The Problems Experienced by Teachers in Distance Education and First Literacy Instruction during the COVID-19

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***Abstract*—The aim of this research is to determine the problems experienced by first-grade teachers in distance education and the first literacy teaching process conducted during the COVID-19 pandemic. This research was carried out using the phenomenology pattern. The participants of the study consisted of 12 first-year teachers selected from the Tavşanlı district of Kütahya province in Turkey, during the first semester of the 2020-2021 academic year. Snowball sampling was used to select the participants. Data were collected through a semi-structured interview. The data were analysed through content analysis. According to the research results, teachers encountered various problems related to the distance education process, which were caused by technology, students, and parents. The main problems identified included: access to technical and technological infrastructure, inequality of opportunity, low technological literacy levels of teachers, students and parents, lack of parental interest, low student participation, lack of motivation among students and parents, deficiencies in parent-teacher communication, inability to create a school/classroom culture, and individual differences between students. Regarding first literacy teaching; participants mentioned that preschool education, activities that enrich teachers' teaching-learning processes, ensuring technology integration, and monitoring student development all impact the process. In this context it is suggested that various trainings, and programs—including awareness-raising and practical studies—should be developed to address the problems.**

***Keywords*—COVID-19, distance education, first literacy instruction, primary school**

I. Introduction

The transition to first grade marks a significant change for students as they enter an official academic process for the first time. This period requires adaptation to the school system, including new environments, peers, classrooms, teachers, and routines. Students must also adjust to the formality of school life, following rules, waiting for bells, and accepting authority. This shift from preschool's randomness to structured learning presents emotional and cognitive challenges. Thus, the first grade includes factors that affect students' development, requiring them to be adaptable and resilient as they navigate this critical stage of their education.

The COVID-19 pandemic originated in Wuhan, China in late 2019 and swiftly halted life worldwide. Education, from preschool to postgraduate levels, shifted to distance learning as face-to-face interactions ceased. This transition, necessitated by the pandemic, marked the first reliance on technology-based teaching and learning experiences, fundamentally altering traditional education processes [1]. In this context, all stakeholders of education –especially teachers - had to experience distance education at the same time and full time. At the beginning of the epidemic process, the sudden transition to full-time distance education was first met by stakeholders with feelings of anxiety and inadequacy [2], but it is seen that progress has been made by adapting to this process [3, 4]. At the same time, problems encountered in the technical-technological context, the positive or negative involvement of families in the teaching-learning process [5, 6], are accompanied by issues stemming from various reasons, such as students' participation in the class, lack of interest, and inequality of opportunity [7]. Conversely, the experiences gained during the pandemic have brought about a number of positive outcomes. The advent of remote learning afforded students and teachers the opportunity to attend classes at their convenience, irrespective of time or place. In particular, it has provided the opportunity to prevent inequality of opportunity by integrating students and families in different geographical locations into the education process. Furthermore, it has facilitated significant contributions, including the integration of technology, the enhancement of technology literacy, and the utilisation and advancement of digital resources within the educational context. In this regard, it has facilitated the adaptation of all stakeholders in the field of education to the technological landscape [8, 9].

In particular, the utilisation of digital tools and flexible learning processes afforded the opportunity to devise learning processes that were responsive to students' individual differences. Consequently, students were able to learn at their own pace [10, 11]. This process has also facilitated the development of more creative teaching methods and teachers' orientation towards more creative activities in applications [12]. Therefore, it has provided valuable insights regarding the usability of distance education processes experienced in the global context in many areas of education after the pandemic.

Naturally, it can be thought that they had various experiences within the framework of first literacy teaching.

In this context, learning to read and write for the first time is vital for students entering formal education, as it is one of the most important skills they will acquire in their lives. Initially, the acquisition of academic life and knowledge is built upon literacy skills, but all other forms of learning that will take place throughout one's life, as well as communicative experiences, are developed on the same foundation [13, 14]. Bay [15] emphasizes the importance of first literacy teaching as "the most basic need that enables the individual to realize oneself, prepare for life, communicate effectively with society

as a social being, understand existing written and visual materials, and express oneself effectively in writing and verbally." Therefore, the critical period that first-year students are in, in terms of literacy learning, underscores the need for this process to be managed optimally. Moreover, since it is the responsibility of the teacher to help first-grade students, who are at the beginning of their primary school journey, adapt to new teaching-learning processes and dynamics, and to integrate academic experiences such as literacy and arithmetic, it is expected that the teacher will effectively navigate these challenges [16].

This study examines the challenges faced during the first literacy teaching process, including traditional and full-time distance education implemented during the pandemic. The purpose of this study is to discuss technology integration, problems, solutions, and considerations at the first-grade level, particularly in distance education and the post-pandemic landscape. It is important to gain insights from pandemic experiences to inform future technology-based educational initiatives for first literacy teaching, given the uncertainty of future full-time distance education requirements. First-grade teachers were asked to provide objective evaluations of the problems encountered during the COVID-19 pandemic's distance education process, as well as the issues faced during first literacy teaching via distance education.

In this context, the aim of this research is to determine the problems experienced by first-grade teachers in distance education and the first literacy teaching process conducted during the COVID-19 pandemic. The study sought answers to the following sub-questions:

1) What problems do first-grade teachers encounter in the distance education process in relation to technology, parents, and students?
2) What challenges do first-grade teachers face in teaching first literacy through distance education?

II. Method

A. Research Model

This research was conducted using the phenomenology pattern, one of the qualitative research methods. The phenomenology pattern focuses on the common meanings of experiences, perceptions, feelings, and thoughts that different individuals have related to a phenomenon or concept [17]. The rationale for choosing the phenomenological design in this study is to explore the problems experienced by teachers who navigated the COVID-19 epidemic concurrently, but had different experiences while providing education to first-year students through distance education.

B. Study Group

The study included first-grade classroom teachers from the Tavşanlı district of Kütahya province during the first semester of the 2020-2021 academic year. Participants were selected using snowball sampling, a purposive method aiming to gather rich information about the research problem. It involves collecting data by asking interviewees who else might be interviewed in the relevant context, thereby creating a growing set of data similar to a snowball [18]. Initially, two accessible teachers were interviewed, and new participants were added based on their recommendations, resulting in a total of 12 teachers (7 females and 5 males) participating in semi-structured interviews.

C. Data Collection Tool and Data Collection Process

Data collection involved semi-structured interviews using a designated form. Researchers developed questions, refined them based on expert feedback, and piloted them with two teachers for effectiveness. Pilot feedback informed adjustments to the form, which was then finalized. Interviews, conducted via Zoom due to COVID-19, were video-recorded with participant consent for transcription and analysis. Duration of interviews varied from 27 minutes 18 seconds to 76 minutes 17 seconds.

D. Data Limitations

The study examines first-grade teachers in Tavşanlı district, Kütahya, during 2020-2021. Snowball sampling identified participants, facilitating a diverse sample across district schools. Online data collection limited teachers' control over variables like excitement and shyness, potentially impacting emotional states and opinions. Hence, the research's limitations should be appraised accordingly.

E. Data Analysis

The researchers employed content analysis to examine the data. In content analysis, categories and codes are identified by deductively analyzing the data, and then the data is coded according to these categories [19]. In this study, a pre-defined list of categories was not used; instead, categories and codes were developed and shaped according to the teachers' opinions. This approach allowed for the emergence of new categories and themes based on teacher opinions, which were directly included in the presentation of the findings. In this respect, the themes "Technology-related problems" and 'Problems caused by parents and students" are included in the category "Problems experienced in the distance learning process". Also, in the category of "Problems experienced in the process of teaching initial literacy through distance education" are the themes of "getting pre-school education", "teachers' activities", "use of technology in teaching" and "follow-up of students" development'.

F. Credibility, Transferability, Consistency, and Ethics

In this study, the researchers implemented specific measures to ensure credibility, transferability, consistency, and ethical integrity as follows in Table 1:

Table 1. Credibility and transferability studies of the research

Credibility and Transferability	Procedures carried out
Credibility and Verifiability	Obtaining expert opinion Participant confirmation Direct quote Explanation of the data collection tool and process Explanation of the data analysis process Describing the implementation process of the participants
Reliability and Transferability	Preventing data loss by using video recording Presentation of findings without comment Checking consistency between data Check list

To ensure research credibility and transferability, expert

opinions were sought before employing the semi-structured interview form. A preliminary interview assessed question clarity but was not included in the study. Zoom facilitated online interviews with consented classroom teachers, and recordings were for research use only. Participants verified responses, enhancing accuracy.

Individual coding and theme creation were conducted by researchers, resolving discrepancies through checklist cross-referencing and interview record review. Direct participant quotes reinforced findings.

Ethical considerations were paramount; teacher participation was voluntary, and consent obtained before recording. Participant pseudonyms safeguarded identities. Ethical standards were upheld, evidenced by voluntary participation verification through initial video recordings. This study includes approval from the Uşak University Social and Human Sciences Research Ethics Committee (2022-123, 15/09/2022).

III. Findings

A. Problems Experienced in the Distance Education Process

Findings related to the problems experienced during the full-time distance education process during the COVID-19 pandemic are examined under this heading. In this context, the related problems are handled as problems caused by technology, parents and students.

1) Technology-related problems

Teachers were asked regarding the technological challenges they encountered throughout the COVID-19 pandemic. Accordingly, the answers were gathered under the themes of "*infrastructure and technology literacy*". In addition, codes such as "*internet, power outage, lack of course platform and technological devices*" emerged under the theme of infrastructure (Fig. 1).

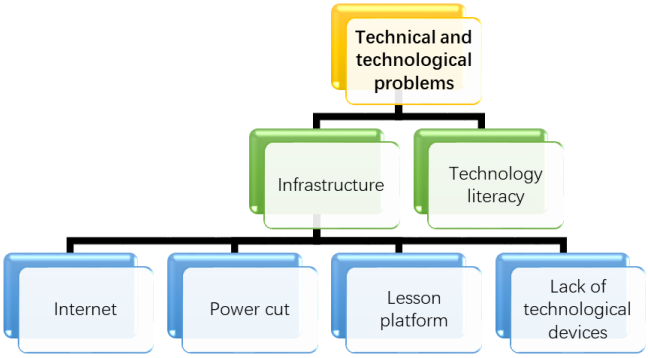

Fig. 1. Technology-related problems according to teachers' opinions.

Teachers reported difficulties with the distance education process due to technology-related infrastructure deficiencies. They mentioned internet connectivity issues due to weak infrastructure in their district, resulting in frequent connection slowness and interruptions caused by the increased usage due to remote schooling at all levels. Additionally, power outages were reported as a problem.

> *Simge: Internet speed was not enough… Since I do not live in the neighborhood where the school is located, the course was interrupted both in the interruption in that neighborhood and in the interruptions in the neighborhood where I live.*

> *Ahmet: There were a lot of connection problems. At first, children could not enter the system. The parents didn't know what to do. We described it to them. We tried to help some of the parents online by meeting them face-to-face.*

With the transition to total distance education, the Ministry of National Education stated that online courses should be held through this system by strengthening the infrastructure of the Education Information Network (EBA - https://eba.gov.tr/) system. However, some teachers emphasized that problems such as blocking the system for a while, not working as desired, untimely expelling the teacher or students or not allowing teachers to define courses were encountered due to millions of students entering the system at the same time at the first time.

> *Mehmet: EBA had issues during class hours, both in the morning and afternoon on Monday. Initially, I had trouble accessing EBA but found Zoom and Teamlink more reliable. They limit us, hindering lessons that could be conducted with alternative programs.*

> *Simge: It took nearly two hours to set up a lesson on EBA. Even when completed, there were problems skipping live lessons; they'd restart. Time was severely lacking. Teaching simultaneously with my husband, EBA repeatedly kicked me out of courses, especially during peak hours, reducing efficiency.*

Teachers discuss the issue of insufficient technology devices. The economic situation of households, rising device costs, and multiple siblings accessing distance learning from the same residence all highlight the necessity for adequate devices and internet infrastructure. Consequently, students who lack access to such opportunities may fall behind in their education. Teachers extended the course hours for such students and initiated the program's preparation, but they were unable to prevent all of them.

> *Haluk: Financial constraints prevented some students from participating in distance education. Lack of devices like tablets or suitable phones for apps like Zoom also hindered engagement. One student, facing financial challenges, deferred learning to the following year due to family circumstances.*

> *Ahmet: Some students faced issues where a sibling needed to use the available phone or tablet at home, impacting their ability to participate. To address this, we adjusted course hours to accommodate their sibling's schedule, aiming to increase participation.*

> *Bilge: Parents managing multiple children, including infants, during online classes posed challenges. To support them, I adjusted class hours, focusing on essential activities like initial sounds, syllable formation, and reading practice to meet their needs.*

It is noteworthy that there are teachers who have the same problem. Teachers whose spouse or own children had to participate in distance education also experienced device deficiency problems, were affected by costs, and tried to repair and use their old devices.

> *Simge: My husband is also a teacher and we need to do lessons at the same time. We had one computer running, old computer was not booting up. We could not buy a new PC due to the high prices, we had the old computer repaired and used.*

Technology literacy poses challenges for parents, students, and teachers. Some individuals struggle with low levels of technology literacy, making the online learning process difficult, especially for those with limited internet access. Additionally, inadequate technology literacy among some teachers hampers their ability to address technological issues effectively.

Ahmet: Since the technological skills of students and families were low, we had great difficulty in connecting, teaching and communicating. When connection problems occurred, we suffered a lot. Unfortunately, in addition to the problems and difficulties I experienced, their problems were also added.

In this context, teachers had to address both their own issues and those of their students and parents. Moreover, they highlighted their challenge in the process as they struggled to cope with their own technological limitations.

Bilge: Parents could not enter EBA or Zoom in the first place. We took care of it over time by shooting and directing videos.

In addition to the rapid transition to distance education with the pandemic process and the need to use different applications/programs or software, it can be said that the fact that most software is in a foreign language poses a problem especially for parents in rural areas. However, Teacher Simge emphasizes that both their own and students' skills should be improved through lessons and in-service trainings in order to prevent the problems that will be experienced in integrating technology into education in the future.

Simge: Initially, none of us knew how to conduct remote teaching effectively—structuring courses, managing time, or integrating EBA with other apps. Learning was through trial, error, and research, as formal training was absent. Regular teacher training and workshops are crucial to keep pace with technology and improve teaching quality. Equipping children with adequate technological skills beforehand would enhance teaching efficacy.

2) Problems caused by parents and students

Teachers were surveyed about issues with parents and students, revealing an interconnection between their problems. Consequently, challenges from both groups were addressed together. Responses were categorized into themes like "individual differences," "parental involvement," "attendance," "school culture," "teacher-parent communication," and "parental participation" (Fig. 2).

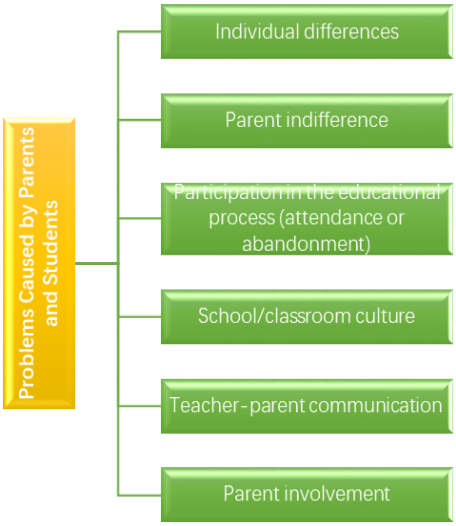

Fig. 2. Problems caused by parents and students according to teachers' opinions.

According to the opinions of the teachers, individual differences of the students have sometimes become a problem. In the process, it is seen that the family and experiential situations that the students have in a positive or negative sense and some of the characteristics they are born with force the teacher.

Seval: Initially, I suspected one student had learning difficulties, but their lack of participation in distance education made assessment challenging. From what I observed, their comprehension seemed weak, but without closer observation, I couldn't confirm.

Gonca: Three students entered my class already literate. One was gifted, and despite initial reluctance from the family due to challenging times, the student attended lessons. I provided extra reading comprehension materials and practiced with them.

Melek (unified class): Individual differences are evident in my class, with varying student potentials. Some grasp concepts quickly, while others need repetition. Progress is inconsistent, with some students consistently lagging. Limited time constraints hinder addressing individual needs effectively, despite efforts to repeat lessons.

Teachers have noted issues with parental involvement, including inattentiveness, lack of assistance in distance learning, and subpar home study environments, which hinder students' progress in reading and writing. Despite teachers' efforts to bridge these gaps, these inequalities persist, impeding student growth. It is important to address these issues in order to ensure that all students have equal opportunities to succeed.

Furthermore, limited parental engagement affects students' active participation in remote learning, particularly in attendance. Student behavior can be negatively impacted without parental supervision, which can undermine educational efficiency and literacy skill development, posing significant challenges to achieving educational objectives.

Seval: Consistent attendees and latecomers are both observed among students, with the issue seemingly linked to parental involvement. Consistent attendees and latecomers are both observed among students, with the issue seemingly linked to parental involvement. Despite being warned, absenteeism persists, and while there may be a temporary improvement, the problem invariably resurfaces. For example, if a student misses breakfast or oversleeps and subsequently misses a class, this can be detrimental to their study.

More complex situations are encountered in the teacher Ahmet's classroom. Teacher Ahmet states that some students have difficulty in attending the lesson due to compulsory situations such as the need for parents to work and the number of siblings or lack of opportunities.

Ahmet: Since the students are first graders, he says he needs a toilet five minutes after starting the lesson, he asks for permission, he quits the lesson, or his mother misses class because his father is working, he cannot start the lesson on the computer. A particular student's attendance was considerably irregular due to having six siblings.

Some teachers indicated that some parents did not include their children in the distance education for various reasons or did not want to do so. A student parent of the wise teacher did not include the child in distance education without specifying a financial, technical-technological or any reason, and the student could not learn the first literacy.

Bilge: I have a guardian; he did not participate in live lessons arbitrarily. He has internet, there is no problem in his financial situation. But we still asked, even if there is a financial problem, national education can provide it. She did not even answer the messages and her child did not participate.

Several parents of the students in the teacher Ahmet's class did not include them in the formal education processes by stating that they wanted to teach their children to read and write themselves.

Ahmet: Seven-eight students attended classes from time to time. Some mothers said they could not attend and that they would teach

themselves to read and write. So, I asked them to send the homework, they sent irregularly.

The parents of three of the five students who had problems in the Teacher Mehmet's classroom stated that the child could not attend the lessons, citing their financial situation. However, he states that parents have a smartphone and sufficient internet quota. Additionally, based on the social media posts of the parents, he argues that the source of the problem is family indifference rather than financial impossibility.

Mehmet: Claims of no Internet or devices are doubted as students often have phones readily accessible through parents. They communicate with ease in other social media groups using phone numbers. This lack of parental involvement affects five students, with three missing out on reading. However, the situation is not dire, but rather a case of parental indifference.

Teachers stress that new students in their first year have not been exposed to a school or classroom setting before, creating a significant obstacle to online learning. Their unacquaintedness with school culture hampers adjustment to distance learning. In addition, the indifference of some families further complicates establishing a classroom ambience during distance learning. This disparity problem makes it more challenging to provide a successful distance learning experience.

Haluk: Adaptation to school culture is very difficult. They haven't even gathered at school and sung the National Anthem. We tried to do as much as we could remotely in terms of behaviors... It was troublesome that there was no room or corner of the house for lessons.

Melek: ... His father was coming from work; the child was distracted... Two of my students had a desk, others joined the class, either lying on the bed or on the carpet. They didn't even have study notes.

İlker: There were too many parents who distracted the student during the lesson and watched TV in the same room... Construction starts in a student's apartment and sounds come from behind. A bird or cat sounds from another student's room. Sometimes I heard having breakfast sounds.

In order for students to adapt to school/classroom culture, it is seen that some teachers warn or direct parents to take precautions in this regard. Thus, it is aimed to ensure that the student participates more regularly and in a more isolated way from external factors and to take measures to get used to the school/classroom culture. In this way, it is seen that there are teachers who can solve the problem significantly.

Ahmet: First-year students faced challenges adapting to distance education due to limited school exposure. I advised parents to create a designated classroom space with clear labels and visual aids, improving effectiveness and student behavior. Emphasizing the importance of uninterrupted class time was mostly followed by parents, though some struggled to comply.

It is important to highlight that teachers maintain close communication with families to enhance the effectiveness, advantages, and quality of students in remote learning. In that light, teachers inform families and exchange ideas regarding the necessary steps to be taken by engaging with them. Therefore, involving families actively in the process leads to enhanced efficiency.

Simge: Mothers were present in live lessons, facilitating immediate assistance if required. I instructed children to approach their mothers during lessons, guiding them on what to expect and emphasizing the mothers' supportive role, which eased progress.

İlker: ... We had frequent meetings with parents. We explained the system...

Teacher Gonca mentioned that she tried not to put an obstacle or distance between parents and herself as much as she could.

Gonca: We never break up with parents, everyone always asks everything easily. I didn't say, "Don't bother me after this hour." I was like a 24/7 company. Because I can understand their concerns, they do not know what to do, this is the first time they have encountered something like this.

B. Problems Experienced in The First Literacy Teaching Process Through Distance Education

Teachers were surveyed on the challenges encountered when teaching first literacy via distance education. Themes such as "*getting pre-school education*", "*teacher activities*", "*using technology in lessons*" and "*student development follow-up*" were identified as relating to first literacy instruction. Teacher perspectives highlighted the importance of "student development follow-up" in the evaluation and management of the literacy process (Fig. 3).

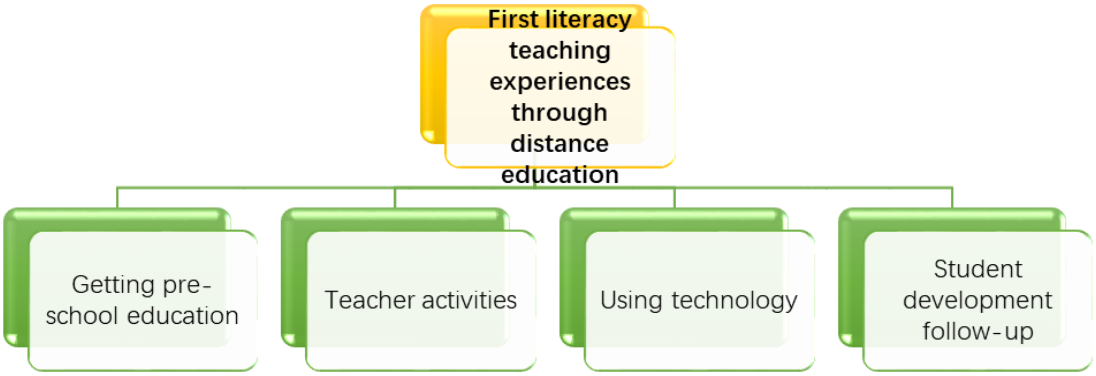

Fig. 3. Problems experienced by teachers in the first literacy teaching process through distance education.

1) Pre-school education status

Teachers with a higher proportion of preschool-educated students find first literacy teaching in distance education smoother. Students accustomed to school life and possessing relevant skills adapt more easily, fostering academic development during the first literacy process. This suggests that early exposure to educational environments enhances

students' readiness for academic tasks in distance learning settings. 21 of the 23 students in Teacher Mehmet's class received pre-school education and he mention the advantage of this situation as follows.

Mehmet: 21 of 23 student went to kindergarten, I did not have too much difficulty, writing was good… For example, we do intuition work on the letter. If I give the "c" sound, they can easily say the words with the "c" sound in them. If anyone knows songs, mania, riddles, they sing. Then we move on to the spelling of the letter. By combining the sound, we complete it with syllables, words, sentences.

2) Teacher activities

Teachers play a crucial role in remote learning, managing various responsibilities amidst the pandemic. They address individual student needs while incorporating diverse teaching methods, interdisciplinary approaches, and instructional materials to enhance first reading skills. These dedicated efforts contribute to a productive learning experience for both educators and students as they navigate the challenges of remote learning and the first literacy process.

Simge: Progress in book layouts was notable. Daily dictation exercises engaged students and promoted lasting learning. Instead of syllable-colored texts, I introduced colored words for spelling, rhyming, counting, and memorization, enhancing reading speed and pronunciation.

Gonca: Integrating sounds from music, art, and physical education into activities, I encouraged physical literacy through jumping and rolling to combat screen fatigue. Videos featuring mothers and fun contests like yogurt consumption challenges were used. Student groups and evening reading sessions fostered successful outcomes despite challenges.

Seval: Students eagerly awaited enjoyable game segments in physical education lessons, refining pronunciation through wordplay, rhymes, and songs. Rhymes and rhythmic counting were integrated into activities, enhancing expression skills through image interpretation and perspective-taking.

Ahmet: To capture attention, I crafted a cylinder with eyebrow eyes, introducing it as a friend to the children, and engaged them in letter and syllable reading using regular school materials.

3) Using technology in lessons

Teachers' perspectives offer insight into the crucial role of technology in teaching first literacy during remote learning. While some express concerns, a minority hold optimistic views. Positive teachers believe that online education is not far removed from in-person schooling and can sometimes be more accessible. For example, Mehmet, who extensively uses technology in conventional classes, finds remote teaching a seamless and uncomplicated transition.

Mehmet: Despite its drawbacks, distance education's benefits outweigh its disadvantages based on my experience. Integrating technology into traditional lessons has maintained student engagement and eased the shift to remote learning. I offered diverse digital resources, including screenshots for struggling students to catch up, fostering independence and flexibility. Parents' admirable adaptation has enhanced collaboration with educators.

Teacher Mehmet states that while using technology well, he also supports students' learning about real life by doing and experiencing. Accordingly, it can be said that Teacher Mehmet constructs a balanced teaching-learning process with an effective technology integration.

Mehmet: Teaching first-grade pupils, my approach focuses on experiential learning. I have developed home-based activities for each letter, such as baking cookies for the "k" sound. These relate to other subjects, where discussions about the creation of wheat and bread link life science and food education. These integrated activities cover Turkish, Visual Arts, and Life Sciences, promoting holistic learning.

Finally, while Mehmet teacher states that teachers' technology literacy should be improved, he also summarizes the situation with this comment: "Technology should be used as a producer, not a consumer".

Mehmet: … In Classdojo, student development and homework follow-up can be done, competitions can be organized like Kahoot, various intelligence games or activities can be designed in different programs, etc. However, I think teachers should be trained on such content development... I think there is a vision problem in our use of technology. Unfortunately, we use technology as a consumer, and since we cannot use it as a producer, we cannot use it efficiently in education and training...

It can be said that some teachers are left alone with technology integration along with the distance education process. However, since some teachers direct this process to raising awareness, researching and learning, and developing their own technology skills.

Seval: Utilizing programs like Wordwall, puzzles, and Storyjumper, we engaged in various activities. Initially, I didn't use Web 2.0 tools, but seeing children's enthusiasm sparked their integration into the classroom, making learning more enjoyable. However, excessive use of technology can lead to boredom despite its motivational benefits for children due to their age and developmental stage.

Bilge: We incorporated websites and Web 2.0 tools into lessons, enhancing engagement. Initially unfamiliar with tools like Wordwall, I now find them easy to prepare and use in class, facilitating learning. I intend to continue utilizing them in face-to-face education.

Teachers with negative opinions mention that first literacy teaching with distance education is difficult and will cause differences between students/families with and without opportunities.

Seval: I think it is very difficult to teach literacy in distance education. The development of the student was evident depending on the situation of the parents who had the opportunity and who did not.

Proficient technology-integrated teachers adeptly navigate distance education, benefitting from prior preparation of e-learning content and frequent technology use. Their proactive approach to upgrading technological skills supports other educators in overcoming distance education challenges.

4) Student development follow-up (assignments, first literacy practices etc.)

Teachers tried to communicate closely with parents in order to follow up the development processes and homework of the students. It is seen that WhatsApp messaging application is mostly used in this process. Most teachers have tried to track student progress by asking parents to send their student work through WhatsApp.

Ahmet: I followed most of my students' reading videos, writing videos and photos of their homework daily on WhatsApp.

Bilge: I gave daily homework. The mothers sent me a photo, so I learned to sign online and signed it. They sent the readings by taking a video.

At the same time, it is also important for teachers to try to enrich the process with self-sacrifice by giving feedback.

Seyma: I met with the parents one by one on WhatsApp in the evening. Your child has this, like, watch out for that. I did this one-on-one every day. If I had 34 students, I made 34 calls every day. I even sent video or audio recordings individually.

Gonca: I received homework lists and photos via WhatsApp, providing the necessary corrections. Most students completed their assignments; however, I contacted those who did not to understand their challenges. Falling behind suddenly can be problematic, particularly during this tough period, and compensation can be tricky. I maintained this routine daily, including weekends. During weekends, I shared videos and occasionally played games. Weekly, I introduced games and activities, aiming to keep students engaged.

İlker: I conducted one-to-one reading sessions, providing personalized attention that significantly enhanced the learning experience. Although writing proved difficult for some, their reading abilities showed significant improvement.

Teacher Seval also stated that she had difficulty in eliminating student mistakes and mislearning because she could not take care of the students face to face and could not get enough family support.

Seval: Initially, we encountered issues with parental involvement during lessons, especially regarding reading assignments where students had minimal practice at home. Some students display reversals in letters and numbers, posing challenges in correction due to limited one-on-one assistance.

It can be said that the opinion of the Teacher Melek summarizes the importance of family support in terms of distance lessons.

Melek: The live lessons were nice, but they also had difficulties. The fact that families were sometimes conscious and directed the children was a great advantage, but a disadvantage for others.

There are also teachers who state that some parents intervene inappropriately in the teaching-learning process. It is mentioned that the parent whispers the text while the teacher follows the student's reading, which prevents the learning process and accurate measurement and evaluation.

Seyma: While teaching phonics, parental assistance was constant, hindering my assessment. It was challenging to identify the child's specific struggles, such as pronunciation obsessions or writing difficulties. Once, during a word-finding game, children enjoyed themselves, but a parent provided excessive support by consulting a dictionary. Despite monitoring via camera, such interventions persisted.

Teacher İlker mentions an extraordinary experience in this regard. During a lesson, she states that she heard the mother addressing her child in a way that could cause emotional harm and that she also observed the result of this behavior.

İlker: Parents were helping during the lesson. They were making threatening sentences to their children. For example, one of them said to his child, "You don't have a mother like me anymore." She says that when we started face to face, she missed her mother when she had difficulty writing in class.

It is also noteworthy that there are parents who do the students' homework themselves. Therefore, it is stated that some students have problems in their academic development.

Melek (unified classroom): The students generally fulfilled their homework and responsibilities, but there were those who did the homework themselves, and those whose mother or sister did it. I know what the student can do, but everything feels just right in the homework. It's okay for them to be supportive, but they should have just helped the students.

It is noteworthy that in addition to the teachers who try to follow the development and homework of the students in some way, there are also teachers who leave the student follow-up to the families. İlker mentions that the teacher follows the families by directing them and informing them about how they should do the homework control, etc.

İlker: I could never follow the assignments remotely. I told the parents that they were responsible when they were at home and that homework should be done and followed according to my instructions. I tried to follow it on the screen, but it was not efficient. In general, they did their homework.

IV. Discussion

This study aimed to investigate challenges faced by first-year primary school teachers during the COVID-19 pandemic, particularly in distant education and first literacy instruction. Interviews revealed issues categorized into "technology-related" and "parent and student-related" challenges. Notably, "infrastructure deficiencies," such as unreliable internet, power outages, inadequate course platforms, and device shortages, hindered distant education, exacerbating challenges for teachers, students, and parents, especially due to economic constraints.

Teachers, particularly those with spouses in teaching or student roles, encounter similar challenges, indicating disparities in opportunity. Despite the potential of distance education to offer flexibility and equal opportunities, issues arise for families of diverse sizes and residing in different types of settlements, sometimes resulting in non-participation in distance education. These observations are consistent with existing literature on the topic [20–23]. De Giusti [24] reported that 85% of children in countries with middle to lower socioeconomic levels and 35% of children in high-income countries worldwide have been unable to participate properly in educational processes during the COVID-19 pandemic. The inadequate technological infrastructure available to children in rural areas is a critical point to emphasize. A survey conducted by ERG [25] with 2,000 village headmen found that 60% of students lacked technological resources and attempted to continue their education through the WhatsApp application. In this study, teachers also made efforts to engage students in distance education using the WhatsApp application, reaching students via text messages, audio, or video calls.

Limited technology literacy presents challenges for parents, students, and teachers, exacerbated by reliance on foreign language software in distance education. Proposed solutions include organizing courses and training sessions to improve digital skills, crucial for all stakeholders. Early integration of educational processes is emphasized [26, 27].

Issues in distance education arise from students' individual differences, influenced by familial, economic, and experiential factors. Studies [21, 28] support this notion, emphasizing the need to recognize and address such differences early. Understanding individual variations is crucial for timely intervention in both challenging and favorable circumstances. Education aims to unlock students' potentials, underscoring the importance of grasping factors driving these differences to mitigate challenges, including those posed by events like the COVID-19 pandemic.

Teachers identify "parental indifference" as a primary issue during distance education, including lack of attention and support, withdrawal from online learning, failure to create conducive home environments, and insufficient commitment

to homework. Erbasan and Erbasan [16] found that family support was lacking and collaboration between families and educators was insufficient. In agreement with this, Babayiğit and Erkuş [29], Gündoğmuş [30], Kargın and Karataş [4] also emphasized the critical role of family support during first literacy education. Thus, parents' attitudes and behaviors have inhibited students from actively participating in and continuing with distance education. As a result, some students have made little to no progress in learning to read and write. Furthermore, since teachers are unable to monitor students' actions through the screen, parents are needed to assist teachers by supervising their children at home. Kuş et al. [31] reported that some parents remained indifferent during the distance education process, neglecting to engage adequately with their children or supervise their homework. Bozan & Anılan [32] and Bubb & Jones [33] both highlighted teachers' reliance on family support during the early literacy process, which significantly impacts students' learning. This shortfall, however, has rendered the distance education process largely uncontrolled and ineffective. Various factors, including parental work commitments, the number of siblings, rural residence, arbitrary or unjustified neglect, and technical or economic obstacles, exacerbate this gap for students, making it difficult to bridge.

First-year students encounter significant challenges in adapting to distance learning, exacerbated by the absence of a familiar school environment and school culture influenced by home conditions. Literature supports these findings [34]. Teachers partially address this issue through proactive parent communication [26]. Establishing classroom culture and relationships in a virtual setting, especially in first grade, highlights the importance of students' sense of belonging and early literacy instruction [16].

It has been observed that the challenges faced by teachers regarding the first literacy teaching process through distance education can be categorized under four main contexts: "pre-school education status," "teacher activities," "technology inclusion" in the first literacy teaching-learning process, and "student development follow-up" in the context of evaluating and monitoring the first literacy process.

Teacher opinions highlight notable individual differences in first literacy teaching between preschool attendees and non-attendees. Preschool aims to foster cognitive, affective, psychomotor, and social skills for school readiness. Students lacking such readiness, due to non-attendance or insufficient skill development, often lag in certain abilities [35, 36]. Student differences lead to diverse developmental progress in literacy, posing challenges for teachers. Preschool attendees may adapt to formal schooling more easily, thus progressing academically. Studies suggest preschool positively influences literacy learning, school readiness, and adaptation in first-grade students [36–38]. Therefore, it is suggested that the expansion of preschool education has a positive effect on students' overall academic life, especially during the first literacy process.

Amidst pandemic challenges, teachers in distance education exhibit remarkable dedication, employing diverse methods to enrich the educational process. Personal interactions foster engagement and efficiency [26, 39, 40]. Their unwavering commitment is key to the success of remote learning, particularly in nurturing literacy skills among first-year students [41, 42]. Despite significant responsibilities, teachers engage extensively with families, reflecting their profound dedication to fostering student growth and well-being.

The integration of technology in distance education shapes teacher perspectives, with varying opinions among educators. Some express concerns about challenges in first literacy instruction and exacerbation of resource-based inequities. Conversely, teachers with positive views prioritize enhancing technology literacy, efficiently utilizing technology and engaging in professional development. These findings are supported by research [3, 4]. Despite initial apprehensions, many teachers integrate digital activities into distance learning, improving the effectiveness of first literacy instruction [43, 44]. Combining technological and real-world elements enriches distance teaching methods and enhances teachers' technology literacy competencies, enabling them to address challenges in tech-based teaching effectively.

Teachers' beliefs, perceptions, and attitudes toward technology are significant factors influencing the seamless integration of technology into education [45]. Correspondingly, Lai and Lin [46] affirm that the first literacy teaching process is influenced by teachers' beliefs and perceptions about technology integration. Thus, there is a pressing need to increase the number of teachers who effectively use technology across various aspects of life, remain current with technological advances, and strive to adapt to changing times [47]. It is crucial to highlight that technology, when used judiciously, enhances student learning without overwhelming the process. Some teaching experiences support this view. Efficient technology usage, coupled with real-life experiences, offers students a rich learning journey, balancing academic, real-world, and virtual environments harmoniously.

V. Conclusion

To conclude, the mandated transition to remote learning during the pandemic has presented numerous obstacles. Nevertheless, committed teacher involvement has served to mitigate some of the challenges. Disparities in access to resources among students, as well as the difficulties in adapting for teachers, students, and parents, have been exacerbated. Efforts to address the situation have been further complicated by the ongoing health crisis. Additionally, the provision of first literacy instruction has suffered negative consequences. Effective communication between teachers and parents, along with active parental engagement, is crucial in reducing student difficulties. With a multitude of health, pedagogical and technological challenges to contend with, teachers who are proficient in technology are better equipped to address issues related to distance education.

As a consequence, with the widespread use of technology means that distance education processes are still used full- or part-time at many stages of education. Distance learning therefore has a continuity that will not be limited to the pandemic. Therefore, it is important to analyze in detail all the actors and problems of distance education and to understand all the details of the distance education and first literacy. In

this respect, it is important to draw lessons from the pandemic experience to inform future technology-based literacy education initiatives, given the uncertainty of future needs for part-time or full-time distance learning. The most significant outcome of this study is the recognition that the reconciliation and integration of all stakeholders in education, including all segments of society, with technology has the most significant impact on educational processes. Consequently, the focus should be on developing solutions that address this issue.

This study is limited to the data collected in the process of teaching with distance learning, which was compulsory during the COVID-19 pandemic. It is limited to the opinions of first grade teachers who taught first literacy in Tavşanlı district, Kütahya province, Turkey, and interviews conducted online in a qualitative manner. The data obtained from the teachers' opinions focused on the problems encountered in the context of technology, teachers, students and parents.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Mehmet Fatih Kaya designed and conducted the research study. All authors collected the data together. Sinem Ağır analyzed the data. All authors wrote the paper and approved the final version.

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