

## Professional Development of Secondary School English Language Teachers During and After COVID-19 Pandemic

Md. Mominul Haque 

Abdullah Al-Mamun 

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### Corresponding Author:

Abdullah Al-Mamun

### Email:

[mamun.ier@du.ac.bd](mailto:mamun.ier@du.ac.bd)

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Department of English Education  
Faculty of Education, P. N. Campus,  
Tribhuvan University, Nepal  
Email: [enged@pncampus.edu.np](mailto:enged@pncampus.edu.np)  
URL: [www.pnc.tu.edu.np](http://www.pnc.tu.edu.np)

### Abstract

*This study investigates perceptions and practices of secondary level English teachers during and after the COVID-19 driven distant education period and explores the skills that secondary level English teachers had to acquire to meet the online distance teaching needs during COVID-19 pandemic and the ones that are still in use in the post-pandemic teaching conditions. Ten secondary level English teachers were selected for this mixed-method study. The results show that the teachers mostly had to develop their Technological Knowledge (TK) which indirectly added to their Pedagogical Knowledge (PK); no direct attempts were made to improve their PK or the Content Knowledge (CK). Their responses indicate that the teachers did not feel to work on their CK. The study has a number of implications, including the need for teacher education programs to increase teacher awareness of new pedagogical-technological learning methods and the significance of providing opportunities for teachers to acquire digital competence and encourage them to adapt personally to new digital technologies within*

*specific disciplinary contexts. The findings have both theoretical and practical implications for pre-service and in-service teacher training programs in order to satisfy the requirements of the post-pandemic English language teaching environment.*

**Keywords:** professional development, technological skills, pedagogical knowledge, COVID-19, emergency remote teaching (ERT), blended learning

### Introduction

The COVID-19 pandemic has caused the worldwide closure of educational institutions. As a consequence, education has undergone a radical transformation (Karakose, 2021), with the emergence

of online teaching and learning, in which instruction is conducted remotely through online platforms. There has been a rapid shift from traditional classroom setting to virtual classes, indicating that educators have adjusted their entire pedagogical approach so as to address new teaching and learning conditions and respond to changing circumstances. Since the outbreak of coronavirus, educators around the world had to adapt to a drastically altered reality. As a result, online instruction emerged as the only means for teaching-learning during lockdown period (Mishra et al., 2020). Both asynchronous and synchronous lessons have been employed for the past two decades, but quarantines and school closures have necessitated a reimagining of familiar technology devices in educational processes and models. However, even without coronavirus, these modifications have been percolating in the process for quite some time, and they are now evidently poised to become prominent components of education, even in the post-pandemic era. During this unexpected crisis, a new term has surfaced: Emergency Remote Teaching (ERT) (Hodges et al., 2020).

With this unprecedented shift away from traditional classroom in many parts of the world, some wonder whether the adoption of internet-based instruction will persist post-pandemic period and how this type of transformation would affect the global educational environment. In response to substantial demand, numerous online teaching and learning platforms are providing free access to their services; however, there are several arguments against online education. Arguments pertaining to online pedagogical approaches include accessibility, affordability, adaptability, and lifelong education (Lee, 2017; Patel & Patel, 2017). It is viewed as an inexpensive mechanism of education owing to the lower transportation cost, lodging, and overall institution-based education that is easily accessible. Another intriguing aspect of online learning is its adaptability; learners can schedule or plan their time to complete online courses. Blended learning and flipped classrooms result from the combination of face-to-face instruction with technology; this kind of educational environment can enhance students' learning potential that lead the students to lifelong learning (Low et al., 2021). The government acknowledges the growing significance of online education in today's dynamic world.

Although online education has been proven to be efficacious in the distance learning scenario caused by COVID-19, the unplanned use of technological advances has the potential to cause educators, students, or administrators some challenges. As addressed by Huang et al. (2012), technology enables educators foster a positive attitude toward teaching and learning. However, challenges such as inadequate time management, ineffective assessment, and learners' lack of focus on learning as well as developing the materials must be addressed in order to create an effective teaching-learning environment. In light of these factors, it is clear that there are obstacles to overcome. In a study based on Pakistan, it has been found that some students struggle to participate in online learning due to a lack of consistent internet access and/or access to technology (Nazir & Khan, 2021); this disparity exists across nations and between economic classes within countries. Due to global political and environmental instability, expenditures on education may be compromised in the years ahead. Notwithstanding the short-term stimulus packages in some countries, long-term investment in education is at risk due to the diversion of public funds to health and social welfare. As the economy weakens and unemployment rises, private investment will become limited as well. Furthermore, we must take into account that the majority of teachers in developing nations, such as Bangladesh, are not adequately skilled with educational technologies and have tried to respond to the Emergency Remote Teaching circumstance driven by

the COVID-19 pandemic with limited technological skills and preparation (Shrestha, 2022; Sayma, 2021; Soheli et al., 2021). Bangladesh must be prepared for the coming years because online teaching and learning have the potential to be employed in the years ahead and blended learning may become popular in the near future. A significant portion of this preparation will involve equipping our teachers with the appropriate technological skills.

Planning and preparation for probable similar situations in the future or blended learning necessitates a thorough analysis of the skills and strategies employed by teachers during the ERT period. Therefore, this research aims to investigate teacher perceptions and practices of online teaching during COVID-19-driven remote teaching period, when online teaching was the only means by which teachers could attach with their students, and with an eye toward the future. Due to the globally specialized nature of EFL, it is of particular value to investigate EFL teachers' attitudes toward online teaching (Faez & Karas, 2017). It also seeks to explore the skills that are still in use in post-pandemic teaching conditions. Analyzing the collected data, this study also provides some suggestions on effective teachers Professional Development measures that are needed to be taken to meet the teaching needs of EFL teachers in futuristic similar situation or blended learning situations.

In spite of so many studies on the sudden requirement to switch from traditional classroom-based education to online learning during the COVID-19 pandemic, as well as the method efficacy, benefits, and drawbacks of online remote teaching, sustainable professional development of Bangladeshi EFL teachers in the post-pandemic era has not yet been worked on. Several studies have revealed that such unprecedented teaching situation eventually facilitated the use of technology and the advancement of teaching practices towards a blended process. Therefore, our teachers in Bangladesh must be prepared with proper technological and pedagogical skills. Teachers' professional skills and knowledge should be sustainable and the Professional Development measures would be 'proper' if we can figure out the specific skills that are required to meet the teaching needs of EFL teachers in the post-pandemic teaching situations. Therefore, with an attempt to understand the perception of EFL teachers on sustainable Professional Development, this study focusses on finding out the specific skills that the teachers had to acquire to meet the teaching needs during COVID-19 pandemic and the ones that are still in use in the post-pandemic teaching conditions. Finally, this study proposes some suggestions to improve Teachers Professional Development programs to meet the teaching needs of EFL in the post-pandemic teaching situations.

It is well acknowledged that teacher expertise has a substantial impact on how effectively students learn and how successfully they master assignments (Berliner, 2004; Darling-Hammond & Bransford, 2007). Despite being the most significant force behind educational reform, teachers' contributions are frequently ignored (Ogilvie & Dunn, 2010). Many scholars, practitioners, and decision-makers in the field of education concur that bettering teachers' professional development will undoubtedly result in better student learning outcomes (Tajeddin & Rezanezhad, 2019). Furthermore, it is necessary for teachers to master various teaching techniques in a methodical manner in addition to expanding their expertise. According to the studies that have already been done, many teachers believe that employing technology is not the only way they can support students at this difficult time; it is also seen as a way to improve English language instruction. The first necessary and important step and platform for supplying language teachers with a successful education is teaching.

As teachers' professional development leads to improve students' learning results (Tajeddin & Rezanezhad, 2019), the teachers need to become well equipped with the teaching and learning needs of the present time and be prepared for any unprecedented situation like the COVID-19 pandemic. And the literature that has already been published has demonstrated how such a novel educational situation was handled. In the end, this transitional era made it easier to integrate technology and improve instructional methods in the direction of a mixed process. As a result, teachers in Bangladesh need to undergo proper professional development programs so that they are equipped with the necessary technological and pedagogical knowledge and abilities. And the measures would be "appropriate" if we could identify the precise expertise needed to satisfy the needs of EFL teachers in emergency remote teaching or blended learning scenarios in the future. As a result, this study focuses on learning the precise skills that teachers had to acquire to meet the teaching needs during the COVID-19 Pandemic as well as the ones that are still in use in the post-pandemic teaching conditions in an effort to understand how EFL teachers perceive continuing professional development. Finally, this study makes some recommendations for enhancing Teachers Professional Development programs in order to better serve EFL teachers' instructional needs in potential Emergency Remote Teaching scenarios.

Having four specific objectives, the study was marched. The objectives upon which this research is based on are: to understand the perception of the English language teachers towards Teachers Professional Development; to identify the skills that the teachers had to acquire to meet the teaching needs during COVID-19 Pandemic; to identify the skills that are still in use in the post-pandemic teaching conditions and to identify the skills that should be incorporated in the Teachers Professional Development programs to meet the teaching needs of the English language teachers in the future Emergency Remote Teaching (ERT) situations.

With a view to fulfilling the objectives, this research attempted to investigate the following research questions:

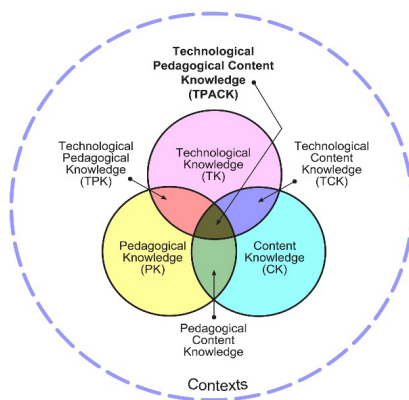
- What is the perception of English language teachers on Teachers Professional Development?
- Which skills did the teachers have to acquire to meet the teaching needs during COVID-19 Pandemic?
- What are the skills that are still in use in the post-pandemic teaching conditions?
- What Professional Development measures should be taken to meet the teaching needs of English language teachers in the future Emergency Remote Teaching situations?

### **Conceptual Framework**

The TPACK framework, developed by Koehler and Mishra in 2008, is the most popular framework for studying teachers' professional knowledge in the field of teacher educational technology. The framework is based on the idea of Shulman's Pedagogical Content Knowledge (1986, 1987), which defines the knowledge that is unique to educators. The TPACK framework takes into account the extensive nature of teachers' expertise as well as their familiarity with the specifics of using technology in the classroom. This hypothesis was developed to shed light on the skills and understandings educators must possess in order to effectively incorporate technology into their lessons and classrooms. It distinguishes between three categories of knowledge that teachers need for

effective EdTech integration: Content Knowledge (CK), Pedagogy Knowledge (PK), and Technology Knowledge (TK).

*Figure 1. TPACK Model Developed by Kohler and Mishra (2008)*



The intersections of these fundamental knowledge kinds are also highlighted by Schulman's approach. When it comes to technology integration into education, "the interaction of multiple bodies of information, both theoretically and practically, develops the forms of flexible knowledge" (Koehler & Mishra, 2008, p.60). The researcher aims to shed light on the relationship between pre-K and TK from the perspective of EFL educators. In PK, educators draw on their expertise in areas like as student motivation, information dissemination, assessment, and classroom management. TK is the understanding of how to utilize new technology. Koehler and Mishra (2008) describe that their theory is the result of five years of researching instructors of all grade levels using design experiments to determine how their classrooms functioned. They derived the basic idea from Lee S. Shulman's "Those Who Understand: Knowledge Growth in Teaching" book from 1986. To begin, Shulman dissects the commonly held belief that educators are expected to be well-versed in both their subject matter and the best practices in education. Shulman rebuts this by arguing that good teachers integrate these two bodies of knowledge to create a coherent body of instruction for their subject. To put it another way, this is what we call "pedagogical content knowledge" (PCK). The use of technology in the classroom has been identified by Mishra and Koehler as the most significant change in education over the past twenty years. In their experience, PCK is seen as separate from technological knowledge. Five years of research led to Mishra and Koehler's development of a new framework, TPACK, which incorporates teachers' understanding of technology with their pedagogical content knowledge and places an emphasis on the interplay between the two.

### Methodology

This study has used a mixed method approach. It includes a survey questionnaire with closed-ended questions and semi-structured interviews with teachers. The survey described below was distributed electronically, largely via Facebook Messenger and WhatsApp, and social media. The semi-structured interviews were conducted physically. At the outset of the survey, respondents were asked to read a detailed description of the study's goals and assured that their participation was completely

voluntary and confidential. Participants were asked to indicate their willingness to take part in the study by clicking a button before beginning the survey. Results from the closed-ended questions shed light on EFL educators' theoretical and practical understanding. The additional open-ended interview question allowed for greater elaboration and provided deeper insights into teachers' perspectives on long-term PD, the skills needed for distance education during COVID-19, and teaching practices in the wake of the pandemic, including challenges and new opportunities.

A total of 10 secondary school English teachers were selected using convenient sampling technique as survey participants from 7 different schools in Dhaka City. The researchers were not directly connected to the secondary English language teachers. So, having access to the teachers was an issue of consideration. Since the study did not have any funding, the researchers had no luxury to explore much. They had to reach the participants who were easiest to access. The researchers used this non-probability sampling method because of its cost effectiveness and time-efficiency. 40 percent of the participants were female. The average age of the participants was above 41 years and 70% of them have been in teaching profession for more than 8 years. All of them teach English to the students of class 6 to class 10. Among those teachers, 80% teachers have B.Ed. degree but none of them are certified as EFL/ESL teachers. After the questionnaire survey, 4 teachers were selected for the semi-structured interviews from those 10 teachers. Among the 4 teachers, 2 were male and 2 were female teachers. To ensure participants' privacy, the questions that appeared in the survey did not require any disclosure of personal or other identifying details.

Two separate approaches were used to gather information for this investigation. At first, a questionnaire was given out to educators. Second, semi-structured interviews were conducted to get more in-depth replies from the educators. The survey was conducted using Google Forms and consisted of 24 close-ended questions. The researcher began the survey by collecting demographic data like respondents' names, email addresses, birth dates, gender, marital status, education levels, teaching experience, and teaching certifications. Questions were graded on a 5-point Likert scale, and topics covered digital tool knowledge and digital tool sources in the context of distance EFL training before the COVID-19 crisis. Closed questions about distance English as a foreign language (EFL) instruction during the coronavirus pandemic were categorized according to respondents' answers to six factors: where respondents learned about digital technologies; how much institutional support they received; how confident respondents felt in their own technological-pedagogical knowledge; how they felt about their own use of digital technologies; how they felt about the shift in their own professional knowledge and practice; what obstacles they faced; and how they felt about the potential for improvement in distance EFL instruction. The preferences of teachers on many areas of teaching and learning were investigated. The interview consisted of 6 open-ended questions inquiring about teachers' professional development strategies during and after the COVID-19 crisis and their perceptions of the professional development needs of English language teachers after the pandemic.

The SPSS version 25 was used for all analyses. Data-driven thematic analysis was used to examine the qualitative information gathered through semi-structured interviews. In order to characterize the experience of EFL teachers in distant instruction, qualitative coding of data-driven topics was employed.



## Results

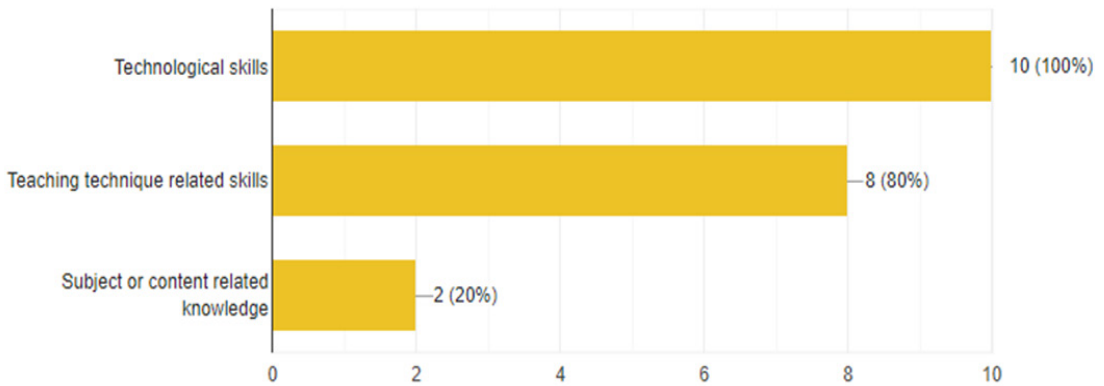
This research aimed, in part, to explore how English language teachers feel about their own professional development opportunities. According to the results, the majority of educators consider their time spent in teacher education and other formal professional development opportunities to be the most effective means of advancing their careers. They claim to have received all of their education from the Ministry of Education or from colleges dedicated to teacher preparation. They have noted, however, that they had to rely on their own initiative throughout the covid-19 epidemic to acquire the knowledge and training necessary to teach effectively in the challenging conditions presented by the school's isolated location. The questionnaire included an electronic consent button to make sure that the teachers have responded voluntarily. All of the respondents have agreed to the consent button. All the teachers were above 30 years old and 40 percent of them belong to the age range of 45 to 49 years. This information was taken to ensure that the teachers are experienced in their field and have taught before, during and after the pandemic so that more detailed data can be achieved. The data also shows that 70 % of the teachers have been in teaching profession for more than 8 years 20 % of the respondents have been in English language teaching profession for 6 to 7 years 10 % of the respondents are in teaching profession for 5 to 6 years and another 14.3% of the teachers have reported that they are in this field for 8 to 9 years. The researcher aimed to select respondents who are in the teaching profession for more than 5 years so that it is ensured that the teachers are experienced and have taught before, during and after the pandemic. This will help the researcher to understand and gather information about the differences in their experiences. The majority of the teachers which is 60 % to be exact currently teach in class Eight. 50 % of the teachers teach in class 7 and 9 and 40 % of the teachers teach in class 6 and class 10. It was also attempted to understand their educational background and all the respondents have reported that they have BA and MA degrees in English. While asked about any other professional degrees related to English language teaching, only one teacher has reported that s/he has a Masters in ELT degree. None of the teachers have conducted online classes before covid-19 pandemic. Regarding the teaching experiences during the distance learning and teaching situation, the teachers have shown mixed reactions. The general description of the data regarding their experience of online teaching can be described as all of them have a positive attitude towards online teaching but there were some drawbacks as well. There were some challenges as the situation was completely new to them, but they liked online teaching.

Since the Inception of communicative language teaching (CLT) in Bangladesh, the Government of Bangladesh and some other organizations like the British Council have attempted to implement or utilize communication technology in teaching or in English language classrooms. However, no significant growth was seen so far. But the covid-19 distance learning situation has made the teachers learn new technological skills and utilize them in their classes. All the participants have reported that they had to learn new skills for online class conduction. However, the interview results show that even if they had to learn some skills during the covid-19 pandemic and they are still in use, the use of technology has reduced again. They use the newly learnt technological knowledge in the classroom even after the pandemic but within a limited domain as it was before the pandemic.

All the participants have reported that they had to develop their technological knowledge or skills that are directly related to technological devices. 80% of the teachers have reported that they

had to develop their teaching technique related skills or what we say the Pedagogical Knowledge. However, the development in their Pedagogical Knowledge was not done with direct initiatives. The development in Technological Knowledge actually indirectly added to their Pedagogical Knowledge. Therefore, it can be said that the development in their PK is basically a byproduct of developing their TK.

*Figure 2. Sectors of Teachers Professional Development during COVID-19*

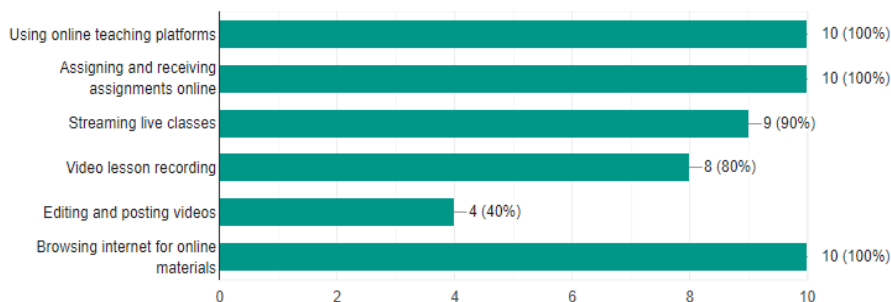


It was attempted to figure out the exact aspects upon which the teachers have worked on. Identifying the very specific skills that the teachers had to acquire to meet the teaching needs during COVID-19 Pandemic was one of the objectives of this research. The figure below shows the result of the second research question. The teachers basically had to learn using online teaching and learning platforms such as Google Classroom, Zoom and Skype for conducting online classes. However, the qualitative data indicates that they also had to learn using WhatsApp and Facebook for teaching purpose.

Figure 3 below demonstrates that 100% of the teachers have reported that they had to learn using the online platforms for delivering their classes. All the teachers also reported in favour of assigning and receiving academic assignments online, browsing internet for online materials, and 90% of the teachers have also reported for streaming live classes. Along with synchronous instruction through Google Classroom, Zoom and Skype, the teachers also used Facebook “live” option sometimes for conducting their classes. While on the other hand, the teachers had to record videos and upload them in Facebook or WhatsApp groups and Google classroom as well. Thus, learning how to record videos, editing and uploading has greatly added to their asynchronous delivery.



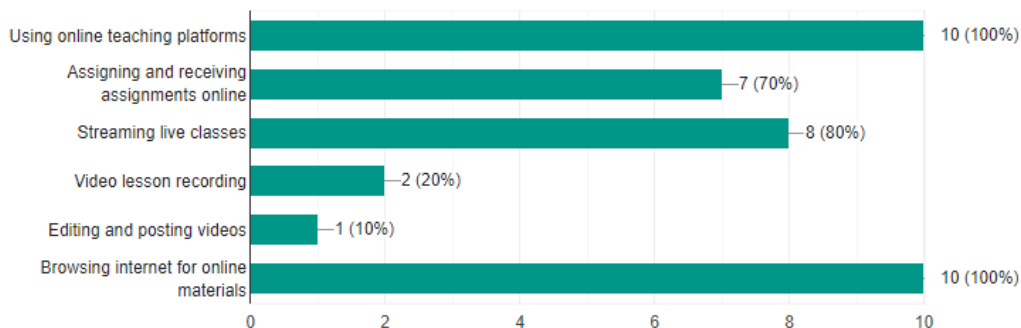
Figure 3. Skills that the Teachers Had to Learn



The data in figure 3 shows that 80% teachers have reported that they had to learn recording videos for teaching and learning purpose. Only 40% of the teachers voted for learning video editing. The data obtained from the interview reveals that most of the time the teachers uploaded the raw video file with no edit which they found to be noisy and hardly audible. It was because the teachers found video editing to be too much hectic and complex. While on the other hand, some teachers tried to make their recorded video lessons as much clear as possible with some basic editing. Majority of the respondents said that they actually avoided learning video editing as they found it too much difficult; however they agreed that they should have learnt it for making the lessons better.

As now we have found the skills that the teachers had to learn to meet the teaching needs, the next objective was to figure out the specific skills that are still being used by the teachers in the new normal era. The changes caused by ERT period are important to analyze especially if the changes tend to stay even after the ERT period has been over. This analysis will help the policymakers to plan teachers' professional development programs more effectively. Most of the aspects that the teachers had to learn during the COVID-19 pandemic are still being used but to a somewhat limited extent.

Figure 4. Specific Skills that Are Still Being Used in the Post-Pandemic Era

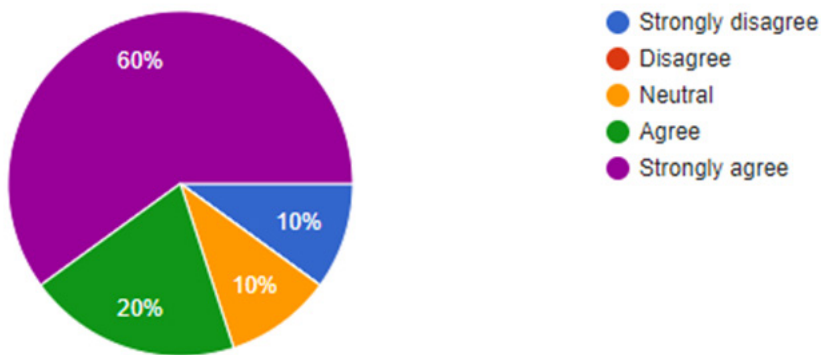


The aspects of teaching with technology that the teachers had to learn during COVID-19 pandemic are still helping them in teaching after the pandemic, using online teaching platforms and browsing internet for online materials has been selected by 100% of the teachers. Assigning and receiving assignments online and streaming online classes have been reported by 70% and 80% teachers respectively. On the other hand, video lesson recording and editing and posting videos have been reported to be the least used ones. As we can see that teachers still use online teaching platforms and browse internet for online making materials, the use has become limited. Teachers now use online

teaching platforms only occasionally, especially, when they need to make up any class. The need for browsing internet for online materials has also reduced down as they have gone back to traditional instructional approach. They also occasionally assign homework and assignments to be submitted online, especially, when there is any long break between two class dates. The interview data indicates that using online teaching platforms and assigning and receiving assignments online provides the teachers with some flexibility and reduces work pressure. Flexibility in a sense that if they feel sick or unwell, they can think of online classes being at their home. It helps them take rest and avoid the traffic in a sick health. Teachers also reported that they use online platform to convey any message to their students. Although, using social media platforms were still an option in the pre-COVID period, they did not actually bother much about it. However, their institutions guided them to have social media groups for keeping easy and close communication with the students. And now in the post-COVID time, it has become an important part of the communication mechanism.

Majority of the teachers had basic knowledge of operating a computer as they have stated that they have got training on using technology in the classroom from the initiatives taken by the Ministry of Education. However, as it was stated before that they never had conducted online classes before the pandemic, 80% of the teachers have reported that they did not know how to conduct online classes before the pandemic. While on the other hand, another 20% of the teachers have reported that they knew how to conduct online classes but they never have conducted any.

Figure 5. Experience of Conducting Online Classes before COVID-19 Pandemic



Interesting facts that figure 5 shows is that these 20% teachers belong to a relatively young age group. This part indicates that the comparatively young teachers knew how to operate or conduct class online mostly using WhatsApp video conferencing and Google classroom but they never had conducted before the Covid-19 pandemic. These relatively young teachers have also reported that they know how to browse the internet for creating interactive teaching materials for their students but the majority which is more than 80% has reported that they did not know how to use the internet or how to browse the internet for creating teaching materials. In the interview, one of the teachers reported that s/he has got training on creating digital content but use of the internet in doing so was very limited. In this part, the teacher suggested that the training for the teachers should include more use of the internet so that they can create effective digital contents which are interactive and interesting in nature.

Along with browsing the internet for creating digital interactive contents for their students, the teachers also learnt how to make video lessons for their students for online teaching 80% of the

respondents have reported that they have learnt making video lessons during the covid-19 pandemic which included video making and editing skills. They have also learnt assigning homework and assignments digitally and receiving them online, which according to them, was a matter of great difficulty for them. The data indicates that the teachers have employed themselves to gather knowledge and develop their skills from random sources. The sources of their skill development can be divided into 3 categories. The first one is “Self-taught”, the second one is “Colleague support” and the third one is “Institutional support”. All of the teachers have agreed that they have learnt most of the things by their own efforts however a significant help, assistance and support was made by their other colleagues specially the ICT teachers or the teachers who are well equipped with technological knowledge. They have also reported that their schools have arranged coordination and Technical Support meetings so that they can learn about new teaching techniques and approaches and about using new technologies. In terms of self-support or self-taught skills, only 16% of the participants have reported that they have joined “online courses” for improving their online teaching practices and the rest of them have used YouTube videos to learn from.

The overall data indicates that Technological Knowledge was the most crucial one that they had to work on in comparison to Pedagogical Knowledge and Content Knowledge. Improvement in technological knowledge has eventually supported their pedagogical knowledge but no direct efforts were made. As part of technological skill development, they have learnt how to do online presentations, making PowerPoint slides, making interactive videos and browsing the internet or various websites for creating digital content for their students. Zoom and Google classroom has been the most significant applications that the teachers had learnt during the covid-19 remote teaching situation and using these applications also include some other small but related things such as taking a screenshot of their computer screen for attendance, recording the class, transferring videos and to mute or unmute a student. The data shows one important aspect that some skills that they had learnt for teaching online during the covid-19 pandemic are still in use and are still helping them for teaching in the post-pandemic teaching situation. They have reported that the knowledge developed during the online teaching condition is helping them to use technology to make their lesson plan more resourceful. They still use email, WhatsApp and Google classroom for communicating with the students and assigning different tasks, homework, or assignments. They also use these online platforms for discussions which are related to their academic study. The teachers have suggested that more teacher training programs are needed to be arranged for teachers’ skill development in the technological field and the existing technological training should be improved by incorporating new technologies related to classroom or teaching methods and techniques that are in practice around the world in the current days so that they can stay updated.

### **Discussion**

Understanding how English language teachers view teacher professional development was one of the objectives of this research. The statistics revealed that the majority of teachers perceive the training they get from the Ministry of Education and Teachers Training Colleges as part of their professional development. They claim that the only institutional training to which they have been exposed are those offered by the Ministry of Education or the colleges for teachers. However, they

have also noted that during the COVID-19 outbreak, they had to educate themselves independently in order to improve their teaching abilities for the remote classroom context. The researcher tried to ensure that the teachers were knowledgeable and had experience teaching before, during, and after the pandemic by choosing responders who have been in the teaching profession for more than five years. The researcher will be better able to comprehend and collect data on the variations in their experiences as a result. Currently, 60% of the teachers offer classes in eighth grade. 40% of the teachers teach in classes 6 and 10, whereas 50% of the faculty members instruct in classes 7 and 9. The interviewees were all asked about their educational backgrounds, and all of them stated that they hold MA and BA degrees in English. Only one teacher has mentioned having a Masters in ELT when asked whether they had any additional professional degrees in English language instruction. Before the COVID-19 epidemic, none of the teachers had taught online. The teachers' attitudes to their teaching experiences in the context of remote learning and teaching have been conflicted. All of them have a positive attitude toward online teaching, but there are also certain negatives, according to the overall summary of the data surrounding their experience with it. They enjoyed online teaching, but there were some difficulties because the environment was unfamiliar to them.

The Government of Bangladesh and several other organizations, such as the British Council, have tried to incorporate or employ communication technology in teaching or in English language classrooms since communicative language teaching (CLT) was introduced in Bangladesh. However, no appreciable growth has been observed thus far. However, the remote learning environment created by COVID-19 has compelled the teachers to acquire new technological abilities and apply them in the classroom. All of the participants acknowledged that conducting an online class required them to pick up new skills. The results of the interviews indicate that, even though they had to pick up new skills during the COVID-19 pandemic and they are still in use, technology use has decreased once more. Even after the pandemic, they continue to employ the newly acquired technology knowledge in the classroom, but in a more constrained setting than it was during the outbreak.

Each participant acknowledged that they had to increase their technological proficiency or understanding in areas directly related to technology devices. In order to improve their pedagogical knowledge, or the skills connected to teaching techniques, 80% of the teachers said they had to. Their pedagogical knowledge did not, however, evolve through direct endeavors. Their pedagogical knowledge was actually indirectly enhanced by the technological knowledge improvement. As a result, it may be claimed that their PK development is primarily a byproduct of improving their TK. There was no attempt made to develop the CK of the majority of teachers since they lacked clarity regarding the subject-related or content knowledge.

It was sought to determine the precise components that teachers have worked on. One of the objectives of this research was to identify the very particular abilities that teachers needed to acquire to meet the teaching needs during the COVID-19 Pandemic. Teachers were required to learn how to conduct online classrooms utilizing online teaching and learning technologies such as Google Classroom, Zoom, and Skype. However, qualitative data suggests that they were also required to learn how to use WhatsApp and Facebook for educational purposes. 100% of teachers indicated that they were required to learn how to use online platforms to offer classes. In addition to voting for "Assigning and receiving assignments online," "Browsing the internet for online materials," and "Streaming live

classes," 90% of teachers also reported for "Assigning and receiving assignments online." Along with synchronous instruction through Google Classroom, Zoom, and Skype, teachers occasionally used the "live" feature on Facebook to conduct classes. Teachers were required to record videos and publish them to Facebook or WhatsApp groups as well as Google classroom. Therefore, understanding how to shoot, edit, and publish videos has significantly facilitated their asynchronous delivery.

The data reveals that majority of the teachers reported having to learn how to record films for teaching and learning purposes. Only 40% of teachers supported learning video editing. According to the interview data, the majority of the time the teachers posted the raw video clip with no editing, which they have admitted to be noisy and barely audible. It was because the teachers thought video editing was too stressful and complicated. On the other hand, some teachers used simplistic editing to make their recorded video lessons as clear as feasible. The majority of respondents indicated they avoided studying video editing because it was too difficult, but they agreed that they should have learned it to improve the teaching. After determining the skills that teachers needed to learn in order to satisfy the teaching needs, the next goal was to determine the precise abilities that teachers are currently using in the new normal period. The effects of the ERT period must be studied, especially if the effects persist after the ERT time has ended. This analysis will assist policymakers in better planning professional development programs for teachers. Most of what instructors had to learn during the COVID-19 epidemic are still in use, albeit to a lesser scale.

As we can see, teachers continue to use online teaching platforms and explore the internet for online producing resources, but their use is limited. Teachers now only use online teaching tools on rare occasions, particularly when they need to make up a class. The necessity to use the internet for online materials has also decreased as they have returned to a more conventional pedagogical style. They also assign homework and tasks to be submitted online on occasion, especially when there is a considerable hiatus between two classes. According to the interview data, employing online teaching platforms and sending and receiving assignments online gives teachers some flexibility while also reducing job pressure.

The teachers get the flexibility to think of conducting online classes being in their own homes in the case they become ill or incapacitated. They are able to get some rest and stay away from the traffic, which is helpful for their sick health. Additionally, teachers have claimed that they use online platforms to communicate with their students on any topic. During the time before COVID, using social media platforms for academic or teaching purposes was technically still a choice; nevertheless, they did not put much effort into engaging in this activity. However, their educational institutions encouraged them to establish social media groups in order to facilitate communication with their students in an easy and personal manner. In addition, in the time after COVID, it has developed into an essential component of the communication mechanism.

Since the Ministry of Education's programs have provided them with training on using technology in the classroom, the majority of the teachers reported having a basic understanding of how to operate a computer. 80% of the teachers reported that they did not possess the knowledge. Another 20% of the teachers, however, claimed that they had never taught an online course despite knowing how to do so.

It is important to note that among the survey respondents, 20% of the teachers are quite young

in age. As a result, this portion of the data demonstrates that young instructors have a greater exposure to technology than older teachers do. Before the Covid-19 outbreak, however, they had no experience teaching online or using Google Classroom or WhatsApp video conferencing. These relatively new instructors have stated that they are familiar with using the internet to create interactive teaching materials for their pupils, but the majority—more than 80%—have stated that they are unable to use the internet or even browse it to produce educational materials. One of the teachers said during the interview that while they had received training in the creation of digital content, their use of the internet in doing so was relatively limited. In this section, the instructor recommended that greater internet usage be incorporated into the teacher training program so that educators can provide engaging, interactive digital curriculum. Along with using the internet to create digital interactive materials for their pupils, instructors also learned how to create video lessons for online instruction. According to 80% of respondents, making video lessons was a skill they picked up during the COVID-19 epidemic. They have also learned how to digitally assign and receive homework and assignments, which, in their opinion, was a very challenging task for them. According to the data, educators have taken it upon themselves to learn new things and hone their skills by consulting a variety of sources. There are three different types of sources for their talent development. Self-taught is the first, followed by peer support and institutional support, respectively. The majority of what they have learned, all of the teachers agree, they have done on their own, but their other colleagues, particularly the ICT teachers or the teachers who have a strong technology background, have been a huge help, support, and encouragement. Additionally, they said that their schools had set up coordination and Technical Support meetings so that they could learn about utilizing new technologies as well as new teaching methodologies. Only 16% of the participants said they had taken "online courses" to improve their methods of online instruction, while the remaining 84% said they had watched YouTube videos to learn from.

In compared to Pedagogical Knowledge and Content Knowledge, the aggregate data shows that Technological Knowledge was the one they had to work on the most. Although no direct efforts were taken, advancements in technology understanding finally supplemented their instructional knowledge. The development of their technology skills included teaching them how to create digital content for their pupils using online presentations, PowerPoint slides, interactive films, and website browsing. The most important applications the teachers learned during the COVID-19 remote teaching situation were Zoom and Google Classroom, and using these applications also includes a few other smaller but related tasks like taking a screenshot of their computer screen for attendance, recording the class, transferring videos, and muting or unmuting a student. The research highlights one crucial point: Some of the abilities they acquired while teaching online during the COVID-19 pandemic are still in use and continue to be helpful to them when they are instructing in post-pandemic classroom settings. They claim that the skills they acquired while teaching online are enabling them to more creatively use technology in their lesson plans. They continue to communicate with the students and give them new tasks, homework, or assignments through email, WhatsApp, and Google Classroom. They also use these internet forums to have debates about their academic work. The teachers have suggested that more teacher training programs be set up for teachers' skill development in the technological field



and that the current technological training be improved by incorporating new technologies related to classroom or teaching methods and techniques that are in use globally in the present so that they can stay updated.

### **Conclusion and Implications**

The coronavirus pandemic enhanced online education worldwide. Numerous studies have demonstrated that such an unconventional educational atmosphere facilitated the incorporation of technology and the improvement of teaching strategies towards a blended process. Our teachers in Bangladesh must therefore be provided with the required technological and pedagogical skills. If we can identify the specific skills required to meet the teaching needs of EFL teachers in post-pandemic teaching circumstances, then teachers' professional skills and knowledge will be long-lasting and professional development techniques will be "best suited." In an effort to appreciate how EFL teachers perceive sustainable professional development, this study identified the specific skills teachers had to acquire to suit their needs as educators during the COVID-19 pandemic, as well as those that are still employed in post-pandemic classrooms. In order to better address the needs of EFL teachers in post-pandemic classrooms, the study closes by indicating some recommendations for enhancing Teachers Professional Development programs. The research shows that professional-technological knowledge is essential for effective teaching, especially in the new normal era, and it indicates a strong link between professional-technological knowledge and teacher efficacy in online education. The effectiveness of digital learning relies on teachers' preconceptions and past experiences with implementing technology. Positive attitudes toward digital instruction should be fostered in both pre-service and in-service teacher education programs. The results point to the critical need to boost educators' belief in technology, broaden their knowledge on how to apply it in the classroom, and encourage a mindset that values technology's potential for positive social change. A failure to do so, as evidenced by the current state of affairs, endangers everyone. The findings also highlight the critical importance of preparing educators to be lifelong learners in the digital realm. Educators' personal interests and motivations should inform the content and design of digital lessons in teacher preparation courses. It is important to urge educators to embrace digital innovations in their professions. They will undoubtedly be able to make better use of new technology after they have gained experience with employing digital tools to a desired educational aim.

Due to the dependence on self-reported data, it is probable that the replies may not accurately reflect the attitudes and practices of all EFL teachers. It is possible that some participants unwittingly tried to "please" the researcher by giving answers that matched what they thought were the researcher's assumptions. Further research is needed to define teachers' professional growth in connection to online education, and to establish novel approaches to strengthening pedagogical-technological processes and procedures within the restrictions and potential of continually expanding technology. Despite the debilitating impacts of COVID-19 on many facets of life, there will be unprecedented demands on educational resources and policymaking in order to make sense of the policy decisions that should arise from the increasing usage of digital technology in education. Educators have been given a jolt of reality by the current COVID-19, which will hopefully help them plan for the future, both now and in the far future. Finally, the study has been conducted with the teachers from 7 different schools of Dhaka City only. The result may vary in other districts and especially in the rural areas as teachers in



Dhaka city and rural areas does not get equal exposure to technology and professional development opportunities.

To cut a long story short, this very research has struggled with a small and non-representative sample size — lack of diversity in participants, heavily reliance on self-reported data and lack of longitudinal data. The future researcher/s may consider these limitations in order to ensure a better meaning outcome from their studies.

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**Md. Mominul Haque** is a PMER (Planning, Monitoring, Evaluation and Reporting) Officer at Bangladesh Red Crescent Society. His areas of interest include in-service teacher training, educational leadership, ESP etc.

**Abdullah Al-Mamun** is a Lecturer in English Language Education at the Institute of Education and Research, University of Dhaka. His areas of interest are teacher's identity, critical pedagogy, Green ELT, sociolinguistics etc.