Adaptive Performance of Pre-Service Teachers: Challenges and Opportunities through the Times of Covid-19

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Abstract

The Covid-19 pandemic in India came in rapidly with a gush as a part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) sometime in the month of January without any anticipation of an uncertain future ahead. This time of crisis has changed the way we work, live, and lead. The education sector, a very crucial determinant of a country's economic future, was equally preyed, to the havoc created by this crisis. Educational institutions were compelled to shut down, cancel their classes, examinations, internships etc. and had to choose online modes to continue educational activities. How did educators and students navigate these uncertain times in the initial days of crisis? In search of answers to this question, the present study aimed to study the adaptive performance of pre-service teachers in times of lockdown due to COVID crisis. Pre-service teachers are situated in a transition process that generally affords a rare opportunity to contemplate all kinds of difficulties including, societal and personal, and to learn to make sense of these from ways attempted by their predecessors i.e., their teachers (Cook-Sather, A., 2006). Exploring the phase of transition of pre-service teachers in times of crisis provided insights into the extent and mechanisms of their adaptive capabilities and performances thus paving the way for fostering adaptive competencies in the pre-service teachers in the teacher training processes. The study recognizes the potential of assessing adaptive performance, while there is still a lack of consensus about what adaptive performance means.

It appeals to stakeholders not only in the education sector but a wider society at large, to create spaces and opportunities for individuals to explore their potential through their adaptive capabilities and performances in times of crisis or otherwise.

Background/Context of the Study

The Covid-19 pandemic in India came in rapidly with a gush as a part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) sometime in the month of January without any anticipation of an uncertain future ahead. In less than five months, the COVID-19 outbreak in India spread like wildfire to all states and union territories, infecting more than five lakh people. Mid-March saw the flagging of social distancing as an official method of keeping the virus at bay, followed by measures in the form of nationwide lockdown introduced in March end. This lockdown had a far-reaching radical impact on every aspect of mankind, bringing in a hoard of challenges and disrupting and rupturing the overall social structure. The education sector, a very crucial determinant of a country's economic future, was equally preyed to the havoc created by this crisis.

Educational institutions were compelled to shut down, cancel their classes, examinations, internships etc. and had to choose online modes to continue educational activities. This was apparently not an easy task. The initial days were quite perplexing for both educators and students in terms of coping with the changes that came unprecedented and that which was expected to be the 'New Normal' in future. The pandemic emerged with a pressing need for transformations from the century-old, traditional face-to-face teaching models and strategies to opening the windows of technology in teaching-learning. A multi-pronged strategy was visualized to manage the crisis and build a resilient Indian education system in the long term.

In such a scenario, when COVID created many challenges and struggles for all, one needs to essentially sit back and think if it came alone with its challenges or evolved pathways for opportunities alongside challenges. Social distancing is

something contrary to human nature, humans being social animals. In the midst of any kind of adversities, human nature has always possessed a unique ability of striving towards evolving ways of surviving, sustaining, adapting and living through conditions confronted.

You can't solve problems with the same type of thinking that created them.
   – Albert Einstein

Combatting the challenges of the crisis demands substantial restructuring of every aspect of life including the field of education. Change, though a normative concept is not an easy process to navigate. It comes along with a bundle of other elements or components like attitudes, relationships, motivation, uncertainties and many more. It also is embedded within cultures that may make it easy or difficult to navigate through change.

Education driven by technology-based interventions expect students, teachers and other stakeholders to be more adaptable, flexible, and be better able to handle uncertainty than ever before. Those who can meet the expectations will be able to move at a pace with which the world is progressing and others may fall behind in this space.

In this regard, the present study aims to study the adaptive performance of pre-service teachers in times of lockdown due to the COVID crisis. Pre-service teachers were specifically chosen for this study, considering the fact that they are in a transition state, 'betwixt and between', referring to the liminal phase. This phase is one of the multistep transition processes, where student candidates are afforded a rare opportunity to contemplate all kinds of difficulties including societal and personal, and to learn to make sense of these from ways attempted by their predecessors (Cook-Sather, A., 2006). This is critical to the process of 'becoming' that novices undergo during their rites of passage (Turner, 1995). "On the threshold of 'teacherdom'" (McNamara et al. 2002:864), "marginally situated in two worlds" (Britzman 1991:13), the pre-service teachers enter this space in a state of being "no longer just students but nor are they fully teachers" (Head 1992:94). The premise of needing to move towards transition has undergone transformation and how this transition looks like and how it has affected demands attention as

it has been argued that transitions or rites of passage can create spaces having the potential to transform not only individuals but also educational institutions and, perhaps, society (Cook-Sa czther, A., 2006).

Exploring the phase of transition of pre-service teachers in times of crisis, will provide an insight into the extent and mechanisms of their adaptive capabilities and performances thus paving way for fostering adaptive competencies in the student teachers or more commonly known as pre-service teachers in the teacher training processes.

Concept of Adaptive Performance

'Adaptive performance' as a term can be used to understand the dynamic nature of employee performance in a changing environment. Literature has often referred to various terms for adaptive performance. A few of them are adaptability, adaptation, adaptive expertise, adaptive transfer, performance adaptation, adaptivity, and adaptive behaviour. The term being used in diverse contexts lacks a universal definition. Based on the work of Pulakos et al. (2000), adaptive performance can be defined as flexible work behaviours that enable individuals' adaptation to changes by excelling in problem solving skills, stress management, innovativeness, and interpersonal management within the environment or culture that they are situated in. As Johnson (2001) suggests, adaptive performance can be considered a part of contextual performance (Park, S., & Park, S., 2019)

The most frequently used model of Adaptive Performance developed by Pulakos et al. (2000) is an eight-dimension taxonomy of AP, consisting of: (1) Handling Emergencies or Crises; (2) Handling Work Stress; (3) Solving Problems Creatively; (4) Dealing with Uncertain and Unpredictable Work Situations; (5) Learning Work Tasks, Technologies and Procedures; (6) Demonstrating Interpersonal Adaptability; (7) Demonstrating Cultural Adaptability; and (8) Demonstrating Physical Adaptability (Calarko, H.N., 2016).

Adaptability in the Context of education

Collie and Martin, (2016) assert that adaptability is an important disposition for teachers in the complex world of education. Martin, (2017), and others have referred it as a teacher's ability to change, adjust and modify their practice in response to variability, novelty and uncertainty and teacher adaptive practices have been identified as the expression of this adaptive disposition in the classroom (Loughland, T., & Alonzo, D., 2019). Teachers' adaptability has been considered as a central factor in effective teaching and learning, especially in instructional practices and beyond, with respect to teachers' functioning at work. Studies have shown its association with other factors that are salient to teachers' healthy and effective functioning at work, as well as students' positive outcomes (Collie, R.J, & Martin, A.J., 2016).

Khan, A., et al., (2012) communicates the ill-effects of teachers' stress on their performance and this impedes the functioning of teachers. This results in inefficient teaching learning environments, transaction of low quality instruction and low satisfaction level among students. Teachers need to learn to adjust and adapt to the demanding learning situations by effectively reacting and responding in constructive ways to new, changing, or uncertain conditions and situations.

Collie, R.J, & Martin, A.J. (2016), discuss adaptability as an important capacity for effective teachers and highlight various reasons for its promotion among teachers. The article points out the need for teachers to successfully respond to and deal with any changing demands that transpire across the school more broadly in terms of any kind of changes that may emerge unanticipated. The article specifies the relevance of adaptability to teachers' healthy and effective functioning at work and to students' academic outcomes.

Brühwiler, C., et al., (2020) explores whether students who are taught by a teacher achieving higher scores in measurements of adaptive teaching competency rate classroom processes more positively, as well as whether the measured adaptive teaching competency has a positive effect on student learning outcome and further explains it implications. The results were found quite encouraging demonstrating the benefits of adjustment in teaching by teachers who scored

high on adaptive teaching competency. The study emphasizes the relevance of adaptive planning competencies in teacher training and encourages one to come to an understanding of the importance of adaptive performance in both initial teacher training and continuous teacher education and the ways of fostering adaptivity in teachers.

From most of the studies reviewed on teacher adaptability, it is quite obvious that adaptability is a very crucial and important capacity building tool for teachers, resulting in a plethora of benefits including healthy and effective functioning at work and overall wellbeing.

Data Collection: Tools and Techniques

The original scale for Adaptive Performance developed by Pulakos et al. (2000) was used in this study. The description of the tool is already given in the earlier part of the paper. This was the tool used in phase 1 of this study. The phase 2, being a focus group discussion, a list of questions as a semi-structured questionnaire, was prepared on the basis of quantitative results obtained. These questions were probing and follow-up questions of phase 1.

A Convenient sampling technique was adopted for the first phase of the study keeping in mind the constraints of collecting data and getting responses during the period of lockdown. A Google form was used to create the questionnaire and the link was circulated among various groups of student teachers. Further, it was a voluntary sampling design, wherein participants had the choice to participate in the study or not engage with the study. Sixty-two participants completed the questionnaire. In the second phase, a purposive sampling technique was used to select the participants. A homogeneous group of participants were chosen from phase one on the basis of their responses. Again this followed a voluntary sampling design. The final list of participants who participated in the focus group discussion were those who were willing to participate and to be audio recorded.

Data was collected in two phases, the first one using the quantitative approach and the second one using the qualitative approach to supplement the quantitative results. Quantitative data was initially analysed to know the extent of overall adaptivity and also with respect to the individual dimensions of the adaptive performance. Further, data was analysed qualitatively to get deeper insights into the factors and mechanisms involved in the process of adaptation by the participants. For the second phase of data collection, focus group discussion was used as a technique.

Data Analysis

Quantitative

62 participants who were pre-service teachers responded to the questionnaire of which 90% of them were females and almost 48% of them belonged to the lowest age group of 18 to 23 followed by 43% of them in the age group of 24 to 30.

The data collected reveals the following about the adaptive performance of pre-service teachers.

Almost 50% of the pre-service teachers display their capacities in handling emergencies and crisis.

Around 50% and more are able to analyse situations and achieve focus on the situations, while a few of them are able to decide on actions to resolve the problem. Around 21% of them express their inability to respond quickly to situations.

When it comes to managing work stress, it is observed that one third of the participants reported anxiety in taking on additional work that may come unexpected and also work related stress impacting the quality of their work. At the same time, more than 30% of the participants have expressed a feeling of ease in taking up changing tasks and have also stated that their peers resort to their advice in difficult situations because of their ability to show self-control in these situations. Around 45% of them conveyed their cool nature required in

taking decisions. More than 50% of them reported having calm discussions with their peers for resolving problems.

Around a little more than 20% of the participants expressed comfort in using well-known methods rather than exploring something new. About more than 40% of them were quite adept in solving problems creatively by embracing a variety of sources towards innovative solutions to problems and also developed new tools and methods to resolve problems. Around 33% of them communicated that others within their circle relied on them to suggest new solutions.

Nearly 45% of the pre-service teachers find uncertain and unpredictable situations hindering their ability to act upon situations and almost 75% of them resort to superior's decisions regarding accuracy of information before acting upon situations. At the same time, the majority of them exhibited their contribution to the team's stability by motivating others towards assignments and also showed their ability to reorganize work to adapt to new situations.

Approximately 40% of the participants don't proactively make efforts and wait for innovations to be popularized around before taking any actions. Almost 75% of them try to look for the latest innovations for their work improvement. About 40% of them conveyed that they undergo training on a regular basis to keep their competencies up to date, while more than 60% of them looked for opportunities that could facilitate their performance.

Only 33% of participants communicated that they adapt their practices to others requirements and suggestions and quite a fifty percent of them adjust their practices when offered a solution by someone. Almost 80% of the participants consider good relationships with their peers as important for their effectiveness and try to understand their viewpoints to improve their interactions with them. Just 25% of them said that they don't consider negative comments about their work very important while a majority of them said they do.

More than 75% of the participants conveyed that they learn new ways to do their job to collaborate with others and willingly adapt their behaviour in doing so. About 40% of them expressed their awkwardness because of not being able to

understand others' practices and would like to stay with their own practices and act based on their own principles, irrespective of the situations.

About 75% of the participants stated that they strive to adapt to any kind of working conditions and about 60% of them try to reach physical limits to accomplish urgent tasks. About 50% of them say that they can only work efficiently in a comfortable environment.

The results of quantitative analysis reveals a major portion of participants trying to adapt and cope with situations in times of crisis while responses from a few of them is indicative of some kind of struggles or problems in coping with difficult times. To know more about the factors that could have been hindering or fostering these adaptive capabilities of pre-service teachers, a focus group discussion constituting a few of the selected participants was conducted. The overall findings of the quantitative analysis indicate that the crisis helped them develop adaptive skills and demonstrate interpersonal adaptability. The analysis from the FGD follows.

Qualitative

The audio recording from the focus group discussion was transcribed by carefully listening to the responses that participants gave for the questions. The thematic analysis was carried out after reading the transcripts.

The Emerging themes were dealing with change, optimistic choices, adaptation to change, facing challenges, varied and distinctive response to Covid challenges. The discussion below highlights these themes in a more narrative manner.

One of the excerpts from the responses in the FGD

Respondent:

"*When it comes to human being, all blame this year as a curse and everything is happening in this year, but no one is noticing the human adaptability Although all the adversities have been coming, it's not just the pandemic, but other natural calamities, I have noticed one really beautiful thing about human kindness and adaptability. I have seen people going out of the way and helping people even to people who are not even related. It's just like that the relation of human kindness*

that was so beautifully highlighted throughout the whole year. All the front line helpers doctors nurses and many others. We know that everything is difficult, but we do adapt and we change and time never stops for anyone".

Other few catchy phrases from the responses were
- *Changing with the changing times*
- *Pandemic was Difficult yet enlightening*
- *We need to value every moment, we sometimes regret some moments, and think we should have done this way or that way, but learnt we should value everything we have*
- *Pandemic made me realise that many such things are possible, which I never thought I could do possibly do before*

The above excerpts indicate a kind of positive optimism with which these pre-service teachers navigated their journey through the times of crisis. But to understand what kind of experiences they go through in totality and what were the factors that either hindered their ability to cope or facilitated them in coping with the situations during this crisis and adapting to situations was something worth exploring. The focus group discussions helped to explore these significant questions.

Emerging Issues and Challenges

When the group was asked about their ability to handle this crisis and emergency situation, mixed responses emerged from participants. Most of them were disappointed about the fact that they were having online classes due to which they couldn't travel to college, meet their teachers and especially their friends whom they used to enjoy with. They felt that they couldn't concentrate on learning at home as much as they could at the institution in face-to-face mode because of various reasons. They had no personal space of their own due to constraints of place at home, there were so many other things going on at home in the background due to which they got quite distracted during online teaching, some of them conveyed that they had to do the household work and parents were not understanding or cooperative in giving them their space to learn during

online sessions. These problems resulted in frustration for many of them and they wished they could go back to college soon.

On the other hand, some of them said that after a few initial online classes, they felt quite comfortable with this mode. When they used to interact with their peers, they realized that they were saving a lot of time which used to, otherwise be spent on commuting to and fro to college. This valuable time they felt could be used in many other things which they couldn't do during college times. The online teaching according to them also gave opportunities for engagement and discussions in classrooms through certain features of the platform like breakout rooms etc. which were being used by a few of their teachers. They were happy about the online mode of teaching learning, yet they all expressed their unhappiness in not being able to meet their friends and teachers. They all yearned for the reopening of colleges for face-to-face teaching and also indicated that teaching learning can be done in a hybrid mode.

When the group was asked to explain their stressful times and a comparison of stress during the times of crisis and normal times, most of them pointed to this the time of crisis as a unique experience in itself. Majority of them stressed on the fact that these times were very unusually difficult, because of the stringent restrictions that came along with other difficulties. The lockdown in initial periods forced everyone to be at home, which they referred to as prison, and absolutely refraining from going out of the house as precautionary measures against the virus and for safety of all. Most of the time was spent in front of the screen whether it was for learning or for leisure. This was very frustrating to many of them, who were generally not used to sit at one place. Network issues and technological glitches also were reported by them as resulting in more frustration as they could not listen properly to their teachers or interact. Amidst all these adversities, a few of them pointed to these times as unique in terms of bringing in opportunities to learn in a comfort zone, learn many new things about technology and enjoying the new way of learning stressing the fact that 'Not everything is negative' which was an optimistic voice among all their constraints. It also indicated in general our nature as humans to see the bright side.

When the group was asked about their ability to think creatively or visualize something new about a problem in such times of crisis, astounding responses were evoked from the participants. It seemed as the time of crisis like this pandemic brought with it the 'unthought'. Participants communicated that they initially used to attend many seminars and webinars online intentionally or unintentionally. But in the process of doing so, they gradually found themselves learning a lot, getting to know about various changes and perspectives over a period of time, which they thought they would not have gained in normal times. Some of them mentioned their newly found hobbies and interests, which they started pursuing in these times as a result of availability of ample time to themselves. A few of them disclosed that they did not follow their interests, always complaining about lack of time. Most of them attributed these new found activities in their lives to their family's and friends' support. The list of activities they spoke about, ranged from cooking, composing songs on a musical instrument, farming, studying types of soil, art and craft through hampers, creative writing and so on. They felt these activities helped them to de-stress themselves from the frustrated and anxious moments they were going through. A few of them disclosed that these activities helped them to earn some monetary benefits too. They also expressed their joy in being able to spend a lot of quality time with their family and friends, which otherwise they usually are not able to do. In this regard, they considered technology as a boon, due to which they could connect with many relatives and friends using video calls on various apps and platforms. They also conveyed how they celebrated different festivals and occasions with their families despite all the constraints in lockdown times. A few of them were pleased to bring this point of labour distribution at home, where barriers like gender differences broke down bringing in some kind of fairness in household work.

When the group was asked about the kind of relationships in these times of crisis, there was a silence that pervaded the conversation. When they were probed further to share their experiences, unpleasant experiences surfaced the talk. Most of them spoke about bad moods, constant overthinking, and frustrations to a very high level, bursting out with anger on trivial matters and more. They also expressed their regret for these emotions which were uncontrollable then, confessing that they could have been calmer and not reacted in those undesirable ways. Quarrels between members of families were also reported by

participants. This also created a very uncongenial and unpleasant environment for them to regulate and control their emotions at times.

When the group was asked about their capacity to accommodate any kind of new situation or a novel practice, the responses sounded more inclined towards certainty and hope as a result of powerful, influential learning experiences acquired in the course of the times of crisis. They asserted that they learnt to handle and cope with difficult situations with no choice left for them to do otherwise. They also expressed their gratitude to all around them including peers, friends and teachers, for having taught them to manoeuvre technology with ease and comfort. The varied learning experiences, according to many, instilled in them the confidence and capability to be self-sufficient and self-reliant. A few of them also communicated how they have started doing certain things to help and support others with confidence following this time of crisis and also started taking individual decisions by themselves.

When the group was asked about the physical conditions that hindered or promoted their way of working in times of crisis, responses included both the factors of hindrance and promoters. The major physical problems recorded by participants were health issues like headache, backache and so on, as a result of sitting at one fixed place and looking into the devices for a long duration of time. A few of them also spoke about the strategies they used to overcome these problems and cope with them. One of them mentioned that she used to change places within her house and even the positions in which she used to access the devices.

There was one response that was quite distinctive as one of the respondents. She underlined the importance of religious and spiritual interventions that can help cope with the crisis situations. She conveyed that she was a religious person and used to chant and pray for peace. She stressed the need to worship God for the peace of our mind, soul and body. Following this, others concurred with her way of thinking and one of them said that she learnt to calm herself before taking any decisions.

Conclusion

The results provide initial support for two previously unexplored areas in adaptive performance research: stress effects as a predictor of adaptive performance, and 2) the mediating effects of self-efficacy and stress effects. The experiences that pre-service teachers described, conveyed that the pandemic and lockdown induced stress and their confidence to cope that stood out in their narratives.

Haeckel's (1999) organizational level perspective indicates that a turbulent work environment in an organization demands adaptation. This, if applied to a disrupted learning environment, indicates that pre-service teachers in this study adapted a great deal to adjust to their learning environment and went one step ahead to enhance their performance in a new online format. The implications for organizations to support such learning and provide training is of crucial importance.

There are several studies that corroborate with the above finding. Zaccaro and Banks (2004) commented on the need to implement training programs that bolster skills related to adaptive performance. Assenting to Haecke's (1999) call for new tools (i.e., technology), Vicente (1999) addressed the issue of adaptability from the perspective of IT design, creating technology to support an adaptive workforce. His study further implies that workers will be able to tailor the design of their device to meet the changing needs of their work.

Applied to education, the pre-service teacher was simultaneously learning as a student and acting as the teacher in schools for their internship practice compelling them to tailor their own design to respond to changing needs of their work similar to their teacher educators.

Vicente (1999) stressed the importance of human adaptability in computer-based work and complex sociotechnical systems (CSS) in general. Because of the uncertainty inherent in CSS, Vicente noted that:

"In complex sociotechnical systems, the primary value of having people in the system is precisely to play this adaptive role. Workers must adapt online in real

time to disturbances that have not, or cannot be, foreseen by designers. As more and more routine tasks become automated, this requirement for worker adaptation will only increase. Thus, the increased demand for adaptation or adaptive performance on the part of workers today is undeniable." (p. 121).

This implies that ICT is definitely not just a part of the solution but also a part of the problem. The nature of the work is incredibly driven by technology and hence there is a complex socio-technical system required for the work environment to survive. Virtually, all teachers had to come in contact with technology in some manner. As technology becomes a mainstay in the workplace, individuals must adapt to, and evolve with technology and the changes in work it brings. This necessitates the need for research to examine adaptive performance in terms of a measurable performance construct at the human or individual level to understand the dynamic nature of adaptability from both social and technological sides.

Reiterating Chan's (2001) definition, individual adaptability is the process by which individuals achieve a degree of fit between their behaviors and the demands created by novel and often ill-defined problems occurring in work situations. Guided by this definition, one can see how diverse approaches have been used to examine adaptation. Indeed, how can predictions of adaptive performance be accurately determined if there is no agreement on what constitutes adaptive performance? Thus, the intent of the present research was to (a) initiate steps towards a shared understanding of adaptive performance and (b) examine predictors of adaptive performance under a unified framework. Researchers are beginning to recognize the potential of assessing adaptive performance yet, there is still a lack of consensus about what adaptive performance means across job, occupational, or role assessment situations. That is, a high level of adaptive performance requires an individual to be able to transfer knowledge and skills (cognitive) as well as cope emotionally (affective) with the increased demands and stress imposed by a dynamic and ever-changing work environment (Stokes, C.K. 2008).

In accordance with these conclusions, the present study appeals to stakeholders not only in the education sector but a wider society at large, to create spaces

and opportunities for individuals to explore their potential through their adaptive capabilities and performances in times of crisis or otherwise.

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