Exploring the Opportunities and Challenges of Online Practicum in Bangladesh

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The COVID-19 situation compelled the preservice student-teachers (PSTs) of the Institute of Education and Research (IER), Dhaka University Bangladesh, to complete their practicum online. As such, the challenges and opportunities of online practicum needed to be explored. A qualitative study was undertaken and a conceptual framework was developed combining an 'offer-and-use' model of teaching practicum (Helmke, 2008), based on the 'source-position-performance' framework (Day & Wensley, 1988). Purposive and convenience sampling were used to collect data through a semi-structured questionnaire from 28 PSTs, and a thematic analysis helped to identify their opportunities and challenges. Identified challenges were gender and cultural biasness, lack of financial and technical support, improper guidance and training, a lack of motivation as the practicum is non-paid, a lack of information and technological literacy, cognitive development, and inefficiency in cost management. This study recommends reconsidering a blended mode of Micro-teaching and Simulation courses, and providing soft loan and internet cost-related support from the institution level.

Keywords: Online Practicum, Cultural and Economic factors of online practicum, Educational Factors, Cognitive and Motivational Factors

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Introduction

Quality Education underpins the sustainable knowledge of society, and educators play an important role. Students learn in different ways, and Prozesky (2000) emphasizes ~~on~~ the roles of educators in learning. Muller (2003) suggests that there is no specific training that can effectively improve educators' competencies, Recine (2018) argues that the teaching practicum is important to enrich on-field competencies of teachers, when compared to theory alone.

The practicum component of Education awards for PSTs of the Institute of Education and Research (IER), Dhaka University (DU), Bangladesh, is a whole semester. PSTs typically engage with micro-teaching and simulation courses, a subject-related teaching course, and are then assigned to a school to complete their practicum in person. The PSTs apply learned knowledge, skills and understandings, and as the practicum runs for five to six months, each PST undergoes rigorous assessment procedures by a school coordinator and two subject supervisors. Due to the sudden outbreak of COVID-19, all educational institutions in Bangladesh remained closed for more than 500 days (UN, 2021), and was among one of 14 countries globally that kept schools fully closed since March 2020 (Wielen, 2021). Consequently, the PSTs from the 2016-17 intake could not physically continue their practicum semester. In response, the IER and DU authority decided to conduct the practicum requirement online where the PSTs had to present prepared or prerecorded classes to their respective supervisors. Bao (2019) suggests that online learning has gratifying benefits. However, the Chairman of the University of Grants Commission of Bangladesh, mentioned his anxiousness about the lack of expertise and new challenges among teachers that teach online (Tithi, 2021; Wal, 2020). So, how the practicum went online is a point of focus for educationists and as the situation is new, existing literature has not a lot to offer so far. Therefore, this study explored what kind of challenges and opportunities the PST experienced during their online practicum.

Conceptual Framework

To explore the scope and challenges of online practicum, a theoretical framework was developed combining both the 'offer-and-use' model (Helmke 2008), and the 'position-performance-framework' (Day & Wenslay, 1988). Helmke (2008) proposed *offer-and-use model*, is basically a framework that indicates factors affecting students' learning and performance, and other

factors students are being provided with. Helmke's (2008) model embraces the factors affecting students' learning and performance, namely educational, individual, cultural, and economic factors. Hascher and Kittinger (2014) argued its usefulness in terms of student teacher's learning in practicum, however during the COVID-19 pandemic situation, this factor is better supported by Dhammei (2019). Following Dhammei (2019) this factor integrates three themes - Planning and Preparation; Implementation; and Reflection.

The source-position-performance framework (Day and Wensley, 1988) argues that cultural and political factors can impact an organization's market position and its marketing performance and outcomes in several ways. For example, Park and Choi (2009) found that cultural factors, such as student attitudes towards online learning and their perceptions of the quality of online education, can impact student satisfaction and engagement in online courses. Similarly, Sánchez-Franco and Roldán (2005) found that political factors, such as the level of institutional support for online education, can impact the success of online educational programs. In addition, Freedom of place and space, an offer by online education found in other research findings (Sing & Phirriyalatha, 2020) has been adopted namely geographical factor to make sure the neutrality so that opportunities as well as challenges can be addressed. This next section will explore each part of both models in more detail.

Helmke (2008)-Educational Factors
Dhammei (2019) has mentioned three phases-*Planning and Preparation*, *Implementation*, and *Reflection* to be considered as educational factors. Integrating the three ideas by Dhammei (2019), the educational factors that Helmke (2008) described have been organized accordingly.

Dhammei (2019)- Planning and Preparation
Thoughtful lesson planning and effective resource creations are vital to online teaching (Moreno & Mayer, 2007). PSTs are able to supplement their planning from videos and lessons presented by other peer PSTs, and contents available online i.e., Contents on YouTube.

Dhammei (2019)- Implementation
Hands-on experience within classrooms enables pre-service teachers to illustrate how a classroom run, and how this is related to what PSTs have been taught in their academic studies (Balli, Wright and Foster, 1997). However, this is not possible in online classes, and further concern has been added by

Kraushaar and Novak (2010) who suggest that the students' concentration is negatively influenced by technology through involving into activities i.e., games, irrelevant to their intended learning.

Dhammei (2019)- Reflection
This section emphasizes PSTs re-evaluation of their learning, teaching approaches, and practices via personal reflection. Engaging in personal reflection and learning from other PSTs through peer-assessment, can be an effective tool for professional development, as there remains less chance of feeling uncomfortable, shyness, less interested to be involved in process to get help online (Baddeley, 2021). *"Vicarious experience"* (Bandura, 1965, p. 589) is obvious here in terms of reflective learning from the observation of others (Mohamadi et al., 2011).

Helmke's (2008) model - Individual Factors
Pekrun (2006) reports that cognitive aspects as well as motivation and emotions are relevant in exploring learning outcomes, and is aligned to the 'offer-and-use' model of Helmke (2008). Cognitive factors consider existing beliefs regarding teaching-learning of the PSTs (Endedijk, 2010; Oosterheert & Vermunt, 2003), and specifies the difference between what PSTs were taught in simulation courses, and their actual experience relating the online environment (Endedijk et al., 2014). Also, becoming self-authoritative helps cognitive development of the PSTs (Keskin, 2019).

The motivational factor section encompasses students' autonomy to work independently (Baddeley, 2021). Selim (2007) recounts how motivation plays a vital part in constructing the online environment, and is highly related to learner's success in online education (Baturay & Yukselturk, 2015; Cull, Reed, & Kirk, 2010). PSTs that are more motivated tend to engage with the online learning environment more (Reosenberg & Ranellucci, 2017). In summary, what constitutes the motivational factors is the involvement of PSTs to different online activities alongside their regular online classes.

Day and Wenslay (1988) - Cultural Factors
Day and Wenslay (1988) consider the "*socio-cultural norm"* i.e. heavy domestic chores, creates a disparity in accessing financial and educational resources. The United Nations (2013) included childcare, care of livestock and elders in a family. English as medium of instruction alongside the first language (Adler, 2002) and non-verbal communication (Stansfield, McLellan, & Connolly, 2004) are also considered here.

Day and Wenslay (1988) model - Political Factors
The Political factor mentioned in Day and Wensley's (1988) 'source-position-performance' framework, considers government support, technological infrastructure, and trained instructors as political factors. Adopting the idea of political factor in online education, Sánchez-Franco and Roldán (2005) found that political factors, such as the level of institutional support for online education, can impact the success of online educational programs. Fuchs and Horak (2008) mentioned government support as having access to computers and internet. Considering such, Fredriksson *et al.* (2018) feared a digital divide indicative of the degree of government support. In addition, Baldassare et al. (2013) referred to government support as proper internet connection at home. Technological infrastructure means electricity and adequate IT infrastructures to assist online education (Sing & Lewa, 2014), and Khatun (2020) mentioned facilities such as devices, speed of internet is top infrastructural priority for online education.

To factorize this theme more, Webster and Hackley (1997) identified technological manner, styles of teaching and technological control, as three crucial characteristics of trained instructors. Furthermore, Kim (2020) advocated that efficiency in accessing websites and technologies helps dealing with the limitations of online education. For this study, PSTs assume the role of trained instructors.

Helmke (2008) model - Economic Factor
The Economic factor deals with financial cost management namely, in online education, cost-effectiveness especially involves saving money in terms of travelling (Fedynich, 2014; Yilmaz, 2019) preparing teaching aides (Cukier, 1997 as cited in Sing *et al*., 2020), and the costs related to quality devices and internet connection (Jameel & Real, 2020).

Sing and Phirriyalatha (2020)-Geographical Factor
This theme is somewhat connected to the economic factor grounded in Helmke's (2008) model and the only differences is that it considers learner's geographical location (Chan et al., 2006; Fedynich, 2014). Additionally, Sing and Phirriyalatha's model (2020) adds distance covered, and how traffic impacting the online classes to be started on time is a geographical factor.

Based on the above models, the conceptual framework for this study is as follows:
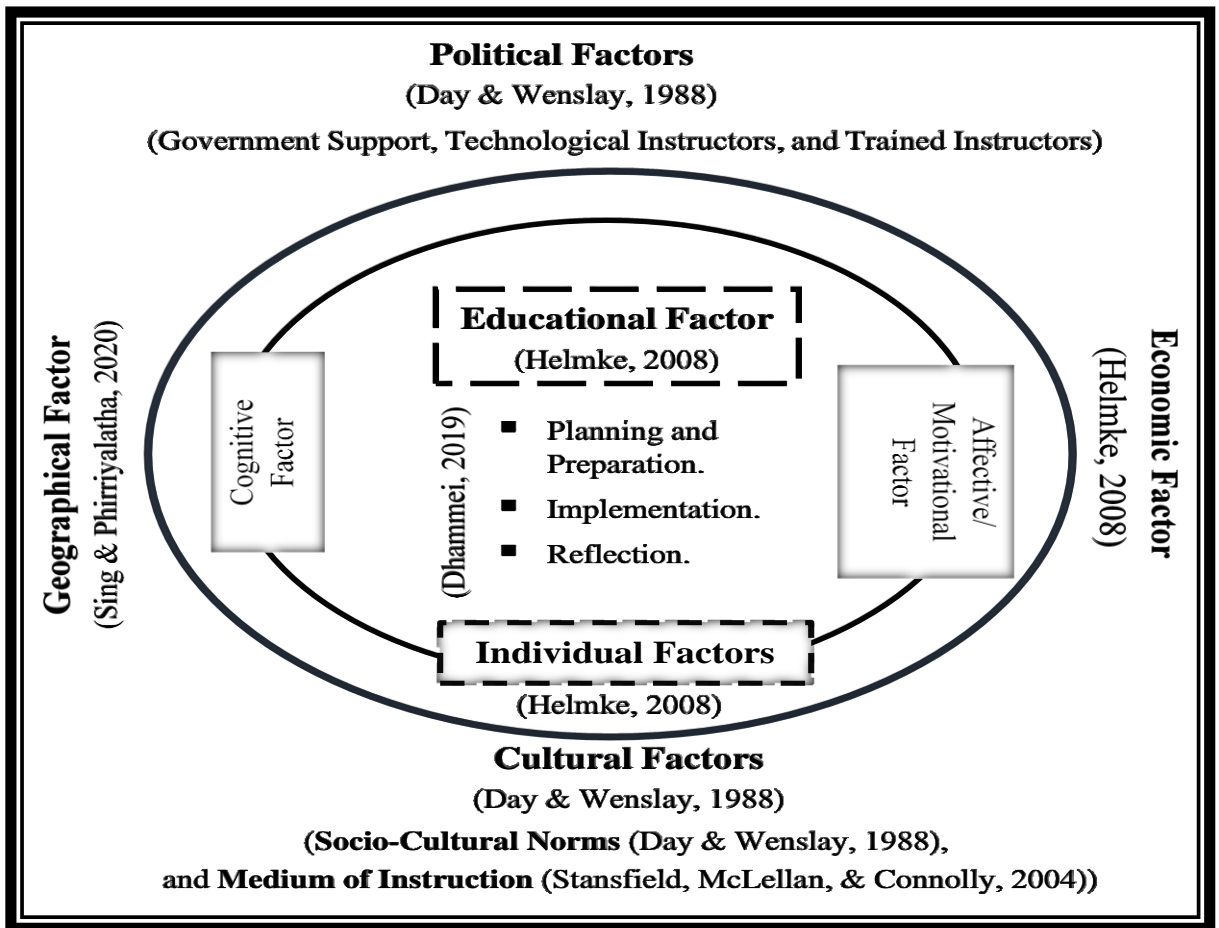

Political Factors
(Day & Wenslay, 1988)
(Government Support, Technological Instructors, and Trained Instructors)

Geographical Factor
(Sing & Phirriyalatha, 2020)

Economic Factor
(Helmke, 2008)

Cognitive Factor

Educational Factor
(Helmke, 2008)

(Dhammei, 2019)

- Planning and Preparation.
- Implementation.
- Reflection.

Affective/ Motivational Factor

Individual Factors
(Helmke, 2008)

Cultural Factors
(Day & Wenslay, 1988)
(Socio-Cultural Norms (Day & Wenslay, 1988),
and Medium of Instruction (Stansfield, McLellan, & Connolly, 2004))

Figure-01: Conceptual Framework

Methodology

Study Design
The aim of this study was to explore the opportunities and challenges IER and DU PSTs faced during their first online practicum resulting from the COVID-19 pandemic. As the online practicum is new in Bangladesh, a qualitative

approach was adopted to explore the aforementioned situation adequately (Johnson and Christensen, 2013).

Participants:
PSTs from the 2016-17 session who completed their practicum online were selected through purposive sampling. Convenient sampling was used to further identify PSTs who were available, interested and voluntarily (Creswell, 2011). Of the 28 PSTs that participated, where 15 were female (53.6%) and 13 were male (46.4%). PSTs were advised to develop and submit a reflective journal (RJ) at the end of semester.

Data Collection and analysis
The online practicum session started in June 2021 and the PSTs completed either presenting online classes or submitting recorded classes by September 2021. The study engaged two different data collection tools. Firstly, narrative information was developed considering the conceptual framework, and collected through an open-ended semi-structured questionnaire, and to get "extended comment" (Bell & Waters, 2014). Data were collected through email and social media as it was easier to inform everyone about the research (Alampi 2012; as cited in Bell & Waters, 2014). Secondly, reflective journals that were written and maintained by the PSTs (Connelly & Clandinin, 1990) constituted important documentation of PSTs' self-critique (Anderson, 2012). These were a very significant source of data for narrative research (Phelps, 2005). Coding was used to indicate individual as PST-01 to PST-28 randomly to ensure the privacy and anonymity and similarly, and codes RJ-01 to RJ-28 indicated the reflective journals of the PSTs. Thematic analysis was adopted to identify similar information under major ideas or themes (Creswell, 2011). Convenience sampling was used to avoid any mental harmful effect on participants (Bell & Waters, 2014). An updated and authentic social media account was used to share the questionnaire (Bell & Waters, 2014).

Findings and Discussion

The aim of this qualitative study was to identify the opportunities and challenges of online practicum for PSTs in Bangladesh. Table 1 shows the summary of the findings.

Themes	Sub-Themes	Opportunities	Challenges
Cultural Factors		Development of skills	Female PSTs experienced lack of access to the financial resources; to proper device and other resources
			Heavy domestic chores hampered PSTs' (especially female) preparation time.
			Preparing digital teaching aids in Bangla; understanding students' behavior through non-verbal communication
Political Factors	Government Support	No opportunities so far	To access proper devices and smooth internet connection
	Technological infrastructures	Improved technological knowledge and skills	Not having appropriate home appliances for effective online practicum
	Trained Instructors	Mock classes and a few personal pieces of advice from supervisors helped online practicum	Having no pre-training
Economic Factor		Cost-effectiveness doing online practicum	Losing tuitions during pandemic put a heavy toll in supporting PSTs' internet cost
Geographic Factor		Effective irrespective to their locations	PSTs from rural areas faced internet speed problems
Educational Factors	Planning and Preparation	PSTs found watching online classes from YouTube and other colleagues, *"vicarious experiences"*, aided in their planning and preparation	Difficulty in communicating with supervisors and preparing materials e.g., video tutorial, physical teaching aids etc.
	Implementation	Easier to present concept through online	Engaging students into activities
	Reflection	Peer assessment from close peers before and after class	Having feedback as no fixed allotted time before or after class.
Individual Factors	Cognitive	Improved cognition dealing with new online situation	Facing different situation in online classes from that of they were being taught
	Affective/ Motivational	More autonomy and appreciation of new ideas	No payment for practicum.

Table 1: Summary of the findings

Educational Factors
The findings under this theme are discussed following the framework.

Planning and Preparation
The findings shows that PSTs acquired *"vicarious experience"* from other online sources, for instance, YouTube and classes uploaded by other PSTs online. PST who had access to such, commented that

> *YouTube helped me a lot in preparing for science classes. I found a lot of animation and recorded classes relating human skeleton topic which enriched my preparation as well as confidence to take today's class effectively (RJ-19).*

> *I have found many resources on online so ideas on developing teaching aids were easier than in offline" (PST-03) "developing PowerPoint slides is a little time staking (RJ-02)*

> *Videos and pictures are very easy to get online. I didn't have to worry about getting proper digital contents to plan (PST-28).*

Conversely, a PST felt guilty taking digital contents directly from online. He wrote, *'this is like copy-paste with no creativity to do new things in my classes (PST-14)'*. PST-14 also acknowledged that selecting proper and appropriate materials was very *thought provoking* and for that pre-classroom contract with supervisors is crucial. This study reports a contradictory result as PST-10 admitted it was *difficult to reach them (supervisors)* and PST-16 mentioned *my supervisor updated me his schedule in response to my text and I reached him accordingly.*

Implementation
The study mentions the advantage of availability of digital resources. According to PSTs,

> I found it easy to show animated video to motivate at the starting (of class) from YouTube (PST-17).
> I found an animated video on the structure of our brain (online) which I wouldn't be able to make as physical objects (PST-21).

However, these resources are not found to be well enough to engage students in activities online, and the challenge was stated as *students can't see me (PSTs) describing the lesson, so [I feel] they sometimes lose attention (PST-13).*

Reflection
This study reports formative assessment in the form of reflection from both peers and supervisors. According to PST-06 *I got feedback only from my close friends (PST-06)* which contributes to vicarious learning as*, we (PSTs) also learn from other's comments (PST-16).*

Reflection of supervisors were also crucial for PSTs who submitted recorded classes. One PST complimented, *'as the practicum went solely online, recorded classes helped both supervisor and PSTs to analyze the class critically (PST-22)'*.

However, explaining lesson plans, teaching learning methods and aids to supervisors prior to the class were found to be difficult online. One of the PSTs wrote,

> It took more time and effort to explain and update the lesson plan and teaching method online. Supervisors only reviewed planning of the class just immediately before the actual class. I hardly had time to amend my planning and sometimes confusion arose between me and my supervisors (PST-25).

To overcome this challenge, setting up a *fixed time for getting feedback* was suggested by PST-21.

Post-class reflection from peers was also challenging as PSTs were afraid to provide honest feedback fearing that *it might affect our grades (PST-10).*

The study mentions peer assessment as instructive opportunities, but getting one publicly was challenging because PSTs feared that any negative comment might affect their grades. Baddeley (2021) also found providing such feedback very uncomfortable for the PSTs, and an overall lack of guidance and reflection was reported by Hoff (2000) and NSTA (2000).

Individual Factors
Following the framework, this theme discusses the following findings.

Cognitive Factor
This study found that online practicum improved PSTs' cognitive knowledge and skills while dealing with new situations during their online practicum. Comments included:

> *New experience taught me a lot…… (it) gave the opportunity to assimilate]and accommodate new knowledge and skills (PST-17).*

> *Searching, selecting and using appropriate information for preparing slide has improved my analytic and scrutinizing ability a lot. I feel such practice has developed my information literacy (RJ-10).*

On the contrary, the difference between real life situations and what PSTs has been taught in their academic courses created challenges. PST-04 felt like *talking alone* sometimes and mentioned that interaction between teachers and students was quite difficult comparing to face-to-face classes.

Motivational Factor:

This study confirms that whilst the online practicum offered a great sense of autonomy to the PSTs, the lack of financial assistance and non-paid practicum demotivated PSTs. Data reveals that PSTs believed that a paid practicum would bring great motivation, as many of them included that *finance is a big issue* during the COVID-19 pandemic. PST-08 added, *no tuition or income source* has worked behind financial issues as PST-12 felt *buying data and devices or developing quality material* requires financial support which only paid practicum can offer. Other PSTs acknowledged,

> *Practicum as a non-paid working experience decreases our interest to show our highest capabilities and creativities (PST-01).*

> *Whether online or offline, higher motivation and professionalism would have been promoted by paid practicum. (PST-02)*

To explain autonomy more, PSTs-11 stated, *autonomy provided with a greater extent of opportunity to work with accord and pace*. Some comments included:

> *The supervisor gave us the opportunity to schedule our classes according to our preparation. Such flexibility worked as a great impetus to work independently without feeling any pressure (PST-21).*

> *The deadline of submission was flexible and our supervisors gave us the sense of authority that made me to be more responsible to perform better (PS-03).*

Along with the development of the sense of responsibility, this study reveals such autonomy has made PSTs able to *bring innovative ideas (R-26).* Compliments from supervisors also encouraged PSTs to think 'out of the box'. Supporting such, a participant confessed,

> *I had no previous experience of online teaching ...*
> *sometimes I had to think ideas out of my comfort zone, but*
> *the pleasure is when supervisor appreciated such initiatives*
> *(PST-05).*

Cultural Factors:
A range of cultural challenges was evident when female PSTs mentioned their challenges in accessing resources related to device and internet and preparing teaching aids. Some comments included,

> *I couldn't manage a quality device for my practicum,*
> *although my younger brother had a better-quality*
> *smartphone than mine. (PST-09).*

> *Due to [the COVID-19] lockdown, both my father and*
> *brother had to go online and I found [our] only laptop*
> *[mostly] occupied (PST-17).*

Another female PST experienced gender biasness in buying internet confessing,

> *I had to rely on my brother and father to purchase an*
> *internet pack, or to collect low-cost materials ... because I*
> *am not allowed to go out alone in rural areas like mine.*

Another problem found was due to the increased household works. One female respondent wrote,

> *Family members stayed home daylong during [the COVID-*
> *19] lockdown and household chores have increased and*
> *was imposed on me. So, managing time for preparing for*
> *practicum was became difficult (PST-10).*

Cultural challenges were not limited just to females but also to the male participants. A male respondent admitted another form of cultural challenge stating,

> *I had to spend more time to manage online shopping as my*
> *parents are senior and not too efficient at using technology.*

> *So, some domestic workloads were on me making my*
> *preparation difficult (PST-08).*

In the case of language skills, the study reported mixed responses. Some PSTs mentioned there were opportunities to improve language skills, whereas some PSTs faced language-related barriers. Most PSTs were comfortable to use Bangla as a medium of instruction, but getting relevant pictures and video contents on the internet in Bangla were troublesome. PST-16 mentioned,

> My slides on photosynthesis were mainly picture based, I
> didn't use so much Bangla text as I found scarcity of
> required pictures in Bangla (PST-20).
> I mostly use Bangla to deliver my lecture, but I am not too
> apt to prepare Bangla slides for presentation. In contrast, I
> am not too good to prepare slides in English even.
> Combining both these languages were challenging that I
> expect I would not face if I were delivering classes face to
> face (PST-27).
>
> *While preparing slides in English, I noticed my English*
> *efficiency is getting better and preparing reports is*
> *improving my English writing as well (RJ-11).*

Alike, PST-19 experienced such opportunity to be true for Bangla typing too.

> *Preparing lesson plans in Bangla has improved my slow*
> *Bangla typing a lot. [The] Bangla keyboard was a challenge*
> *before, but now I feel more confident (PST-19).*

Another participant came up with a better solution to avoid the challenges of typing both in Bangla and English suggesting *Google Voice Typing*. He admitted it helped him not only to overcome the challenges of typing, but also improved his pronunciation saying

> *I used Google voice typing for making my slides and lesson*
> *plans and found that wrong pronunciation lead to wrong*
> *words. Practicing voice typing has improved my*
> *pronunciation a lot (PST-23).*

As nonverbal communication is also considered under this theme and PST wrote in RJ,

> *it seems like I was talking to ghosts as I couldn't see the students' face, I sometimes got confused about my own lecture fearing whether my lecture was delivering effectively (RJ-10).*

Political Factors

According to the conceptual framework, political factors involve three overlapping sub-factors, namely, government support, technological infrastructure, and trained instructors.

It was a common finding to mention that the need for government intervention was intensified regarding data and internet price. The scenario was summed up by PST-21 as,

> *Everyone did not have access to internet. Some of us also suffered with high data price and low speed during pandemic and expected to have government intervention (PST-21).*

The study findings also showed this need was intensified in the case of costs related to device-support. PSTs lamented for not having the access to an institutional computer and other instructional materials due to the COVID-19 lockdown, and mentioned

> Not having a laptop and mobile phone made it hard to capture a video class along with a digital presentation. Moreover, demonstrating the skill of using board was a challenge for me as I do not have it and due to pandemic, it was not easy to arrange (PST-3).

Additionally, engaging in Microteaching and Simulation courses prior to practicum didn't include online teaching practices, therefore any pre-training before online practicum was an issue mentioned by PSTs for a variety of reasons.

> *Blended learning should be included in our 6th semester (Simulation course) as we can't hope to return offline. A pre-training would be of great assistance and lack of proper*

> *guidelines prior to our practicum created confusions during conducting classes (PST-07).*

> *If we were taught to prepare digital contents during our simulation courses, it would have lessened the pressure of preparing contents (PST-24).*

Despite such, some PSTs admitted ~~of~~ having mock classes and training sessions arranged by their supervisors. One PST wrote,

> *Our supervisor taught us how to use the Zoom platform effectively and what kind of teaching aids they are expecting (PST-04).*

This study findings showed that online practicum helped PSTs to improve technological knowledge and information processing skill. Sudden reliance on technology made familiarization with several software e.g., *Google Voice Typing* software by PST-23. To add more in the list of software efficiency, the PST-01 wrote in RJ that,

> *The most important technological learning for me is using Zoom, Google meet software (RJ-01).*

Some PSTs were excited as they had access to more technological devises at home now, than at other times mentioning that,

> *To conduct online practicum, I have bought more appliances i.e. graphics tablet, webcam and can use all these for other purposes like learning graphics, creating video contents (PST-23)*

[Technological devices have helped me to] *prepare slide using graphics to make presentation better and more interesting (PST-26).*

Economic Factors

The study found that a common challenge for almost everyone was to manage the cost of buying devices as the COVID-19 pandemic affected most income of PSTs. The next challenge was making the cybercafé-cost and internet affordable. According to them,

> *I had to rely on tuition for bearing my expenses which was not possible during lockdown. Lockdown made pocket tight to carry cybercafé and internet cost was burdensome to me (PST-05).*

While another PST questioned the role of institution lamenting,

> *Students from other batches and even my friends from other departments got internet cost support and device loan, but our online practicum got ignored for no reason (PST-28).*

The PST who experienced the incidence of two broken devices during lockdown, admitted that buying devices immediately was difficult saying,

> *[The] sudden announcement of online practicum and managing devices immediately was also not possible due to financial issues (PST-19).*

When such challenges are listed, online practicum provided opportunities in terms of travel-cost and developing hand-made teaching aids. PST, who felt relieved from travel cost said,

> *My school is quite distant from my residence and I had to carry the expenses of rikshaw, breakfast and lunch. Breakfast and lunch outside campus were expensive. Online practicum has saved my cost (PST-10).*

One of the PSTs further added an advantage as it saved expenses of preparing hand-made teaching aids saying,

> During Micro teaching and Simulation course, I prepared handmade teaching aids to teach the nervous system and submitted it for evaluation. So, during this online practicum, when I was teaching the same content, I used an animated video to teach the same content. It has saved my cost (PST-17).

Geographical Factor

Almost every PST faced issues accessing a high-speed internet connection. One of the respondents shared an experience as,

> *Whether in urban or rural or in capital city we faced network problems. Connection was interrupted frequently. I had to move to the town area around six kilometers away.......to present my class online where my aunty lives (PST-06).*

In contrast, location wasn't felt as a barrier to some other PSTs as one participant added,

> *Online practicum helped me to conduct my classes irrespective of my geographical position (PST-11).*

Another respondent, who submitted only recorded class videos instead of presenting live class also highlighted the advantage adding,

> *I recorded and uploaded my class while staying far away from my academic institution, and these were sent to my supervisors immediately (PST-22).*

Discussion

Educational Factors
Planning and Preparation
According to this study, planning and preparing for class was easier in the case of online practicum, as several contents were available online and PSTs were able to access recorded classes of other PSTs. Such *"vicarious experience"* is highly effective for teaching (Mohamadi et al., 2011). Additionally, the availability of animated videos was effective to motivate students. Although it was a new opportunity, the challenge was to engage students fully. This finding is consistent with the study of Kraushaar and Novak (2010). Another opportunity revealed in this study was instructive assessment by peers, yet it was also challenging as PSTs feared that any negative comment might affect their grades. Baddeley (2021) also found providing such feedback very

uncomfortable for the PSTs. The lack of overall guidance and reflection was also evident in the study of Hoff (2000) and NSTA (2000).

Individual Factors
Cognitive Factor
According to the framework, cognitive factors considers how the actual experience of the PSTs differ from what they have been taught. Whilst this study identified the opportunity of developing cognitive skills including information literacy, the challenges between the actual and online experiences were consistent with the research (Endedijk, 2010; Kopus, et al.,2021; Oosterheart and Vermunt, 2001). During their online practicum, PSTs experienced a great sense of autonomy and responsibility to be more innovative, but as the practicum was not a paid position, many PSTs were practicum demotivated (Baddeley, 2021).

Cultural Factors
This study identifies the struggle of participants to access resources and manage their time due to heavy domestic chores. Baired (2020) and Gill et. al. (2010) also identified heavy domestic chores for women and girls as a major constraint responsible for improper access to adequate technology and internet conducive to online education. Additionally, their limited availability to quality devices, internet, and materials to construct teaching aids mentioned by UNDP Bangladesh and UNEP-PEA. (2020) is also consistent with this study results. This study identified opportunities in constructing digital teaching aids through Google Voice Typing which also improves PSTs' pronunciations. Also, the improvement in keyboard typing is another thing to mention despite challenges in forgathering digital aids in Bangla and non-verbal communication which is conducive to identify slow learners were hard to accomplish. The constraint in terms of non-verbal communication is also reported in Stansfield, McLellan, and Connolly (2004).

Political Factors
This study mentions that PSTs had opportunities to flourish new skills while getting used to new technologies and software i.e., Zoom, Google Voice Typing. The challenges include slow speed and the high price of internet connections, and a lack of equipment. The study by Duffy (2020) addressed the lack equipment as a challenge for online education. Furthermore, the lack of pre-training and proper guidance were other constraints to be mentioned as Shahidullah addressed Bangladeshi teachers' lack of expertise in online teaching (Tithi, 2021).

Economic Factors
The online practicum brings challenges for the PSTs under the economic factor. The online opportunity that PSTs mostly experienced was no cost in accordance with travelling and constructing physical resources, like that of for face-to-face classes, labs, fieldworks, tutorials, (Cukier, 1997; Fedynich, 2014; Yilmaz, 2019). Challenges were to buy devices immediately, and maintaining the high cost of internet were imminent. Similarly, Bangladeshi parents struggle with the high broadband connection cost, 19.89% students demanded financial help to buy smartphones (Alamgir, 2020).

Geographical Factor
The study identified a common opportunity of PSTs conducting online classes irrespective to their location (Chan et.al., 2006; Fedynich, 2014). The remote geographical location was blamed for sluggish internet speed. This finding is consistent with the survey of Priyo and Hazra, (2020) where approximately 76 percent faced such connectivity problem.

Implications and Conclusion

The Institute of Education and Research (IER) undertook the online practicum, and this study embraced a qualitative approach to identify the opportunities alongside challenges of online practicum. Significant findings indicate to prepare for and to implement classes, PSTs experienced many issues including the availability of digital resources, no material cost and travelling cost, increased technological skills and cognitive development. Gender biasness was also evident for both males and females. In terms of reflection, PSTs who submitted recorded feedbacks are appreciated with better feedback, whereas the other PSTs who conducted live classes demanded for separate meeting with supervisor for better feedback.

This study also revealed some significant recommendations from the analysis of what the PSTs learned from their experiences. Among them, the most significant is to consider Micro-teaching and Simulation Courses included in blended or online approach of teaching in the future. It also recommends offering some soft financial loans and support online practicum with some form of monetary payment to keep the PSTs motivated.

The study didn't explore the social, institutional and other factors and did not intend to classify PSTs in terms of motivational scales. Therefore, conducting motivational assessments to understand PSTs' needs in the future is

highly recommended. Besides, the future studies should investigate gender biases among PSTs in greater depth so that the findings can further inform the policy makers to set appropriate strategies to address those gaps.

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