Pandemic Schooling and Teachers' Professional Identity in the Era of COVID-19 in Ethiopia: Summer-in-Service Trainees in Focus

Berhanu Abera (berhanu.abera6@aau.edu.et)

Institute of Educational Research, Addis Ababa University

Abstract:

The global COVID-19 pandemic has resulted in widespread school closures, impacting teaching and learning across countries. At the epicenter of the virus, in Ethiopia, students and teachers were obliged to stay at home where remote learning was not arranged well. After a few months of school closures, classes were reopened with emergency measures in place. However, the teaching and learning process faced significant challenges, and the professional identity of teachers was adversely affected during the pandemic schooling. This study aims to explore the professional identity of in-service teachers in this context. The study utilized a narrative inquiry approach and involved purposefully selected summer-in-service teacher trainees based on three criteria. Data were collected using four instruments: documents, in-depth interviews, reflective journals, and a questionnaire. The findings indicate that the arrangements made for remote teaching or e-teaching had a detrimental impact on the effectiveness of pandemic schooling. Teachers' adoption of pedagogy suitable for the pandemic was also found to be limited. The study further confirms that COVID-19 has influenced the identity formation of teachers, as they experienced concerns and panic regarding their health security. Based on these results, conclusions were drawn, and implications for teachers' professional development programs were presented.

Background

According to Huang et al. (2020), a novel coronavirus known as COVID-19 was discovered in the last month of 2019 at a seafood market in Wuhan, China. The outbreak originated in China right in the middle of Chunyun, a 40-day festival (in 2020, from 10 January 2020 to 18 February) centered on the Chinese Lunar New Year, which represents the largest annual migration of people on the planet (Abiad et al., 2020). Concerns about the pandemic were evident prior to 31 December 2019, when Beijing first notified the World Health Organization (WHO) of the outbreak. On 11 March 2020, the WHO declared COVID-19 to be a global pandemic (WHO, 2020). Since the outbreak of COVID-19, it spread rapidly across the globe. After two years, on 12 March 2021, the disease spread to 223 countries (areas or territories), with 118,058,503 cases and 2,621,046 deaths. In early December 2020, the first mass vaccination programme started, and as of 10 March 2021, a total of 300,002,228 vaccine doses were administered (WHO, 2021). At the time of finalizing this paper on May 10, 2022, a total of 515,748,861 confirmed cases of

COVID-19, including 6,255,835 deaths was reported to WHO. As of 7 May 2022, a total of 11,579,263,039 vaccine doses were administered (WHO, 2022).

The first confirmed case of COVID-19 in Ethiopia was reported on 13 March 2020. The victim was a 48-year-old Japanese citizen who came to the Country on 4 March 2020 from Burkina Faso (MoH, 2020). The number of COVID-19 victims in Ethiopia initially grew very slowly. For example, the number of cases from the beginning of the pandemic on 13 March 2020 to the end of April 2020 was insignificant (approximately 10 people). This number rose to 17 on 6 May 2020; most of the victims were returnees from Djibouti (7) and Somali Puntland (6). The number increased to 29 on 7 May 2020. The figure rose progressively to 35 (later reported as 34) on 18 May 2020. In two months, the Country reached more than 230 cases. After two years, on March 13, 2022, there were 469,184 confirmed cases of COVID-19, with 7,486 deaths reported to the WHO (WHO, 2022). This increased to 486,831 confirmed cases of COVID-19 with 7,527 deaths on 29 June 2022 (WHO, 2022).

According to data released by United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020a), 1 billion learners worldwide, from preschool to university, were not able to attend teaching establishments temporarily as a result of the pandemic. Globally, more than 1 billion children were at risk of falling behind due to school closures aimed at containing the spread of COVID-19 (UNICEF, 2020b). Even if some countries began to partially reopen primary schools, the threat of the disease has continued.

With effects across the globe, the COVID-19 pandemic impacted teaching-learning in Ethiopia. The pandemic ravaged the education system of the Country. After the Government announced school closures, including sporting events and public gatherings, for 15 days on 16 March 2020, all schools were shut down for an extended period (approximately six months). In the meantime, the Ministry of Education (MoE) and Regional Education Bureaus (REBs) took various crisis-mitigation measures to continue teaching-learning after the novel coronavirus emerged. That is, the MoE devised contingency plans for COVID-19 and adopted multiple learning delivery modalities ranging from low-tech to high-tech (i.e., from instructional radio and television that were more easily available to economically disadvantaged groups to web-based platforms) (MoE, 2020). For instance, the Ministry encouraged schools to continue teaching-learning using available technological tools, such as radio, TV and Internet. Afterwards, regional education bureaus also started to use existing educational technologies (EdTechs) in the general education sector of the Country. For instance, the Addis Ababa City Government Education Bureau encouraged primary school students to follow pre-planned radio lessons transmitted via its FM programme. The Bureau announced the programmes on TV and posted the schedule of each lesson door-to-door for community residents. In addition, the Education Bureau of Ormia started to produce television lessons that had been broadcast on the Oromia Broadcast Network (a regional state-owned TV station). Furthermore, some private schools in Addis Ababa attempted to launch their own EdTech solutions as a quick start during the outbreak of COVID-19. They shared learning materials (simplified notes and worksheets) using Telegram and SMS. Some schools also made content available on their websites, whereas few tried to develop video

lessons, which required high bandwidth. However, many students do not have access to technology or a suitable learning environment at home. Moreover, teachers' familiarity with EdTechs was also problematic; they were very familiar with traditional pedagogy, the usual 'talk and chalk'. Apart from using EdTechs, some regions took initiatives to implement a 'house-to-house' schooling. Teachers were encouraged to assist students who were found in their localities. Gradually, the re-opening of schools with limited students (by using shifting system) was declared. Teachers and students were encouraged to adhere to hygienic regulations (washing or sanitizing one's hands) and wearing a face mask.

Though the MoE and REBs took various crisis-mitigation measures to continue teaching-learning after the novel coronavirus emerged, the transition from the usual face-to-face instruction to technology-based instruction (remote instruction) was problematic in Ethiopia. Students in most parts of the Country were obliged to stay at home, where distance learning was not arranged (Abera, 2021). In addition, many students did not have access to technology or a suitable learning environment at home. It was also challenging for teachers to adopt EdTechs and to acquire new skills in e-teaching since they were left scrambling to deliver their classes remotely without any professional training in this regard. As a result, teachers got panic under the circumstance and felt unhappy since they were not sure of the fate of their profession. This is to mean that the professional identity of in-service teachers seemed to be impeded during the pandemic schooling (teaching-learning at the onset of COVID-19 pandemic). That is, the pandemic changed teachers' pedagogical routines since schooling shifted towards 'de-schooling' and lessons were delivered in blended and fully online formats. The pedagogical relationship of teachers with their students also entirely changed since the conventional face-to-face instruction switched to distance learning. The pandemic introduced new pandemic-transformed pedagogy which potentially caused professional tensions among teachers. That is to say, the pandemic schooling affected teachers' professional identity, which had a substantial influence on students' achievement. In relation to this, Fineman (1999) claims that dissatisfied, alienated, stressed identities are proven to create negative emotions that take away creativity and success from one's professional practice.

Teacher professional identity (TPI) has become research agenda of educational researchers as a way to understand and promote the "professionalization" of teaching (Sachs, 2004). A number of scholars have conducted studies on the area globally and argued that there is association between teacher professional identity and satisfaction in their profession. TPI has also a substantial influence on student achievement (for example Smith & Ingersoll, 2004). A study conducted on novice Teachers' Professional Identity in Ethiopia reveled that there was direct and positive relationship between induction and novice teachers' professional identity (Hagos, et al, 2019). In fact, Kenea's finding showed that teachers' professional identity development has not been a very well visible area in research on the Ethiopian teacher education system (Kenea, 2021). What is more, many studies conducted on TPI has gained scholarly attention in traditional face-to-face instructions. As far as the literature sources consulted during the present study are concerned, there is lack of empirical research on identify formation of teachers in the

context of technology-based instructions. Therefore, this study explores the professional identity of in-service teachers during the pandemic schooling when they transit to remote teaching/e-teaching. Specifically, the study attempts to answer the following research questions:

1) What are the lived experiences of teachers for the pandemic schooling?
2) What is teachers' adoption of pandemic-driven pedagogy like?
3) How did the pandemic schooling influence over the professional identity of teachers?

Although the COVID-19 pandemic has subsided, it is believed that this kind of research would also shed light on how teachers' professional practice can be compromised during emergency or crisis situations. Thus, it is expected that this study documents the professional identity of teachers during pandemic schooling in the era of the COVID-19 pandemic in the country and highlights the effective use of pandemic-driven pedagogy to mitigate the impacts of the crisis. Further, this issue will remain a research agenda among researchers. Policymakers in the area of education in times of crisis will also benefit from the research findings.

In this study, 'pandemic schooling' refers to the changes and adaptations made to education systems and teaching practices in response to the global COVID-19 pandemic. 'Pandemic-driven pedagogy' also refers to the pedagogical approaches, methods, and practices that emerged in response to the COVID-19 pandemic and the resulting shift to remote/online and technology-mediated instruction.

Method

Research Design and Conceptual Model of the Study

The main objective of this study was to explore the professional identity of in-service teachers during the pandemic schooling when they transit to remote teaching/e-teaching. To arrive at the intended purpose, a narrative inquiry research method was employed. That is, the study was intended to elicit information on lived experiences of in-service teachers during the pandemic schooling and to retell their views based on empirical evidence.

The following conceptual framework was used in the study as a model, as diagrammatized by the author based on the literature sources included in the paper and presented beneath (please refer Figure 1). The model represents the variables that were investigated in the study. These variables are interrelated as demonstrated by the arrows in the model. The variables in the largest circle generate the variables in the other two circles, and each affects the others in turn.

The outbreak of coronavirus, an acute respiratory illness transmitted through respiratory droplets and contact, caused multiple social and economic effects. Since it was contagious, it spread unpredictably all over the world at an alarming rate. The disease rapidly reached areas with high population densities, including urban areas, camps and camp-like settings, and often overburdens weak health care systems (UN, 2020). Thus, as the World Bank (2020) claimed, school closures were a critical pillar of social distancing tools to mitigate the spread of the illness and to avoid an acceleration of cases that would put a strain on health services. School closures slow down the spread of contagion. In this sense, Ethiopia declared school closures soon after
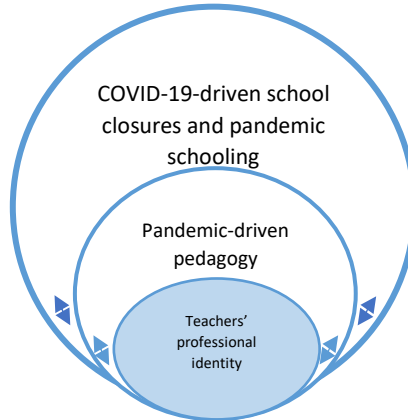
Figure 1: *Conceptual framework of the study*

the outbreak and the first coronavirus case was confirmed and adopted remote teaching/e-teaching by using readily available EdTechs. Gradually, the re-opening of schools with limited students (by using shifting system) was started. The pandemic schooling affected students' learning and teachers' teaching. This study, hence, has explored practices and challenges associated with teachers' profession in view of COVID-19.

According to David (2020), digitized materials can be used to alleviate problems related to the COVID-19 pandemic. From this perspective, countries took various crisis-mitigation measures to continue teaching-learning after the novel coronavirus emerged. Countries devised contingency plans for COVID-19 and adopted multiple learning delivery modalities ranging from low-tech to high-tech (i.e., from instructional radio and television that are more easily available to economically disadvantaged groups to web-based platforms). The Ministry of Education and Regional Education Bureaus of Ethiopian encouraged schools to continue teaching-learning using available technological tools. The pandemic introduced new pandemic-transformed pedagogy which potentially cause professional tensions among teachers. Therefore, the study aimed to examine in-service teachers' adoption of pandemic-driven pedagogy interconnect with teachers' professional identity.

The theoretical discourse on teacher professional identity is dominated by several different approaches, each of them focusing on a specific dimension of its formation. According to Botha and Onwu (2013), identity is a complex construct and on-going process. It is shaped and continually reshaped over the life of an individual (Beltman et al, 2015) and is strongly influenced by how we see ourselves, how we perceive others perceive us and how we are viewed by society at large (Beijaard et al., 2004). It is to mean that teacher identity is formed through time as a function of reciprocal and dynamic interaction between the individual and the context which are explained by the psychological and socio-cultural theories (Belmant et al., 2015). In context of COVID-19 pandemic, teachers have experienced feelings of helplessness and frustration since pandemic has changed teachers' professional routines. As has been said, the

pedagogical relationship of teachers with their students has entirely been changed since the conventional face-to-face instruction switched to distance learning/e-teaching. Moreover, teachers were worried about their health security and overstressed in their professions, especially in the wake of COVID-19. Thus, the study was concerned with the effects of the pandemic schooling on the professional identity of in-service teachers.

Sampling Strategy and Participant Selection

After re-opening of classes during COVID-19 pandemic, the researcher was assigned to teach a common course to trainees of summer-in-service Postgraduate Diploma in Teaching (PGDT) who were from three subject areas, viz, in Physics, Biology and Health and Physical Education (HPE). The trainees were serving as teachers in different parts of the country. They joined the College of Education and Behavioral Studies to qualify for teaching in secondary schools. The trainees were 212 in number and the majority of them were males (64.6%). They were grouped into six sections (two sections for each subject). Of this, the study involved purposefully selected 12 trainees (four participants form each subject) based on three criteria: (a) taught during COVID-19 pandemic using one of the existing educational technologies (EdTechs); (b) had 10

Table 1: *Participants' Demographic Data*

Participants	Characteristics				
	Gender	Subject taught	Teaching experience	Working location *	Grade taught
Teacher 1	Male	Physics	16	Capital city	Grade 9
Teacher 2	Male	Physics	11	Capital city	Grades 7 & 8
Teacher 3	Female	Physics	23	Regional city	Grade 9
Teacher 4	Female	Physics	20	Regional city	Grade 9
Teacher 5	Male	Biology	10	Capital city	Grades 7 & 8
Teacher 6	Female	Biology	11	Regional city	Grades 7 & 8
Teacher 7	Male	Biology	14	Capital city	Grade 9
Teacher 8	Male	Biology	12	Regional city	Grade 10
Teacher 9	Female	HPE	16	Capital city	Grades 9 & 10
Teacher 10	Male	HPE	11	Regional city	Grades 9 & 10
Teacher 11	Female	HPE	10	Regional city	Grades 7 & 8
Teacher 12	Male	HPE	17	Capital city	Grades 9 & 10

* 'Capital city' refers to Addis Ababa while 'reginal city' refers to cities which are found in regional states including city governance of Dire Dawa

Instruments of Data Collection

years or more of teaching experience; and (c) worked in urban areas (federal and regional cites), especially coronavirus affected areas. The first criterion was selected because teachers were facing sudden changes in their pedagogical routines. The pandemic forced them to teach remotely using instructional technologies, which demand teachers to acquire new skills in e-

teaching and to apply pandemic-transformed pedagogy. This may lead them into remote teaching/ e-teaching trauma. The second criterion of selecting teachers with 10 years or more teaching experience reflects that they have a better identity formation than novice teachers so that they are concerned about their profession. Further, they may be presumed to have developed competency in teaching. The third criterion to select individuals who were vulnerable to COVID-19 pandemic help assured that participants could provide information-rich stories drawing on their personal experiences to help answer the research questions posed in this study. Demographic profiles of the participants are summarized in the table below.
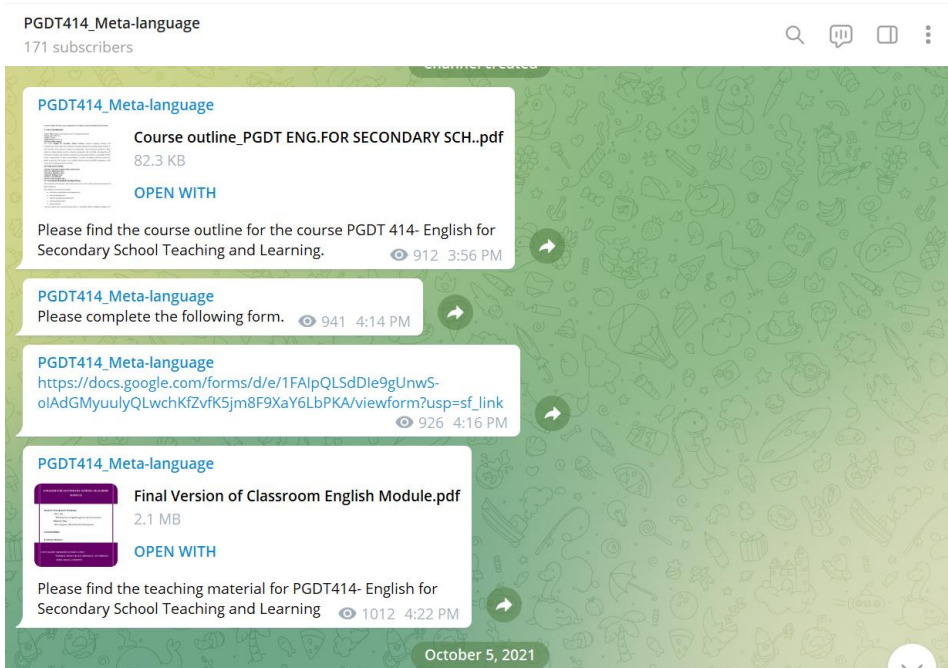
To gather data for the study, four different instruments: documents review guide, in-depth interview guides, reflective journals and a questionnaire were used. That is, documents, such as educational contingency plan of MoE, guidelines for handling the effects of the pandemic and online learning and written correspondence were reviewed and analysed digitally. An online questionnaire was administered to all the in-service teachers who had subscribed to the Telegram channel created for the training purpose. This was done to explore teachers' use of educational technologies (EdTechs) during the pandemic schooling and to identify the participants of the study and 72 responses were obtained. Moreover, telephone interviews were conducted with the study participants which were accompanied by detailed record of reflective journals.

Data Collection Procedures
Since the trainees attended face-to-face instruction for approximately two weeks, the researcher established a Telegram channel (refer to Figure 2) and provided a demonstration on its usage. Subsequently, the trainees were advised to complete an online attendance form created with Google Forms. Using the form, such information as their full name, gender, identification number, contact address, email account, and trainee section were collected. Following these instructions, all trainees successfully registered, with a total of 171 trainees subscribing to the Telegram channel.

Moreover, the researcher utilized a Telegram channel to provide training materials and maintain communication with the trainees. As the majority of the trainees actively followed the channel, the researcher shared a link to an online survey questionnaire, created using Google Forms, to investigate teachers' utilization of educational technologies (EdTechs) during the pandemic. Out of the 171 subscribers, 72 trainees responded to the survey. From these respondents, the researcher selected 18 teachers and contacted them via telephone and email. However, three teachers did not participate in the study. After obtaining consent from the remaining 15 teachers, the researcher shared the interview guide questions with them through their respective email accounts. To refine the interview protocol, pilot interviews were conducted with three teachers prior to the main study. Subsequently, telephone interviews were conducted with each of the 12 participating teachers, with each interview lasting approximately 15 minutes. Following the telephone interviews, participants were requested to engage in deeper reflection on their experiences during the pandemic schooling by maintaining a reflective journal. To facilitate the recording of their reflections, participants received a template aligned with the research

questions. Further communication with the participants was maintained through online chats on the Telegram platform and telephone calls, encouraging them to reflect on their individual stories and connecting their professional experiences with the epicenter of the virus. Finally, a comprehensive record of each participant's responses and reflections was received via email.


Figure 2: *Screenshot of a Telegram Channel created for the training purpose*

Moreover, the researcher utilized a Telegram channel to provide training materials and maintain communication with the trainees. As the majority of the trainees actively followed the channel, the researcher shared a link to an online survey questionnaire, created using Google Forms, to investigate teachers' utilization of educational technologies (EdTechs) during the pandemic. Out of the 171 subscribers, 72 trainees responded to the survey. From these respondents, the researcher selected 18 teachers and contacted them via telephone and email. However, three teachers did not participate in the study. After obtaining consent from the remaining 15 teachers, the researcher shared the interview guide questions with them through their respective email accounts. To refine the interview protocol, pilot interviews were conducted with three teachers prior to the main study. Subsequently, telephone interviews were conducted with each of the 12 participating teachers, with each interview lasting approximately 15 minutes. Following the telephone interviews, participants were requested to engage in deeper reflection on their experiences during the pandemic schooling by maintaining a reflective journal. To facilitate the recording of their reflections, participants received a template aligned with the research questions. Further communication with the participants was maintained through online chats on the Telegram platform and telephone calls, encouraging them to reflect on their individual

stories and connecting their professional experiences with the epicenter of the virus. Finally, a comprehensive record of each participant's responses and reflections was received via email. Data were collected during the period between December 2021 and January 2022, which coincided with the peak of confirmed COVID-19 cases in Ethiopia (WHO, 2022) (please see Figure 3).
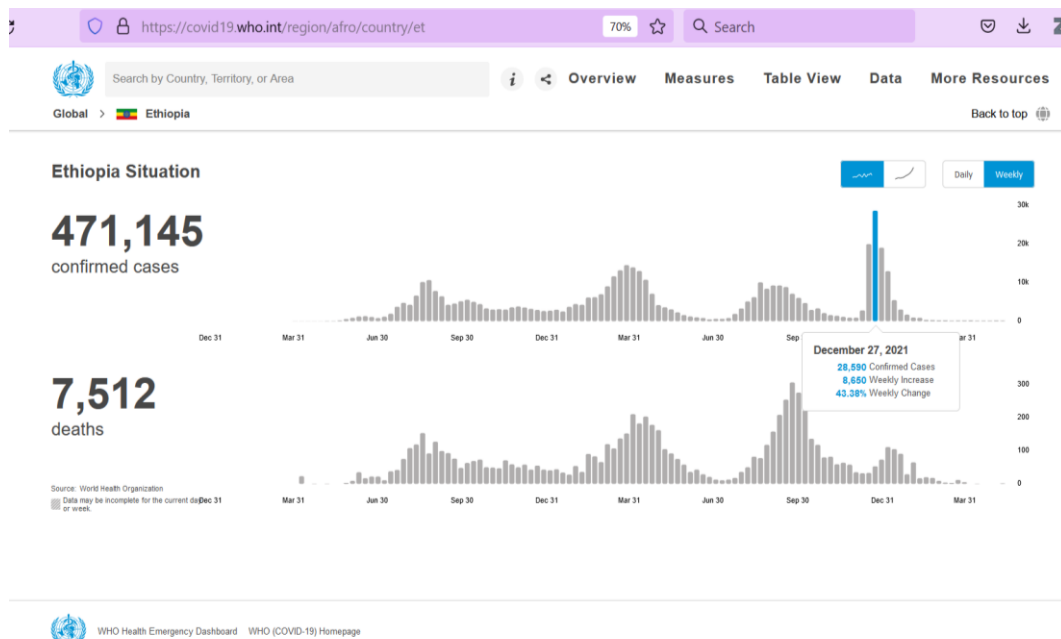
Figure 3: *Screenshot of the WHO's dashboard on confirmed cases and deaths of COVID-19 Ethiopia situation (accessed on 05 April 2022)*

Results

This section focuses on the results of the study which were organized into three sub-sections. The first sub-section examines the findings concerning COVID-19 disruptions and their impact on pandemic schooling. It explores the educational crisis-mitigation measures implemented by the MoE and REBs, as well as teachers' adoption of EdTechs and the associated practices and challenges in their profession amidst the COVID-19 pandemic. The second sub-section delves into the findings related to pandemic schooling and the shift towards pandemic-driven pedagogy, examining how these factors intersect with teachers' professional identity. It presents results that highlight the effects of pandemic schooling on teachers' professional identity. The final sub-section focuses specifically on the effects of the pandemic schooling on the professional identity of in-service teachers, providing a comprehensive analysis of the outcomes in this regard.

COVID-19 Disruptions and Pandemic Schooling

At the epicenter of the virus, schools in Ethiopia took the necessary steps to continue the usual face-to-face instruction taking sanitary measures and wearing a face mask. Classes continued in

this manner for approximately two weeks. However, when the first confirmed case of COVID-19 was reported on 13 March 2020, things changed. On 16 March 2020, the Government announced a nationwide school closure, including sporting events and public gatherings for 15 days. As a result, all schools were shut down for an extended period (approximately six months) and face-to-face teaching-learning was suspended. According to UNICEF's Report, over 26 million students were affected by the closure of schools, and more than 700,000 teachers and school management employees were not working (Khodr, 2020).

During the study, an attempt was made to explore the lived experiences of the participants during the outbreak of COVID-19 and the pandemic schooling. Participant teachers were requested to reflect their views on practices and challenges they encountered associated with their profession in view of COVID-19. Issues, such as teaching-learning under the pandemic, transition to remote teaching/e-teaching in response to the COVID-19 crises and teachers' readiness to distance learning/e-teaching were posed. The following results were obtained.

Teachers' narratives revealed that the teaching-learning was in abnormal conditions. Even though MoE and REBs were taking initiates to implement remote learning using the existing EdTechs in the general education sector of the country, the use of remote learning was minimal across the country. Teachers pointed out the following - where T_1 = Teacher $_1$; T_2 = Teacher $_2$; T_3 = Teacher $_3$, etc.:

> *The Education Bureau [City Government of Addis Ababa] encouraged primary school students to follow pre-planned radio lessons transmitted via its FM program. Even, the schedule of each lesson was posted door-to-door for community residents. However, students were not given ears to the radio lessons. I personally feel that the contents of radio lessons had problems since they were prepared for selected topics to enhance the face-to-face lessons [T_2]…   The Ministry of Education broadcasted plasma lesson through its Ethiopian Educational Television (EETV). I have seldom watched the televised lessons. I don't think that students are following the lessons [T_8]… During the school closure, the Education Bureau of Ormia has started to produce television lessons for primary grades that have been broadcast on the Oromia Broadcast Network. The lessons were interesting. My worry was that most students' parents didn't have TV. Besides, as far as my experience is concerned, most students didn't not watch instructional lessons. They preferred to watch 'Kana TV' and 'EBS TV' channels, which broadcasts films in Amharic language [T_{11}]…*

Furthermore, the respondents were asked about their teaching experiences during the pandemic and their preparedness for remote teaching or e-teaching. That is, the participants of the study were requested to indicate the major e-leaning tools they frequently used at the time of COVID-19. The summary of responses of the participants of the study concerning the e-learning resources they adopted is illustrated below**.**
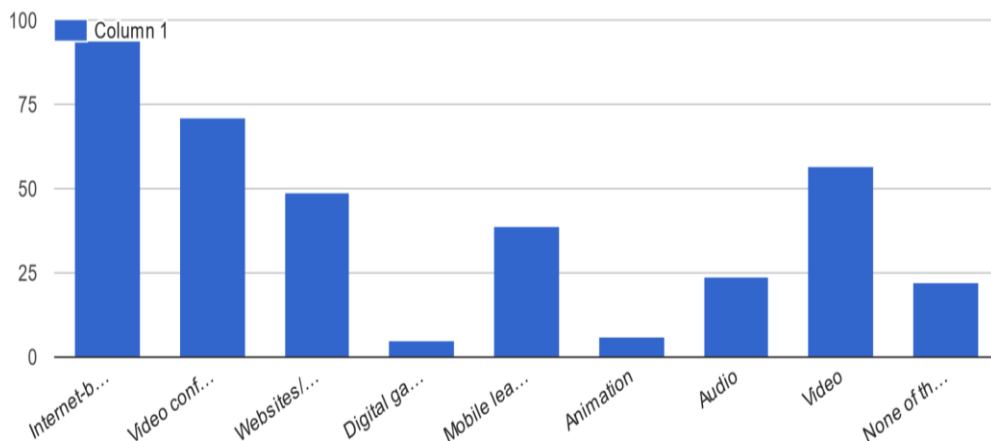
Figure 4: *Major e-learning tools in-service-teachers frequently adopted at the time of COVID-19 pandemic*

As shown in the Figure above, the majority of the teachers who responded to the online questionnaire indicated that they adopted internet-based resources to deliver their lessons. Specifically, they reported delivering video lessons. However, the data obtained through the telephone interviews presented a contrasting picture. They reflected that they were not actively engaged in teaching during the school closure period. Instead, they were required to stay at home as the normal teaching and learning process was disrupted. Their primary concern was their health and safety during the pandemic. They also mentioned that they were introduced to remote teaching practices, although distance learning arrangements were not well-established. Additionally, they expressed challenges related to limited access to technology and an unsuitable learning environment at home, which hindered their ability to effectively employ e-teaching methods. Moreover, they expressed uncertainty about their familiarity with remote teaching or e-teaching approaches.

Participants in the study indicated that they had limited or no training in remote teaching or e-teaching. They also mentioned that their professional development experiences did not adequately prepare them for this new mode of instruction. They held preconceived notions about distance learning, believing that students learn more effectively in face-to-face instruction rather than through remote methods. They expressed the desire for classes to continue in the traditional instructional format. Furthermore, some teachers expressed feelings of being "left behind" and frustration due to their limited readiness for remote teaching.

From the interview results, it can be inferred that the transition to remote teaching or e-teaching faced significant challenges. Despite the efforts made by the MoE and REBs to continue teaching and learning through radio and television lessons as an emergency response, the implementation of remote teaching during the COVID-19 pandemic did not meet expectations. The arrangements made for teachers to engage in remote teaching or e-teaching were found to hinder the effectiveness of pandemic schooling. Teachers were expected to teach remotely

without receiving adequate professional support or training in e-teaching. The awareness among teachers regarding distance learning appeared to be low, as they held onto the traditional notion of face-to-face instruction and seemed to overlook the unique circumstances presented by COVID-19.

The Push towards Pandemic-driven Pedagogy and Teachers' Professional Tension

The crisis-mitigation measures (i.e., teaching-learning modalities) employed in the education sector changed the traditional pedagogy. For example, schooling shifted towards 'de-schooling'. Conventional face-to-face instruction switched to screens-based delivery. The modality of giving lessons has also changed during the pandemic. Lessons have been delivered in fully online and blended formats. The role of teachers was also transformed; that is, instead of only using the usual 'talk and chalk', the pandemic has forced teachers to develop digital lessons and deliver them virtually. Their instructional communication with students became both asynchronous and synchronous. Self-paced and class-paced learning were also introduced.

According to Hindle (2007), an understanding and application of ICTs for teaching-learning in technical and pedagogical dimensions should be taken into account in such a situation. Capabilities in technology and media-related skills are required to design and develop e-learning courses. For instance, knowledge and skills of courseware authoring tools (special-purpose tools that create interactive e-learning content) are essential. Moreover, teachers need to be ICT-literate with regard to which technology is available and how it might be used. Above all, as Mishra and Koehler (2006) asserted, teachers' knowledge of the common intersection of technology, pedagogy, and content is paramount.

In the present study, an effort was made to explore the effects of COVID-19 pandemic on teachers' profession in transforming into pandemic-driven pedagogy. In-service teachers' adoption of pandemic-driven pedagogy interconnect with their professional identity was examined. In doing so, the participants of the study were asked to share their views on the push towards pandemic-driven pedagogy and their professional tension. To meet the intended purpose, teachers' adoption of remote teaching during the pandemic, their competence to teaching with EdTechs, any traumatic experiences they encountered in adopting remote teaching/e-teaching in the wake of COVID-19 pandemic and the coping mechanisms they used were focused.

In terms of teachers' adoption of remote teaching during the pandemic, participants in the study expressed that the crisis tested their capacity to use educational technologies. They questioned their knowledge and skills in this area   mentioned that they were unable to utilize available technological tools due to the panic caused by the virus situation. They also highlighted that the arrangements made for remote teaching were not up to the required standards. For instance, they stated that e-learning resources such as videos, audios, and virtual environments were not accessible in their localities. Additionally, teachers mentioned that they were not familiar with any e-learning content authoring and delivery tools, as these topics were not covered in their pre- or in-service training.

Indeed, teaching with EdTechs necessitates teachers' proficiency not only in their subject matter and pedagogical knowledge but also in the use of the technology itself. It requires professional competency, including understanding how to effectively utilize EdTechs, applying technological-pedagogical knowledge, and managing and administering the use of EdTechs. Moreover, in the era of the COVID-19 pandemic, teachers are faced with the challenge of utilizing EdTechs for instructional purposes while being physically distant from their students. The pandemic introduced a new paradigm of pandemic-driven pedagogy, which can potentially create professional tensions among teachers as they navigate this new landscape.

Hence, efforts were made to examine teachers' professional competence in using instructional technologies in the present study. They were asked about their confidence in their ability to effectively employ technology-based instruction. The results revealed that teachers' professional competency in using instructional technologies was a significant challenge. study participants mentioned that while they felt confident in delivering radio or television lessons to their students, they struggled with the professional competency required to develop technology-based lessons and deliver them remotely. For example, one teacher respondent expressed, "I have no knowledge of how radio and television lessons are produced. I don't know how to design audio and video lessons. I only know how to teach face-to-face." Another teacher shared in his/her reflective journal, "I frankly say that I have lack of knowledge in remote teaching using technologies. I was not trained in the use of the technology for teaching students remotely. I only know chalk and talk."

Furthermore, teachers were asked to share their experiences and views on any traumatic encounters they faced while adopting remote teaching or e-teaching during the COVID-19 pandemic. The responses revealed that some teachers indeed experienced trauma in the process of transitioning to e-teaching. One of the participants' responses exemplified this sentiment, stating, "I felt stressed when I heard on TV about online teaching. The media emphasized that due to the rapid spread of the coronavirus, it was not possible to continue face-to-face teaching. I was extremely worried because I lacked technological knowledge and skills." Another teacher shared, "I was genuinely concerned about my profession when the government announced remote teaching as a mitigation measure for the COVID-19 pandemic. The problem is that I had no training in this area." Additionally, a participant expressed feeling of being left behind, stating, "I felt like I was falling behind others when I learned that the pandemic had changed the teaching and learning modality." These accounts highlight the emotional challenges and sense of unease that some teachers faced during the transition to remote teaching.

From the views of teachers, it seems that the COVID-19 pandemic introduced pandemic-transformed pedagogy, which cause professional tensions among teachers.

The effects of the pandemic schooling on teachers' professional identity
As noted earlier, identity is a complex construct and on-going process of becoming. Teacher education is essentially about developing teachers' professional identity. It is also a result of

practice, reflection on that practice, and continuous professional development (Epstein as cited in Komba, 2015).

The COVID-19 pandemic forced the global physical closure of businesses, sporting activities and schools by pushing all institutions to migrate to online platforms. It also initiated the digital transformation of education (Adedoyin and Soykan, 2020). Further, the novel coronavirus introduced new pandemic-transformed pedagogy that teachers require to apply. That is, teachers were required to construct their professional identify in the context of COVID-19 since it has changed teachers' professional routines. In the study, an attempt was made to investigate the effects of the pandemic schooling on the professional identity of in-service teachers. Under this umbrella, teachers' effectiveness in their profession during COVID-19 pandemic, the beliefs they have about their being teachers during the pandemic schooling and their interest to work as a teacher if the virus continues in the future were explored during the study.

Teachers' narrations revealed that the pandemic tested their capability of e-teaching. Due to the contagious nature of the virus, they were required to adhere to lockdown measures and stay at home. Consequently, they were unable to provide remote assistance to their students using various online platforms and educational technologies. They expressed doubts about their familiarity with e-learning delivery tools and platforms. For instance, one teacher stated the following:

> *The Education Bureau often encouraged us [teachers] to assist our students by using 'Telegram' and 'Zoom'. I'm not familiar with these media. I don't also have laptop computer and internet connection at home. Students do not also have electronic devices (such as laptops, tablets, and smartphones) to engage with online learning. Truly speaking, I am technology illiterate…* $[T_{12}]$

Another participant, T_3, also explained that although there were various e-learning delivering tools introduced because of COVID-19, she was worried about their usability in Ethiopian context. She reasoned out that the arrangements made were not encouraging. Teachers were told to teach remotely where distance learning has not been arranged, she added.

Regarding their beliefs about their profession during the pandemic schooling, a significant number of participants in the study expressed a sense of disillusionment and frustration, to the point where they contemplated leaving the profession. They are feeling frustrated in their profession since they are more vulnerable to the disease. The responses of teachers to the question: "Where do you see yourself in the future if COVID-19 pandemic continues?" strengthen this. The following answers were stated in the reflective journals,

> *I look for other jobs $[T_1]$… It is very difficult for me to determine what comes next. I think that I will join other professions. $[T_2]$… I don't know, but it seems to me that I'll go for remote teaching $[T_3]$… If the disease continues, it'll keep on my profession $[T_4]$… I believe I'll continue my teaching, taking into*

account preventive measures [T₅]…I need myself. I don't want to continue teaching [T₆]… I'll resign my job [T₇]…

Based on the aforementioned results, it can be inferred that the pandemic schooling significantly changed the mode of relationship between teachers and their students. Teachers became increasingly concerned about their health and safety, leading to heightened stress and strain in their roles. Consequently, the pandemic schooling presented obstacles to the formation and development of teachers' professional identities. The challenges and uncertainties brought about by the pandemic disrupted the usual dynamics and expectations within the teaching profession, impacting how teachers perceive themselves and their roles in the educational landscape.

Conclusions

The experience of the COVID-19 pandemic yielded valuable lessons for Ethiopian teacher preparation and the formation of teachers' identities. Based on the findings of this study, it is evident that the arrangements made for teachers to engage in remote teaching or e-teaching have impeded the effectiveness of pandemic schooling. Teachers were expected to teach remotely without receiving adequate professional support or training in e-teaching. Additionally, the awareness among teachers regarding distance learning appeared to be low, as they clung to the traditional notion of face-to-face instruction and overlooked the unique circumstances presented by COVID-19. The study further revealed that the transformation of traditional pedagogy into pandemic-driven pedagogy due to COVID-19 was not widely adopted among the study participants, resulting in professional tensions among teachers. The pandemic-driven pedagogy required adjustments and adaptations that some teachers struggled to implement effectively. Moreover, the results of the study show that COVID-19 has had a significant impact on the formation of teachers' identities. Teachers expressed concerns and panic about their health and safety, prioritizing their personal well-being over their profession. This shift in focus has influenced their perception of their professional roles and priorities.

Limitations and Implications

The findings of this study have important implications for informing any future pandemic/emergency response efforts, taking the case of COVID-19 as a critical lesson. The significant impact of the pandemic-driven shift to e-teaching has shed light on the challenges and opportunities that arise when teachers' professional routines are suddenly disrupted by crisis conditions. The results of the study highlight the crucial need to proactively address the interconnections between technology, content, and pedagogy in teacher professional development programs. By equipping teachers with the skills and knowledge to effectively integrate educational technologies into their instructional practices, education systems can better prepare the teaching workforce to navigate future emergencies that require remote or technology-mediated instruction.

The study findings have also important implications for understanding how teachers' professional identities can be shaped and challenged during times of crisis and emergency

situations, such as the COVID-19 pandemic. The abrupt transition to remote, technology-driven instruction impacted teachers' sense of self as professionals. Moving forward, it is essential for education authorities to develop concrete plans to support e-teaching, including implementation guidelines and strategies for utilizing educational technologies. Efforts should also be made to foster an e-learning culture, promoting technology as an integral part of teaching and learning. It is also very important that teachers get empowered to embrace e-learning tools, recognizing their practical benefits and exploring creative ways to integrate them into their practices. This calls for devising professional development mechanisms.

This study can be taken as a beginning to explore the effects of the pandemic schooling on Ethiopian teachers' identity. Due to limitation of time and budget, the study involved limited participants with inadequate time length for collecting data. The finding would be more convincing if the research was conducted in extended time by involving more participants. Moreover, the results of the study might have been influenced by the time at which the study was conducted; data were collected between December 2021 and January 2022 when the number of confirmed cases were at the highest stage in Ethiopia after reopening schools. When teachers were taken the virus as a new normal, different results would be found. Therefore, it is crucial for future studies to investigate the impact of COVID-19 on teachers' professional identify with sufficient sample size taking into account several factors. Moreover, since this study was delimited to summer-in-service trainees, a similar study could be carried out on novice pre-service teachers or seasoned teachers on duty.

References

Abera, B. (2021). The effects of COVID -19 on Ethiopian higher education and their implication for the use of pandemic-transformed pedagogy: 'Corona Batches' of Addis Ababa University in Focus. *Journal of International Cooperation in Education, .24(2),* 3 - 25.

Abiad, A., Arao, M., Dagli, S., Ferrarini, B., Noy, I., Osewe, P., & Platitas, R. (2020). *The economic impact of the COVID-19 outbreak on developing Asia*. Asian Development Bank. https://dx.doi.org/10.22617/BRF200096

Adedoyin, O. B., & Soykan, E. (2020). Covid-19 pandemic and online learning: the challenges and opportunities. *Interactive Learning Environments*, *31*(2), 863–875. https://doi.org/10.1080/10494820.2020.1813180

Beltman, S., Glass, C., Dinham, J., Chalk, B., & Nguyen, B. (2015). Drawing identity: Beginning pre-service teachers' professional identities. *Issues in Educational Research*, *25*(3), 225-245. https://www.iier.org.au/iier25/beltman.pdf

Botha, M., & Onwu, G. O. (2013). Beginning teachers' professional identity formation in early science mathematics and technology teaching: what develops? *Journal of International Cooperation in Education*, *15*(3), 3-19. https://cice.hiroshima-u.ac.jp/wp-content/uploads/publications/15-3/15-3-01.pdf

David, R. (2020). Policy brief: Education during the COVID-19 crisis Opportunities and constraints of using EdTech in low-income countries, April 2020.

Fineman, S. (1999). Emotion and organizing. In S.R. Clegg & C. Hardy (Eds.), *Studying organization: Theory and method (PP.* 289-310). London: Sage Publications.

Hagos, B., Abera, B., Desta, D., Chalchisa, D., Lemma, G., & Yima, W. (2019). The nexus between the practice of induction and the formation of novice teachers' professional identity in Ethiopia. *CICE Series*, *6*, 131-146.

Hindle, D. (2007). *Guidelines for teacher training and professional development in ICT*. Pretoria, South Africa: Department of Education

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., Gu, X., Cheng, Z., Yu, T., Xia, J., Wei, Y., Wu, W., Xie, X., Yin, W., Li, H., Liu, M.,…Cao, B. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet,* 395(10223), 497–506. *http://doi.org/10.1016/S0140-6736%2820%2930183-5*

Kenea, A. (2021). Educating the heart: Space for teachers' professional identity development through pre-service primary teacher education in Ethiopia. *The Ethiopian Journal of Education*, *41 (2),* 175-206

Khodr, A. (2020). The case for safely reopening schools in Ethiopia COVID-19 Update. Retrieved on March 09, 2022 from https://www.unicef.org/ethiopia/stories/case-safely-reopening-schools-ethiopia

Komba, S. C. (2015). The beginnings and development of Islam and Quranic schools in East Africa. *Journal of Philosophy, Culture and Religion*, *6, 1-6.* https://iiste.org/Journals/index.php/JPCR/article/view/20843/21103

Ministry of Education (MoE). (2020). *Environmental and Social Management Framework (ESMF) for Ethiopia COVID-19 Education Emergency Response Project* (P174206). https://documents1.worldbank.org/curated/en/552071605583987486/pdf/Environmental-and-Social-Management-Framework-ESMF-Ethiopia-COVID-19-Education-Response-Project-P174206.pdf

Ministry of Health (MoH). (2020). Ethiopia confirmed the first case of COVID-19. Retrieved on January 5, 2021.from https://www.ephi.gov.et/images/pictures/pic_2011/pic_2012/First-English-Press-release-1.pdf

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: Anew framework for teacher knowledge. Teachers College Record, 108 (6), 1017–1054. https://journals.sagepub.com/doi/pdf/10.1111/j.1467-9620.2006.00684.x

Sachs, J. (2004). Professionalism, Performativity and Empowerment: Discourses in the Politics, Policies and Purposes of Continuing Professional Development. In C. Day, & J. Sachs (Eds.), *International Handbook on the Continuing Professional Development of Teachers* (pp. 3-32). Maidenhead: Open University Press.

Smith, T., & Ingersoll, R. (2004). What Are the Effects of Induction and Mentoring on Beginning Teacher Turnover? American Educational Research Journal, 41, 681-714. https://doi.org/10.3102/00028312041003681

UN. (2020). Global Humanitarian Response Plan COVID-19

UNESCO (2020a). Education: From COVID-19 school closures to recovery**.** https://www.unesco.org/en/covid-19/education-response

UNICEF (2020b). COVID-19 and children. https://data.unicef.org/topic/education/covid-19/

World Bank (2020). Guidance Note on Education Systems' Response to COVID19, March 25, 2020

World Health Organization (WHO). (2020). WHO Director-General's opening remarks at the media briefing on COVID-19 - 27 July 2020. https://www.who.int/director-

general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---27-july-2020

World Health Organization (WHO). (2021). WHO Coronavirus (COVID-19) Dashboard. Retrieved on March 12, 2021 form https://covid19.who.int/

World Health Organization (WHO). (2022). WHO Health Emergency Dashboard, *COVID-19 Ethiopia situation.* Retrieved *on 07 May 2022* from https://covid19.who.int/region/afro/country/et