODUCTION

The Covid-19 a severe respiratory infectious disease, originated in Wuhan city of China and then spread all across the continents (Remuzzi & Remuzzi, 2020). This Covid-19 crisis forced us to move towards online teaching because of shutting down of universities, colleges and schools for indefinite time period as the only alternative (Mishra et al., 2020). The COVID-19 outbreak has had a variety of effects on education. Teachers and students have to quickly adapt to virtual teaching as a result of the closure of all institutions and schools (Carrillo & Flores 2020). The closure of schools completely changed perceptions of educational Students' environment or space as a result of online learning (Sheen et al. 2020). Space is a broad notion in the context of learning and

education. Traditionally it is referred as the physical learning spaces where learning occurs (Cook, 2010). Learning spaces involve formal locations like laboratories and classrooms, as well as informal learning spaces such as libraries and the entire campus (Painter et al., 2013).The ways humans work, play and learn are changing swiftly due to innovative and novel learning spaces, digital mobile tablets, laptops and technologies like smart phones which creates opportunities to physical and online blend spaces (McNeil & Borg 2018). Thus, learning space refers to space where learning takes place, whether it is physical or virtual.

2. Review of Literature

An emerging body of researches have been carried out to discover various

learning spaces (Ellis & Goodyear, 2016; Kumar & Bhatt, 2014; Talbert & Mor-Avi, 2019; Zeivots & Schucks, 2018) mostly from the perspectives before Covid-19 pandemic crisis. Learning space, on the other hand, becomes a more complex concept with the new age particularly during and after the COVID-19 crisis. Education academicians saw how physical detachment practices eventually lead to the reconstruction of physical learning spaces as after numerous countries reopened their schools, (Melnick, et al., 2020). Moreover, there are on going global discussions about implying and emergence of remote learning spaces (Bozkurt et al., 2020) in the existing academia practices, structures and systems (Chattaraj & Vijayaraghavan, 2021). With the rapid advancement of technology, the learning environment has changed. The term "physical spaces" has been expanded to include "virtual spaces" where learning takes place (Wu, 2018). The abrupt shift to online education amid initial stages of COVID-19 outbreak. the time for preparation was limited, (Almost, 2020) and numerous teachers scrambled to develop virtual versions of previously designed in-person courses (Carolan, 2020; Williams, 2020). The paradigm shift to Emergency Virtual Learning as a response to the Covid-19 pandemic changed the way learning was experienced in the prepandemic context (Chattaraj & Vijayaraghavan 2021).

However, In today's world scope of learning space extends from physical space to virtual spaces as well. Therefore, learners' learning space is not limited to the schools only. They may have access to different social resources and technological resources outside the schools as well. In addition to, elements of new learning settings for 21st century skillfulness can be successfully translated into home learning environment, supporting various learning approaches for instance working on projects, interactions with peers and learning outdoor etc, (Tapia-Fonllem et al., 2020). In the last few decades there occurred a lot developments and of in educational technology advances however, these developments proved to be enormously useful amid this COVID-19 crisis (Chatterjee & Chakraborty, 2020; Dhawan, 2020). Some online learning platforms to enhance and support virtual education were at disposal (Nash, 2020). However, it was a huge challenge for school teachers to plan their educational activities in a virtual space. Considering a very limited research carried out on synchronous learning spaces contrasted with asynchronous learning. lived experience of virtual classroom space requires further exploration that focuses on every day lived practices and use of these virtual tool to determine its best use. These developments necessitate a rethinking of how learning will acquire place and in what type of environment or space. Therefore, it is a timely need to carefully think about the concept of educational space, learning amid Covid-19 pandemic a further in Indian context specifically in Kashmir. This study is aiming to explore the phenomenon of virtual learning spaces persuaded by COVID-19. In doing so, this study adopt the pure phenomenological research design to document and understand the lived experiences and perceptions of participants.

3. Research objective

1. To explore the lived experiences and perception of students' and teachers' regarding virtual learning spaces created by Covid-19 pandemic.

4. METHODOLOGY

4.1 Approach and Design

Investigators adopted a qualitative approach. More specifically research phenomenological research design was adopted to understand and describe the students' and teachers' lived experiences and perceptions regarding virtual educational learning space created during Covid-19. This decision was guided by (Tuffour 2017) and (Van Manen 2016), affirmed that the purpose who of phenomenological study is to document and describe the meaning of lived experiences. This study is based on a social constructivist paradigm guided bv (O'Donoghue, 2006). Social constructionism human asserts that interactions produce and negotiate meaning, with the goal of gaining a comprehensive knowledge of lived experience and perceptions through different perspective and descriptions (Creswell, 2014; (Denzin and Lincoln, 2005; Merriam, 2009). There is strong connection between social constructivism and phenomenology. Phenomenological seeks to understand and research characterize the subjective daily practices and experiences of people who share a common essence of phenomenon (Moustakas, 1994).

4.2 Study participants

This study was carried out in urban secondary public schools of Kashmir, India. Ten participants five students' and five teachers' of two secondary public schools participated in this study and were selected by using Purposive sampling technique. This sampling technique is believed to be the best suited to phenomenological research (Kleiman. 2004). The optimal sample size in phenomenological researches are expected to have four to ten participants (Creswell, 1998; Mastel-Smith & Stanley-Hermanns, 2012).

4.3 Data Collection and Data Analysis

A semi-structured interview schedule was prepared by the researchers to collect data about lived experiences and perceptions of teachers and students in regard to the virtual space and the conditions contained within the online classes. The face to face interviews of 30 minutes were conducted to collect the data from the participants. Furthermore, focus group discussions were also carried out to generate rich perspectives of participants' virtual space experiences. Thematic analysis was utilized to analyze the data and to generate themes.

5. Findings

This study aims to develop a better Knowledge and understanding of public secondary school students' and teachers' lived experiences in virtual environment. Ten participants five teachers and five students were interviewed. The researcher conducted and transcribed each interview. The researcher used the phenomenological method to analyze the transcripts, consistent with paradigm proposed by the (1994).individual Mostakas Each participant experience in virtual learning environment was unique, however, five commonalities emerged within the group, and these themes were interrelated. The interrelated emergent themes were: (a) Techno Adaptability, (b) Pedagogical Flexibility, (c) Professional growth of Teachers, (d) Flexibility in teacher-students interaction, Change in the perception of learning spaces and (e) virtual space challenges. In results (S1,S2 and like) represents student respondents while as (T1, T2 and like) represents Teacher respondents).

5.1 Phenomenon 1: Techno Adaptability

The student participants reported a sense of adaptability and familiarity in complete virtual learning space during COVID-19 pandemic. Initially participants were not sure how to participate in the virtual classes because it was their first time experience to engage with online classes. However, after attending their few classes student participants had realized that there was no such difficulty in managing their activities in virtual space and they felt it a safe space for learning. The students' and teachers' experienced virtual space learning associated with affordance limitations COVID-19 and during pandemic. This affordance of virtual space learning allowed both students' and teachers to hear and see one another in real time while presenting content. students participant (S1) narrated that:

"At first, I feel unsure about how to participate in the virtual classes because it was first time experience for me rather so novel and away of my comfort zone. Nevertheless, after attending a few classes of the performance, I realized that there was no so difficulty to manage the activity in virtual space as well. With time being I feel it provide safe space for learning for engagement and dealing with different types of activities."

Another participant (S2) said that:

"In the virtual learning setup gradually my adaptability has been increased, therefore, I can now confidently state that I can learn and pursue education, not only in conventional physical settings but as well as in virtual setup".

The accounts noted in comfort of the participants appear from a sense of adaptability and familiarity in complete virtual learning space during COVID-19 pandemic. In addition to, this level of comfort can be linked to students' gradual adaptation to new virtual learning spaces, and exclusively to the whole virtual education mode. The student respondent (S3) narrated:

"The advantage of virtual mode is that we have certain choice in how we interact with the class. In offline classes, I become a little antsy. As a result, when I join a virtual environment, I feel like I'm being watched less, which offers me a sense of freedom."

Student participants experiences demonstrated that they feel better and flexible learning space and access to information on their demand after capturing their lived experiences. They experience virtual environment as least restrictive. The teachers also become techno friendly.

5.2 Phenomenon 2: Pedagogical Flexibility

The teacher participants reported that they were more motivated and interested in using Smartphone devices which allowed them to convey their content in a variety of ways. They had used Power Point Presentations (PPT) during their delivery of content which improved their students progress. It was also reported that teachers had used different methods and platforms to increase students participation during online classes. Virtual space provided more space to make wider use of Teaching Learning Material (TLM) in enhancing pedagogy. One teacher participant (T1) reported that:

"In one of interview with the educator, it was quite interesting to bracket his views on "virtual learning spaces". That this Covid-19 exposed a number of digital platforms and innovative pedagogies. Here we were not restricted to adopt any specific pedagogy. after lecture I used to share my recorded lecture through what's app also". The other respondent narrated (T2)

When a smart phone was utilized to instruct, the teacher felt good as PPT was utilized to instruct due to which students achievement and work improved.

Students' stated that they were more motivated and interested through such innovative pedagogies. Using a Smartphone allowed us to convey a content in a variety of ways. The teacher respondent said (T3).

"For me this pandemic brings the change in teaching methods as well, because we cannot teach the students in virtual spaces as we did in physical spaces. I used different teaching methods and teaching learning material to increase student participation. Sometimes I adopted discussions and brainstorming sessions as well."

The technological affordances introduces additional enhancements in virtual learning space and pedagogies. The teachers claim that students needs have varied widely with new learning spaces created by Covid-19. therefore, virtual learning space create appropriate and new learning experiences.

5.3 Phenomenon 3: Professional growth of Teachers

Teacher participants of this study experienced that the virtual educational space learning enabled them that they need not only focus on theoretical material during the courses rather they get the opportunity to know the students better. Initially it was very difficult to maintain the virtual classroom environment, as it was novel experience for educators. However, with time being both the teachers and students begin to adopt with virtual space. This study found that during online classes all students did not remain attentive, as some of them felt that they are not monitored. However, sometimes teachers used to ask their students for feedback in order to keep them attentive through out their class. Likewise, sometimes teachers asked students to un mute yourself, which gave them assurance that they are attentive in their class. teacher participant (T4) stated that:

"For me in online education all students did not remain attentive, as some of them feel that they are been less monitored. However, sometimes I used to ask students for feedback, in order to keep them attentive through out the class. Like sometimes I ask students to un mute yourself, which gives me assurance that they are live in class. However, in traditional classroom space it was easy to keep eye on each student."

It was somehow challenging to cater the needs of all students in online learning space. However, gradually we learn multiple skills about how to teach in a virtual learning space. Learn new ways of content delivery as well.

This virtual space created due to COVID-19 pandemic enhanced the professional growth of teachers. Administration has also played a significant role in providing training to educators in enhancing their virtual teaching skills. Furthermore teachers exploited number of teaching learning material as they did in offline space.

5.4 Phenomenon 4: Flexibility in interaction and Change in the perception

This COVID-19 brings change in perception among students and teachers associated with traditional built classroom space as being the sole conducive learning space. The new opportunities have been created by COVID-19 pandemic for influencing how teaching and learning takes place beyond the conventional spaces. The students (S4) narrated that:

"For me it was a novel experience to learn through virtual mode. Initially I believe learning is only possible in physical classroom spaces. As I get exposed to virtual space, gradually my perception changed that conventional classrooms are not only means to learn."

The student participants demonstrated that they used to support and encourage each other by praising each other after giving response to their teachers questions. The praising words included well-done, very good and excellent. It was also found that the virtual space built students courage and confidence, as it was easy to answer question in virtual mode than physical mode. Participant also narrated that in virtual mode they have some sort of freedom and flexibility in terms of space, time and duration. student participant (S5) affirmed that:

"The virtual space build my courage and confidence, as it was easy to answer question in virtual mode than physical mode. I get encouragements from my peers as well as teacher when ever I responded to any question."

5.5 Phenomenon 5: Virtual space challenges

As the results highlight, the virtual learning environment is the utmost challenge that teachers and students needed to hurdle, mainly distractions at home such as noise and limitations in learning space and facilities. Furthermore, the restrictions employed due lockdown restricted learning experiences of students, like limits the completion of my some assignments and requirements particularly for my practical subjects and physical activities. It was further found that social media platforms like What's App, Facebook, telegram and likewise remain the major distracters and possess greater challenge in virtual space. The results revealed that virtual space is little more challenging and thus, some students' were not relaxed while attending classes in virtual spaces due to lack of emotional touch.

Both the teachers and students experience a distractions in virtual space, more specifically Social media platforms like Snap chat, YouTube, what's app, Facebook and Instagram remain major learning distracters during online learning classes. The students narrated (S7):

"For me virtual classroom environment was somehow frustrating and challenging. I had a low speed internet, but someway the audio and video was playing good but still there seems an echo sound. I missed the whole bunch sometimes while presentations. I had some technical problems as well. However, some students have problems in handling zoom and Google meet platforms, few could not hear properly due to some technical glitches".

The teachers and students experience difficulties in managing best time for Teaching and learning at home, due to distractions at home as a learning space. Furthermore home set-up limits completion of students assignments and requirements particularly for my practical subjects like science and physical activities. I also experience financial challenges while accessing digital learning recourses.

6. DISCUSSION AND CONCLUSION

This paper adds to literature about virtual Educational Space, Learning amid Covid-19 pandemic experienced in the educational context by getting close to teachers and students' real life-world. The affordances advanced of technological tools' allowed participants in the virtual education settings to see one another in actual time. With which the participants believed as a positive of EdTech, since it permitted them to know each other better despite physical distance created due to COVID-19 crisis. The findings highlighted that sync classroom environment enhanced

reciprocal dialogue between teacher and students by allowing them to explicate their concerns and provide instant feedback during the class. Immediate feedback and exchanges with peers and the teachers' appear to enhance student motivation, engagement and learning in virtual space learning (Schullo, Hilbelink, Venable & Barron 2007).

The miscellaneous choices of pedagogical practices are involved in virtual learning space (Baker, 2003) and are often illustrated by dynamic learner centric pedagogical techniques (Browne, 2005; Dabbagh & Ritland, 2005; Mynbayeva et al. 2017). For some students, participating in synchronous virtual classroom activities was difficult as they were unfamiliar with the virtual classroom's features. Because of its unfamiliarity, the majority of students were not comfortable and relaxed rather pushed while participating in this virtual activity (Jandrić, classroom 2020). However with time being they learn many virtual skills necessary for sync learning. It was also supported by Gedera (2014). The students' and teachers' experienced virtual space learning associated with affordance and limitations during COVID-19 pandemic. This affordance of virtual space learning allowed both students' and teachers to hear and see one another in real time while presenting as already claimed by (Hu-Au & Lee 2018). Nevertheless, this pandemic bring paradigm shift from the conventional learning mode to virtual education milieu, it become vital for teachers' to get familiar and learn about sophisticated technology exclusively related with online teaching and learning (Shetty et al, 2021). The findings further revealed that student participants experienced better and flexible learning space and access to information on their capturing demand after their lived experiences. In order to meet the instructional needs of online learners the teachers understand that they need to transform and change their pedagogical

approach to teaching and learning process, results are in line with studies conducted pre-pandemic era (Colaric, & Taymans, 2004; Nelson & Thompson, 2005; Mishra et al., 2020; Panda & Mishra, 2007).

Initially the students feel unusual and were not able to manage and concentrate on lectures due to lack of respective knowledge or experience. However, with time their online learning skills get enhanced and strengthened. Consequently teachers as well students become able to familiarize themselves to adopt technology easily and as a result to build up novel forms of online learning spaces for explorative learning. Some of the results of this study are in line with Falloon's work (2011) on sync virtual classroom experiences of students' in which he emphasized the areas where educators should focus in order to get the most out of it. After reflecting on teachers experiences, they discovered several key takeaways relating to the use of technology as a tool for implementing creative active learning practices in virtual settings. Similar to studies of blended and synchronous virtual learning using various technologies that were conducted prepandemic (Jowsey et al., 2020; O'Doherty et al., 2018), we account that our capability to innovatively utilize technology to sustain active learning was being predicated on student and instructor acquaintance with the digital technology (O'Flynn-Magee 2021).

Teacher participants experienced that the virtual educational space learning enabled them that they need not only focus on theoretical material during the courses rather they get the opportunity to know the students better and observe their effective growth. This virtual space created due to COVID-19 pandemic enhanced the professional growth of teachers this finding corresponds with (Kariippanon et al., 2019). For professional growth, teachers at any educational rank are necessitates to well-informed regarding remain the effective growth in various knowledge

domains, therefore they need to persistently professionalize themselves (Desimone & Garet 2015).

As the findings show, virtual space is the most difficult obstacle that teachers and students need to overcome, owing to distractions at home such as noise and limits in learning space and facilities, and is backed up by research (Barrot et al., 2021). Furthermore, the constraints imposed as a result of lockdown limited students' learning opportunities, such as limiting their ability to complete several assignments and tasks, notably for practical works of Science subjects and physical morning assembly. activities in Furthermore, social networking sites such Snap chat. YouTube. WhatsApp as others were Telegram, Facebook and discovered to be huge distractions and provide a greater challenge in virtual space. This finding corresponds to reports on the negative impact of the COVID-19 Pandemic on students' learning experiences and the problems provided by the home learning environment (Day et al., 2021; Kapasia et al., 2020).) The findings reveal that student participants experienced better and flexible learning space and access to information on their demand after capturing their lived experiences. Research explores that virtual learning spaces have had substantial impact on how people learn (Beckers, Van der Voordt, & Dewulf, 2016). Virtual space is flexible as one can create a comfort zone in digital learning because you can study whenever it is convenient for you. In traditional learning, all pupils are required to be present in class when the teacher is teaching. In the case of digital education, however, this is not the case. Students in digital education can study whenever and wherever they want (Raj 2017). This COVID-19 brings change in perception among students and teachers associated with traditional built classroom space as being the sole conducive learning space. (Sheen et al. 2020) supported the argument by claiming that virtual learning dramatically changed students perception towards educational space.

7. Limitations and Suggestions

This phenomenological study provides for a more in-depth exploration of the learning space phenomena, educational however, number of participants included in this study can be regarded a limitation. Despite the fact that the nature of the topic necessitates such an intervention, more research from a variety of learning contexts is required to examine and validate the patterns that developed and the findings made in this study. The study highlights the mobility paradigm's potential and suggests that a deep engagement with mobility and virtual space is required to trace the change school education in emerging due to COVID-19 pandemic.

To build up an effective virtual milieu by allowing both teachers and students to access smart devices and necessary software's during online instruction addressing challenges of technical access.

Training workshops should be Organizing for teachers and students to advance their familiarity by addressing technical skills regarding digital learning technology and tools.

To avoid the boredom and fatigue educators have to break down their lecture into shorter segments with more frequent breaks.

To advance the academic integrity and quality of assessments open-note and openbook and sync assessment techniques should be used. The innovative and effective methods, randomized questions and restricted time, question pools on LMS. Some recommendations can be made from the teachers' experiences, which may be relevant in other Indian states with similar situations beyond Jammu and Kashmir. Kashmir, in particular, demands the creation of comprehensive policy planning for e-learning, as well as its efficient execution, within its capability and resources.

8. Implications

The findings of this study are highly relevant and can significantly shape the pedagogical way and researchers engagement with the different modes of learning like online, physical, and hybrid. Moreover, the future of school education which will be shaped by technologyenabled learning. The findings of this study will help in maximizing and creation of high quality learning spaces to create desired and sustainable future.

The results of the study will be beneficial for reconfiguration of curriculum. faculty need to have rethink about their roles and responsibilities in the learning and teaching paradigm.

Funding

This study was not funded by any organization or institute.

Conflict of Interest

The investigators declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

9. REFERENCES

- Baker, A. (2003). Faculty development for teaching online: Educational and technological issues. The Journal of Continuing Education in Nursing, 34(6), 273-278. Retrieved from https://digitalcommons.sacredheart. edu/cgi/viewcontent.cgi?referer=& httpsredir=1&article=1016&contex t=nurs_fac
- Barrot, J. S., Llenares, I. I., & Del Rosario, L.S. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies*, 26(2), 7321–7338. https://doi.org/10.1007/s10639-021-10589-x
- 3. Beckers, R., Van der Voordt, T., & Dewulf, G. (2016). Learning space

preferences of higher education students. *Building* and *Environment*, 104, 243-252.

- 4. Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to Coronavirus pandemic. Asian Journal of Distance Education, 15(1), 1-6. https://doi.org/10.5281/zenodo.377 8083
- 5. Browne, E. (2005). Structural and pedagogic change in further and higher education: A case study approach. *Journal of Further and Higher Education*, 29(1), 49-59 https://doi.org/10.1080/030987705 00037754
- 6. Carolan. C. (2019). The Rural Problem: Justice in the Countryside. *Rural Sociology*, 85(1), 22-56. https://doi.org/10.1111/ruso.12278
- Chakraborty, K., & Chatterjee, M. (2020). Psychological impact of COVID-19 pandemic on general population in West Bengal: A crosssectional study. *Indian Journal of Psychiatry*, 62(3),266. Retrieved from https://scholar.google.co.in
- Chattaraj, D., & Vijayaraghavan, A. 8. P. (2021). Why learning space matters: A script approach to the phenomena of learning in the emergency remote learning scenario. Journal of Computers in Education, 8(3), 343-364. https://doi.org/10. 1007/s40692-021-00182-z
- 9. Chatterjee, I., & Chakraborty, P. (2020). Use of information and communication technology by medical educators amid COVID-19 pandemic and beyond. *Journal of Educational Technology Systems*, 49(3), 310-324. https://doi.org/10.1177/004723952 0966996
- 10. Cook, G. (2010). Translation in language teaching: An argument

for reassessment. Oxford University Press.

- Creswell, J. W. (1998). Qualitative inquiry and research design: Choosing among five tradition. Thousand Oaks, CA: Sage.
- 12. Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE.
- Dabbagh. N., & Nanna Ritland, B. (2005). Online learning: Concepts, strategies and application. New Jersey, NJ: Upper Saddle River.
- 14. Day, T., Chang, I. C. C., Chung, C. K. L., Doolittle, W. E., Housel, J., & McDaniel, P. N. (2021). The immediate impact of COVID-19 on postsecondary teaching and learning. The Professional Geographer, 73(1), 1–13. https://doi.org/10.1080/00330124.2 020.1823864
- Denzin, N.K and Lincoln, Y.S (2005). *The Sage Handbook of Qualitative Research*. (3rd ed.). London: Sage Publications Ltd.
- 16. Desimone, L. M., & Garet, M. S. (2015). Best practices in teacher's professional development in the United States. *Psychology, Society and Education, 7(3), 252-263.*
- 17. Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. https://doi.org/10.1177/004723952 0934018
- Diaz, M. C. G., & Walsh, B. M. (2020). *Telesimulation-based education during COVID-19*. The Clinical Teacher in press.
- Ellis, R., & Goodyear, P. (2016). Context and implications document for: Models of learning space: integrating research on space, place and learning in higher education. *Review of*

Education, 4(2), 192-194. https://doi.org/10.1002/rev3.3056

- Falloon, G. (2011). Making the 20. connection: Moore's theory of transacttional distance and its relevance to the use of a virtual classroom in postgraduate online teacher education. Journal of Research Technology on in Education, 187-209. 43(2),Retrieved from https://scirp.org/reference/reference spapers.aspx?referenceid=631564
- Gedera, D.S.P. (2014). Students' experiences of learning in a virtual classroom. International Journal of Education and Development using Information and Communication Technology (IJEDICT), 10 (4), 93-101. Retrieved from https://files.eric.ed.gov/fulltext/EJ1 059024.pdf
- Hu-Au, E., and Lee, J. (2018).
 Virtual reality in education: a tool for learning in the experience age. *International Journal of Innovation in Education 4*(4), DOI: 10.1504/IJIIE.2017.1001269
- 23. Jandrić, P., Hayes, D., Truelove, I. et al(2020). Teaching in the Age of Covid-19. *Postdigital Science and Education*, 2(1), 1069–1230. https://doi.org/10.1007/s42438-020-00169-6
- 24. Jowsey, T., Foster, G., Cooper-Ioelu, P., & Jacobs, S. (2020). Blended learning via distance in pre-registration nursing education: A scoping review. *Nurse Education in Practice*, 44 (1), 1-10. 102775. https://doi.org/10.1016/j.nepr.2020. 102775
- 25. Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R., & Chouhan, P. (2020). Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal. India.

Children and Youth Services Review, 116, 105194. doi: 10.1016/j.childyouth.2020.105 194

- Kariippanon, K. E., Cliff, D. P., 26. Lancaster, S. J., Okely, A. D., & Parrish, A. M. (2019). Flexible learning spaces facilitate interaction, collaboration and behavioural engagement in secondary school. PLOS ONE, 14(10), 1-13. doi:10.1371/journal.pone.0223 607
- 27. Kleiman, S. (2004). Phenomenolog y: To wonder and search for meani ngs. *Nurse Res*, 11(4),7-19.
- 28. doi: 10.7748/nr2004.07.11.4.7.c6211.
- Kumar A. & Bhatt, R.K. (2014). A study of using informal learning spaces at Indian institute of technology, Delhi. *Library Philosophy and Practice*, 1-17. Retrieved from http://digitalcommons.unl.e du/libphilprac/1239
- 30. Mastel-Smith B & Stanley-Hermanns M. (2012)."It's like we're grasping at anything": Caregivers' education needs and preferred learning methods. *Qual Health Res. 22(7)*, 1007-10 15. doi: 10.1177/1049732312443739.

PMID: 22645226.

- 31. McNeil, J., & Borg, M. (2018). Learning spaces and pedagogy: Towards the development of a shared understanding. *Innovations in Education and Teaching International*, 55(2), 228-238.
- 32. Meeker, M., & Wu, L. (2018). Internet trends.
- Melnick, H., Darling-Hammond, L., Leung, M., Yun, C., Schachner, A., Plasencia, S., & Ondrasek, N. (2020). Reopening schools in the context of COVID-19: Health and safety guidelines from

other countries. *Learning Policy Institute*. Retrieved from https://learningpolicyinstitute.org/p roduct/reopening-schools-covid-19-brief

- Merriam, S.B. (2009). Qualitative Research: A Guide to Design and Implementation. (3rd ed). San Francisco: John Wiley & Sons.
- 35. Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1(1),1-8. https://doi.org/10.1016/j.ijedro.202 0.100012
- 36. Moustakas, C. (1994). *Phenomenological* research methods. Sage.
- 37. Nash, C. (2020). Report on digital literacy in academic meetings during the 2020 COVID-19 lockdown. *Challenges*, 11(2), 1-24. https://doi.org/10.3390/challe1 1020020
- O'Doherty, D., Dromey, M., Lougheed, J., Hannigan, A., Last, J., & McGrath, D. (2018). Barriers and solutions to online learning in medical education—An integrative review. *BMC Medical Education*, 18(1), 1-11. https://doi.org/10.1186/s12909-018-1240-0
- O'Donoghue, T. (2006). Planning Your Qualitative Research Project: An Introduction to Interpretivist Research in Education. 1st edition. London: *Routledge*. DOI: 10.4324/9780203967720.
- 40. O'Flynn-Magee, et al. (2021). "Creativity in a COVID-19 Virtual Learning Space," *Quality Advancement in Nursing Education* - Avancées en formation infirmière: 7(1), 1-16. DOI: https://doi.org/10.17483/2368-6669.1284

- 41. Painter, C., Martin, J., & Unsworth, L. (2013). *Reading visual narratives: Image analysis of children's picture books*. Equinox Publishing Ltd.
- 42. Panda, S., & Mishra, S. (2007). E-Learning in a Mega Open University: Faculty attitude, barriers and motivators. *Educational Media International*, 44(4), 323-338. Doi.ogr/10.1080/09523980701680 854
- 43. Paul, J. and Jefferson, F. (2019). A Comparative Analysis of Student Performance in an Online vs. Faceto-Face Environmental Science Course From 2009 to 2016. *Front. Comput. Sci.* 1(7), 1-9. doi: 10.3389/fcomp.2019.00007
- 44. Remuzzi, A., & Remuzzi, G. (2020). COVID-19 and Italy: what next?. *The lancet*, 395(*10231*), 1225-1228. Retrieved from https://www.sciencedirect.com/scie nce/article/pii/S014067362030627 9
- 45. Schullo, S, Hilbelink, A, Venable, M & Barron, AE 2007. "Selecting a virtual classroom system: Elluminate live vs. Macromedia breeze (adobe acrobat connect professional)", *Merlot*, 3(4), 331-345. Retrieved from https://jolt.merlot.org/documents/hi lbelink.pdf
- 46. Sheen A, Ro G, Holani K, Pinheiro Dos Santos A.C.Z., Kagadkar F., Zeshan, M. (2020). Impact of Covid-19–related school closures on children and adolescents worldwide: a literature review. J Am Acad Child Adolesc Psychiatry 59(10), S253. https://doi.org/10.1016/j.jaac

S253. https://doi.org/10.1016/j.jaac .2020.08.417

47. Shetty, S., Shilpa, C., Dey, D., & Kavya, S. (2020). Academic Crisis During COVID 19: Online Classes, a Panacea for Imminent Doctors. Indian Journal of Otolaryngology and Head & Neck Surgery,74(1), 1-5. doi:10.1007/s12070-020-02224x

- 48. Talbert, R. & Mor-Avi, A. (2019). A space for learning: An analysis of research on active learning spaces. *Heliyon*, 5(12), 29-67. https://doi.org/10.1016/j.heliyon.20 19.e02967
- 49. Tapia-Fonllem C, Fraijo-Sing B, Corral-Verdugo V, Garza-Terán G & Moreno-Barahona M (2020) School Environments and Elementary School Children's Northwestern Well-Being in Mexico. Frontiers in Psychology, 11(510). doi: 10.3389/fpsyg.2020.00510
- 50. Tuffour, I. (2017). A critical overview of interpretative phenomenological analysis: a contemporary qualitative research approach. *Journal of Healthcare Communications*, 2 (4:52), 1–5. DOI: 10.4172/2472-1654.100093.
- Van Manen M (2016) Researching Lived Experience: Human Science for an Action Sensitive Pedagogy. 2nd edition. New York: Routledge. doi: 10.4324/9781315421056.
- 52. Zeivots, S., & Schuck, S. (2018). Needs and expectations of a new learning space: Research students' perspectives. Australasian Journal of Educational Technology, 34(6), 27–40. https://doi.org/10.14742/aje t.4516