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Remote Literacy Instruction and Curriculum for Pre-K: Educators' and Parents' Perspectives

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ABSTRACT

Research has consistently demonstrated that quality instruction in Pre-Kindergarten (Pre-K) plays a tremendous role in building a foundation for literacy, particularly among disadvantaged students. The COVID-19 pandemic significantly impacted the instruction provided in Pre-K classrooms worldwide. Pre-K students who were typically instructed using play-based interactive learning techniques were forced to learn in virtual environments, often using unfamiliar technologies. Educational research identified this sudden and unplanned instructional shift as emergency remote teaching (ERT). The present study was conducted to understand educators' and parents' perspectives about the nature and impact of the transition to remote literacy instruction in Pre-K settings. An online survey was developed and administered in collaboration with the school district leadership of a mid-sized urban city in the Mid-Atlantic United States. Findings highlighted changes centered on the content and delivery of literacy curriculum and available support and resources for remote learning. Due in part to the unprecedented nature of a pandemic of this scale, educators and parents shared that there was a struggle to implement an early literacy curriculum and their unfulfilled needs concerning literacy instruction.



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Introduction

The development of literacy during early childhood plays a prominent role in children's social, emotional, and cognitive development (Burchinal et al., 2010; Duncan et al., 2007; Karoly & Whitaker, 2016; Peisner-Feinberg et al., 2001; Zhai et al., 2011). Successful literacy development prepares children for school entry and impacts future academic learning. When a child enters kindergarten, their literacy skills at entry predict their reading skills in first grade (Callaghan & Madelaine, 2012). While children enter school with varying abilities, children from lower socioeconomic backgrounds often begin school with gaps due to limited early childhood opportunities (Washington & Seidenberg, 2021). Research has consistently demonstrated that quality instruction in Pre-Kindergarten (Pre-K) plays a tremendous role in building a foundation for literacy, particularly among disadvantaged students (e.g., Ladd, 2017; Lee et al., 2014). Students with limited access to Pre-K literacy instruction or whose access is mediated by less efficacious Pre-K literacy practices may experience less growth.

During the COVID-19 pandemic, preschool instruction experienced significant disruption due to school closures, a lack of preschool placements, and challenges related to parents' need to work from home with their young children underfoot. Members of the research team personally experienced these challenges and observed how Pre-K instruction shifted to respond to school closures. These observations were the impetus for undertaking this research study.

Importance of Pre-K Literacy Instruction

The foundation for learning to read is established during a child's early years (NELP, 2008). Language skills that begin developing at birth underpin later reading comprehension ability (Hogan et al., 2013). The National Early Literacy Panel (NELP) identified four key foundational skills that should be the focus of early childhood literacy education: phonological awareness, oral

language, listening comprehension, and print knowledge, including alphabet knowledge (NELP, 2008). Quality early childhood programs support the development of these critical foundational skills for early reading (NELP, 2008). Phonological awareness, a child's ability to recognize and manipulate the sounds of language, provides the foundation for decoding and encoding words. Early learners develop oral language through social interaction and direct instruction, listening to adult caregivers, imitating sounds, moving from individual words to more complex sentence structures, and developing vocabulary (Honig, 2007). Pre-K experiences also provide opportunities for young children to learn about letter names and sounds and the conventions of print, such as in which direction to turn the pages of a book and the direction to read (Justice & Sofka, 2010).

Parents and caregivers play an essential role in helping children develop early language processing ability. The types of interactions matter, and for children whose home and community lives have afforded them less access to the reading and language capital that traditional schools value (Yosso, 2005; Lareau, 2011), early and intensive language support is imperative (Dickinson et al., 2010). Parents can be provided with models emphasizing oral language development and knowledge of the world to use with their children (Washington & Seidenberg, 2021). All children need opportunities to hear and produce language. To effectively develop children's oral language skills in preparation for traditional schools, scholars and practitioners must prioritize developing practices that effectively facilitate at-home language development support, as literacy participation in home environments impacts children's expressive and receptive vocabulary skills (Henning et al., 2010). One of the most critical findings in the NELP (2008) report was that intervening before the age of three rather than later produces better results for developing children's language. While the programs varied in the group of studies examined by the NELP, a common feature was the involvement of parents

as the “agents of intervention for children” (p. 180).

Children observe models of complex language through conversation and exposure to written text (Massaro, 2017). Shared reading interventions can significantly impact young children’s early literacy skills; therefore, providing parents and caregivers with interactive models of book reading can help promote children’s language skills (Pentimonti et al., 2013). Parents and educators help establish the critical social context for oral language acquisition and by tuning into their children’s development can encourage more complex expression (Honig, 2007). Focusing on quality early childhood and parent education programming impacts a child’s lifelong cognitive development, health, and adult success (Heckman, 2011). While parents and caregivers recognize the critical roles they play in the life of young children, there are often barriers to providing appropriate learning environments. The following sections will describe the dramatic impact of the COVID-19 pandemic on early learning and the use of technology as a support for parents interested in providing remote literacy learning at home.

Impact of COVID-19 on Pre-K Learning

The World Health Organization (WHO) declared a pandemic in March 2020, significantly impacting the instruction provided in Pre-K classrooms worldwide.

Pre-K students who were typically instructed using play-based interactive learning techniques were forced to learn in virtual environments, often using unfamiliar technologies. Educational research identified this sudden and unplanned instructional shift as emergency remote teaching (ERT) (Hodges et al., 2020; Marshall et al., 2020). Hodges et al. (2020) defined ERT as “a temporary shift of instructional delivery to an alternate delivery model due to crisis circumstances” (Emergency Remote Teaching section, para.1). This definition signifies that these unprecedented instructional transitions were not ordinary events. Extant research shows that due to the emergency situation, school districts did not get sufficient time

to plan and design the virtual instruction typically required for quality instruction (Hodges et al., 2020; Marshall et al., 2020; Timmons et al., 2021). This distinction points to the complex nature of ERT at the Pre-K level. Schools in most communities closed completely, forcing parents to become very active in their children’s instruction. While parents increased interactions with their children, the children had less social interaction with peers and other adults outside the home (Timmons et al., 2021).

Students attending schools in neighborhoods and districts with disproportionate levels of poverty and segregation have long borne the brunt of larger societal inequities that manifest at the classroom level (Orfield & Lee, 2005). COVID-19 exacerbated this reality with implications that have yet to be fully comprehended by researchers studying its impact on learning and literacy development in the early years. Researchers found that due to the impact of the pandemic on school shutdowns and the transition to virtual learning, opportunity gaps (or what Ladson-Billings tells us is an *education debt*) that already existed between students were further magnified (Goudeau et al., 2021; Ladson-Billings, 2006; Neece et al., 2020). Moreover, researchers found that parents of children in the early grades voiced significant concerns about lack of support and resources to adequately support their children’s development (Timmons et al., 2021). While research demonstrates benefits to technology integration and virtual learning to facilitate Pre-K literacy development with students projected to experience later reading difficulties, this body of research concentrates on virtual learning as supplementary, not as a primary learning context (Thai & Ponciano, 2016). Extant research also offers limited insight into the role of parents in supporting children’s literacy at home.

Context for the Present Study

Across the world, families and educators found themselves in unprecedented times as preschools moved to fully remote instruction. One of the study team members, a parent, also found

themselves and other parents in their children's virtual class wanting more and better from remote language and literacy instruction at their children's preschool. Therefore, this field-initiated study was conducted to understand the nature and extent of the transition to remote literacy instruction.

An online survey project was developed in collaboration with school district leadership of a mid-sized urban city in the Mid-Atlantic United States. The public school district serves approximately 22,000 students in grades Pre-K through 12. Five preschool centers in the school district enroll three and four-year-old students. During the 2020-2021 school year, approximately 1,100 Pre-K children learned through virtual instruction provided by the school district (personal communication, June 13, 2022). A series of interactive infographics was developed for use by school district educators and parents as part of the research team's work to enhance literacy learning during the pandemic. This study was conducted near the end of the 2020-2021 school year to determine the needs of Pre-K educators and parents as they transitioned to remote literacy learning due to COVID-19. At the time of the study, all instruction for Pre-K students in the district was provided remotely using *The Creative Curriculum for Preschool, 5th edition* (Dodge et al., 2010) and the online version *Creative Curriculum Cloud* (Teaching Strategies, 2023) as a basis for instruction.

This study was guided by the following overarching research question: How did educators and parents describe COVID-19's impact on Pre-K literacy learning and instruction in their local school context?

The findings in this paper address the following sub-questions from the larger study:

- a. How did educators and parents experience support for Pre-K literacy learning during COVID-19 and emergency remote learning?
- b. Did the district approved curriculum support their needs during this time?

Methods

The university Institutional Review Board and the participating school district approved the study through an MOU process.

Participants

All educators (teachers and paraprofessionals) and parents of children in the Pre-K centers of the school district were invited to participate in the study. Ninety-six educators and 62 parents responded to the online survey. The majority of the educators had more than 10 years of classroom experience, and 45% had graduate degrees. See Table 1 for additional demographic information for the educators. Parents who participated represented 10 unique zip codes within the city and all five Pre-K centers. It should also be noted that the city's schools have had a long history of racial segregation, with 70% of the districts' White elementary students occupying just three of its twenty-four elementary schools. The preschool centers follow a feeder school model, and participation is based on family income (personal communication, July 12, 2023).

Table 1. *Educator Demographics (n=96)*

Characteristics	n (%)
Length in Profession	
Under 1 Year	1 (1.1%)
1-3 Years	8 (8.4%)
4-7 Years	15 (15.8%)
8-10 Years	7 (7.4%)
10+ Years	64 (67.4%)
Highest Educational Degree	
Some College	7 (7.4%)
Associate Degree	10 (10.5%)
Bachelor Degree	35 (36.8%)
Graduate Degree	43 (45.3%)
Current Licensure	
Early Childhood Special Education (Birth-age 5)	11 (11.5%)
Early Childhood (PreK - grade 3 or PreK - grade 4)	18 (18.8%)
Elementary (PreK - grade 6 or PreK - grade 8)	37 (38.5%)
Other (Administration, CDA, ASL Interpreter, Special Education)	7 (7.3%)
None	24 (25%)

Notes: Similar licenses are grouped together. Those holding a provisional license are grouped with fully licensed groupings; ASL=American Sign Language, CDA=Child Development Associate; PreK=Pre-Kindergarten; 1 person holds dual licensure resulting in 97 responses with 96 participants

Measures

Two members of the research team created educator and parent surveys to understand the impact of the pandemic on Pre-K literacy instruction. Four content experts reviewed the survey items for accuracy and clarity, and the surveys were piloted by three Pre-K teachers or Early Childhood Special Educators. Modifications to question clarity and purpose were made on both

surveys based on feedback. Both surveys included forced-choice and open-ended questions as part of this intentional multiple-methods design. The forced-choice questions asked respondents to rate their answers using a Likert scale from 1 to 5. For example, educators were asked to rate the magnitude of support they received in adapting their literacy teaching practices to remote

environments from 1 (low support) to 5 (excellent support).

The educator survey consisted of the consent form and 19 questions across six sections including supports for remote literacy instruction, resources for remote literacy instruction, strategies for engagement in remote literacy instruction, quality of infographic, future supports and resources, and demographics. The parent survey consisted of the consent form and 12 questions across four sections including access to and engagement with remote literacy instruction, quality of remote literacy instruction, quality of infographic, and demographics. This paper focuses on the response to strategies, resources, and support for remote literacy related to curriculum.

Procedures

The researchers sent the study information, including email text with a link to an online survey and the literacy infographic developed by the research team to the principal of each preschool center who then distributed the email with links to their staff. Classroom educators sent the information to families. After approximately two weeks, the study team checked in with district personnel and requested that the information about the study be shared again. A \$20 gift card was offered as an incentive to all participants. The infographic was available on the university's publicly available website, so all families and staff could access it during and after the study. Participants completed the survey, estimated to take between 8-15 minutes, and submitted their responses online.

Analysis

Descriptive statistics were calculated for the forced-choice responses. Open-ended responses were analyzed collaboratively using descriptive coding (Cornish et al., 2013; Saldana, 2016). Three research team members reviewed the open-ended responses, determined initial codes, and grouped the codes into larger categories. After reviewing the initial analysis, they determined the final codes and categories: curriculum,

engagement, and supports, with sub-themes of support as related to curriculum and support as related to engagement. For each theme, responses were categorized into strengths and unmet needs. One research team member then reviewed responses for each question and organized responses by the final categories. All three members then reviewed responses and agreed on the code and category for each segment.

Positionality and Reflexive Statement

This study's research team comprised seven women and one man; two members of the team identified as Black, five as White, and one as South Asian. The research team included five full-time faculty members, two doctoral candidates, and one master's degree student. One research team member was a parent of Pre-K children attending school in the participating school district whose experiences were an impetus for the study. Additionally, several research team members were instructors for individuals now teaching in the district. To avoid potential bias, neither the parent nor the instructors participated in the data analysis. All research team members agree that parent engagement is integral to the learning process and that parents need to have up-to-date information and resources to support their children. This belief became even more firmly fixed during the pandemic as the researchers observed the challenges faced in early childhood instructional settings and the increasing responsibility placed upon parents for leading and monitoring learning activities.

Findings

This section describes the themes that emerged centered on the content and delivery of literacy curriculum and available support and resources for remote learning, showing COVID-19's impact on Pre-K student learning and instruction. Specifically, analysis of the educators' data highlighted how the district-provided literacy curriculum helped with the emergency instructional shift to remote teaching, supported online communication with student's families, and informed educators' motivational strategies as

curricular strengths. The educators reported available collaborative support for delivering the literacy curriculum during ERT. Analysis of the parents' data highlighted the relative strengths of the Pre-K literacy curriculum and how they implemented and adapted teacher-provided strategies and used materials/resources in delivering the curriculum content. Due in part to the novelty and unprecedented nature of a 21st-century pandemic of this scale, educators and parents shared that there was a struggle to implement an early literacy curriculum. Hence, educators, as well as parents also reported their unfulfilled needs concerning the literacy curriculum.

Content and Delivery of Literacy Curriculum

Across the parents' and educators' data, a repeated theme emerged centering on the Pre-K curriculum. Focusing on Pre-K learning and literacy instruction, educators and parents specifically described the strengths of the present Pre-K curriculum. At the same time, both groups reported concerns about the curricular needs that remained unfulfilled during the COVID-19 pandemic.

Educators' Perspectives on the Relative Strengths of the Pre-K Curriculum

Nearly 72% of educators ($N=69$) reported that the web-based *Creative Curriculum*, the Pre-K curriculum provided by the school district, was a useful source of information they turned to for preparing literacy instruction during the instructional shift to remote settings. *The Creative Curriculum* provided flexibility to educators who reported having adapted it for remote instruction by communicating consistently with parents and developing and using various online classroom management practices, such as age-appropriate motivational strategies to facilitate Pre-K students' remote learning. Notably, out of the remaining 28%, 11 of 27 educators who did not select "district-provided curriculum" as an option did not have a license so they may have served in a paraprofessional or other role where their job did not require direct access to the curriculum.

Curriculum Helped for an Emergency Instructional Shift. *The Creative Curriculum* (Dodge et al., 2010) was cited as the curriculum in use for most respondents (72%, $N=69$). These educators reported that they had access to and used the *Creative Curriculum Cloud* (Teaching Strategies, 2023), which provided access to the *Teaching Strategies Gold* assessment (TSG) online and AI's Pals assessment for social-emotional learning (SEL) of Pre-K students during remote instruction. *The Creative Curriculum Cloud* was developed in 2020 to address online teaching challenges by providing resources for teachers and parents (Teaching Strategies, 2023). *Teaching Strategies Gold* is an observational assessment tool for organizing paper-based and digital samples of students' work (Teaching Strategies, 2023). Next, most educators indicated that the Pre-K curriculum seemed flexible in scope, as many reported that they adapted it for remote instruction in the following four ways: Data-driven curricular adaptations, responsive instructional/pedagogical changes, differentiated remote instruction, and elimination of lessons requiring exclusive in-person contact.

Extant research on ERT during the COVID-19 pandemic illustrated that educators with pedagogical training focused mostly on in-person instruction, and those with limited technology exposure had to make adjustments in their practices for remote instruction, such as skipping homework assignments and substituting virtual communication for real-time in-person communication (Marshall et al., 2020). Educators' responses indicated that they changed their pedagogical practices in three primary ways to support students' access to the learning material. First, educators indicated that they taught children and their parents/caregivers how to use technology to support learning. Second, educators indicated that they used screen sharing during the synchronous classroom sessions or shared the lesson/book links with parents through emails to make study material accessible for the students and their families. Nine (9.5%) educators uploaded the books on their YouTube channels,

and five (5.2%) stated that reading an uploaded book on YouTube was easier and better for students than a teacher holding a book in hand on the live video screen. YouTube stories allowed children to see it easily, pause, and discuss events in the text. This teaching practice was consistent with the research conducted by Hassinger-Das et al. (2020), who found that children increasingly utilized YouTube for entertainment and educational purposes.

To make necessary adaptations for Pre-K students' remote learning, educators used data from TSG, ongoing assessments, observations, family input, progress monitoring, and IEPs as they modified curricular materials to engage the students in virtual classes. The curriculum allowed educators to use differentiated remote instructional strategies with the help of technology, such as intentionally using the breakout rooms feature for small group and one-on-one instruction along with the whole class instruction. Several educators reported that these strategies were very helpful in reaching all the students. About 5.2% ($N = 5$) of educators reported that they excluded those lessons that required in-person instruction during ERT.

Curriculum Supported Online Communication with Students' Families. The *Creative Curriculum Cloud* allowed direct communication between educators and parents through the Teaching Strategies Family app, including text, picture, and video (Teaching Strategies, 2023). Educators highlighted four important ways of strengthening communication with students' families, including: a) using the app and other online resources for frequent check-ins with parents/caregivers; b) using an instant connection with parents about information, events, and lessons using Google Voice and my virtual Pre-K Classroom; c) sharing lessons with families via email; d) empathizing with parents and collaborating to understand more about their home life. Several educators reported sharing online lesson plans with students' families and emailing them many curricular resources and activities. Some educators even mailed copies of extra

learning activities to children's home addresses to strengthen each child's skills.

Curriculum Helped Educators to Use Motivational Strategies. Educators reported how a web-based curriculum helped them develop and use various motivational strategies effectively for Pre-K students to learn in remote settings. These strategies included creating visual illustrations of concepts as outlined in the *Creative Curriculum Cloud* (Teaching Strategies, 2023); designing developmentally appropriate, personalized, and multi-sensory learning materials/props/activities suitable for remote learning with Pre-K students; and providing more choices to children about what they want to do in the virtual classrooms. When ERT started, educators first taught students how to use a variety of gestures (e.g., thumbs up or thumbs down) for communicating in virtual synchronous classrooms. They continued to use these gestures for a quick check-in with the students when working remotely. Several educators reported designing and using diverse forms of learning activities such as virtual community circles for social-emotional learning, games, different flashcards including letters, rhymes, and pictures, colorful slideshows, puppets, movements, songs, creating word walls, and showing mini scientific experiments (e.g., growing a crystal with students, planting vegetables) to expand vocabulary. Other teacher-reported strategies were online read-aloud sessions using age-appropriate online lesson plans, e-books, and YouTube videos, using The Creative Curriculum-linked playful activity cards such as the Mighty Minute cards (Dodge et al., 2010), and incorporating the question of the day in class activities.

Educators' Perspectives on the Unfulfilled Curricular Needs

Although the availability of an online curriculum facilitated educators' sudden instructional shift to ERT in some ways, our findings suggest that such facilitation was insufficient to fulfill many educators' curriculum-related needs. Hence, such unfulfilled curricular needs emerged as a second

sub-theme under the curriculum. Several educators noted that they did not have sufficient time and resources, particularly for their professional development centering around using digital technology efficiently for remote instruction in Pre-K classrooms, adapting the online curriculum for remote instruction, and for online classroom management. Our survey showed that 24% of educators ($N=23$) reported limited support from the school administration and district to adapt the curriculum to meet student needs.

Parents' Perspectives on the Relative Strengths of the Pre-K Curricula

Survey results indicate that the curriculum offered parents/caregivers avenues to learn and use teaching strategies centered on a) replicating what the teacher does for class, b) what the teacher suggests for a particular child, or c) observing teacher implementation during online instruction. Several parents reported playing dual roles as parents and educators in children's learning during the pandemic. Parents considered the following strengths of the current Pre-K curriculum helpful in navigating their dual roles.

Parent Implementation and Adaptation of Teacher-provided Strategies. The current web-based Pre-K curriculum offered parents methods for understanding teaching strategies used by the teacher during online instruction. The survey asked what strategies have been most helpful for the parents in supporting their child in literacy activities, and eight parents (13%) reported using the strategies their children's educators modeled in the online classroom. For example, a parent's response included strategies that "Mrs. Z, my child's teacher, uses".

Parent-delivered Curriculum Content. Our findings suggest that parents/caregivers tried several strategies to deliver the curricular content to their children. Parents took strides to ensure that the child understood and retained curricular material by practicing daily read-aloud and letter recognition activities with their children. Several parents reported using manipulatives and digital

resources such as computer games, e-books, and online lessons to increase engagement. Approximately 5% of parents ($N=3$) reported using subscription-based curricular apps such as *ABC Mouse* in addition to the curriculum assigned by the school. Many parents also highlighted that they encouraged active participation by promoting children's interests during instruction. A parent reported, "I try to discuss a topic or something that my daughter likes." According to another parent's response, they continued "sitting beside my child, doing the assignments with him after class..."

Tangible Materials and/or Resources Used by Parents. Several parents pointed out that the current web-based Pre-K curriculum provided many hyperlinks to virtual resources, books, and literacy websites. In addition, the schools shared some literacy resources related to the Pre-K curriculum with the students and their families. One such school division-based literacy-centered resource particularly mentioned by parents was the mobile library program called "*Lit Limo*." In this program, a child who visited the Lit Limo mobile library received their own book, participated in a read-aloud session, and obtained a public library card. Another parent noted they used several literacy strategies with their child including "...letting him play games on PBS, IXL, ABC Mouse." These and other resources, including the reading aloud YouTube channels and interactive e-books such as Epic books, helped parents support the Pre-K literacy learning of their children.

Parents' Perspectives On the Unmet Needs Concerning Curriculum

While parents appreciated the current web-based literacy curriculum for its aforementioned strengths, parents also pointed out ways that the curriculum seemed inadequate to fulfill specific literacy-focused needs of the young preschool-aged children. First, 81% ($N = 50$) of the parents indicated that they observed their child to determine how they responded to instruction and when to intervene and provide support during the learning process. However, the curriculum did not

provide the structure for parents to understand when to intervene and specific strategies to use in helping their child learn remotely. *The Creative Curriculum* did not provide sufficient resources for parents to help their children learn while confined at home and was not as useful as expected, as noted by 53.22 % of parents ($N = 33$). Finally, parents with limited access to information communication technology (ICT) tools also had restricted access to curricular resources. For example, some families had access to three devices (smartphone, Chromebook, computer) while others used the school-provided Chromebook only (33%, $N=21$); two families indicated they only had a smartphone for obtaining class materials. Consequently, their responses indicated that these structural inequities manifested a potential loss of Pre-K literacy learning for children during ERT amidst the COVID-19 pandemic.

Availability of Support and Resources

The impact on the availability of support and resources for Pre-K literacy curriculum during ERT was the third major theme highlighted by the educators' data. On the one hand, educators described the strengths of the support and resources they received for facilitating Pre-K literacy instruction and learning of the children during ERT. On the other hand, educators reported unfulfilled needs for adequate support and resources during the ERT. The survey data also illustrated that the availability and utility of support and resources for remote Pre-K literacy instruction varied across the participating educators. We describe these findings in detail as follows.

Educator perspective on Available Support and Resources during ERT

Overall, 83 educators responded when asked about the support they found most helpful for ERT, and 76% of them ($N=63$) reported having good or excellent support (4 or 5 on the Likert scale) to adapt their practices effectively.

Educator-led Collaborative Support Practices.

During ERT, educators collaborated with their

colleagues by sharing resources and ideas for designing content and delivering the literacy curriculum through digital media. These educators' collaborative practices were reported as very helpful support for one another. Several educators (22%, $N= 21$) highlighted receiving greater support and resources from their colleagues than from any other sources. However, there were differences across schools concerning having access to specific material resources focused on remote instruction. Teacher meetings, workshops, and professional development were reported by about 48% ($N=40$) of educators as being helpful as many of them described the importance of "sharing of ideas."

Although the school administration was reported to offer some logistic support for sharing resources and instructional ideas for virtual collaboration with other educators, it mainly remained unclear what specific logistic and material support they provided to the educators. Fourteen educators reported that educators themselves led such collaborative practices. While only three educators noted explicit help from school administration for virtual lesson planning, 14 educators noted that the virtual collaborative support from peer educators was an important resource for remote lesson planning during ERT. The educators noted that the technological support from the Information Technology Specialist on the school staff was the most important instructional support, and eight educators reported that the access to the internet, computer devices, educational software, and virtual instructional material provided by the school district and school administrators were most helpful supports for ERT. Only one teacher reported having access to the pre-recorded read-aloud videos as the most helpful resource they received from the school district.

Educator Perspectives on Unmet Needs. Several instructional resources were inadequate to fulfill the needs of the educators during ERT. When asked what supports would be helpful when planning for and delivering remote literacy instruction, 95 educators reported their desirable and unfulfilled support needs. This survey

question asked respondents to “check all that apply.” Overall, 23% ($N=22$) of the educators selected all desired supports, indicating they did not feel fully supported. They did not receive the following supports during ERT: (a) planning time with colleagues, (b) printed curriculum, and (c) video examples to learn from. About 79% ($N=76$) of the educators reported planning time with colleagues as their most desired support. Almost 71% ($N=68$) of the educators noted instructional videos to learn from was the most important support they desired, but could not find during ERT. A particularly concerning finding of this study was the limited instructional planning utility of the web-based *Creative Curriculum Cloud* perceived by about 28% ($N=27$) of educator survey participants and the perceived lack of access to the printed *Creative Curriculum* by 42% ($N=40$) of responding educators. These educators preferred the print curriculum over the *Creative Curriculum Cloud* (Teaching Strategies, 2023). Additionally, 24% ($N=23$) of instructors pointed out that their administrators did not offer instructional support for modifying the curriculum for the online environment. Teachers reported a lack of such important instructional resources, which highlighted the inadequacy of the professional learning support they received for planning and delivering remote literacy instruction.

Discussion

Literacy instruction for Pre-K students was significantly impacted by the pandemic ERT. Given the limited time to adapt to fully remote instruction, locating appropriate online curriculum supports and instructional resources was significantly challenging for parents and educators. However, a significant portion of educators (42%, $N=40$) would have preferred accessing the printed curriculum because of their familiarity with the paper-based materials. Access to instruction was one of the first areas tackled by administrators, but access alone could not compensate for the lack of sufficiently trained and confident remote educators.

The power of prior knowledge on the part of administrators, educators, and parents can be seen in the adaptations made during the ERT. The robust background experience of administrators, educators, and parents in using technology and/or modifying curriculum positively influenced addressing the challenges of remote instruction. Results show that parents who had some experience with or access to online resources, manipulatives, and books used these to enhance the program provided by the school. While 76% ($N=73$) of educators were satisfied with the support they received from administrators, teachers also relied on the knowledge and experience of their colleagues to plan for instruction. For example, educators shared lesson plans and information from professional learning communities about items such as software applications. Teacher reliance on colleagues and professional learning communities for instructional support during ERT are consistent with the existing findings reported during the COVID-19 pandemic by Özer & Demir (2024) in their study of remote literacy instruction experiences of the first-grade teachers in Türkiye as well as by Ovcharuk et al. (2023) in their study of in-service teachers in Ukraine.

Despite the challenges they faced, Pre-K educators creatively addressed the needs of their students by modifying their instructional practices, incorporating synchronous and asynchronous instruction, and assisting parents as they utilized new technologies to support their children's learning. Educators' implementation of remote literacy instructional strategies using multiple modalities through the available technology during ERT is well-aligned with the extant research on early childhood literacy instructions during the COVID-19 pandemic (Wright et al., 2023). Educators also reported additional means for communicating with parents that incorporated affordances within the curriculum and external communications tools. This additional communication demonstrated the power of parents as partners in the learning process. It also pointed out the complications that occurred during

remote instruction when parents were not available to assist with monitoring their child's online learning.

Parents and educators reported the need for additional support for assisting children during online learning. Teachers expressed a desire to have more audiovisual material to increase the number of instructional practices they could utilize with their students and expressed disappointment that additional support was not forthcoming from administrators. Parents who wanted more support and resources from classroom educators felt the same frustration. While the school system administrators and educators immediately shifted in instructional setting and modality, the need for additional and accessible resources was evident.

Literacy learning during ERT hinged upon several critical factors shared by survey respondents: a strong curriculum, adequate training, access to materials, adaptability, communication, and collaboration. These factors influenced not only students' success in developing literacy skills but also aided parents' and teachers' resilience in managing the ERT. The value of parents as partners in learning was never more needed than during this challenging time.

While almost all children are now back to face-to-face instruction, that doesn't change the need for administrators and educators to be prepared to shift and adapt to the unexpected needs of children and schools. When considering the 1918-1919 Spanish Flu pandemic, Hollenbeck noted that "...influenza respects no politics nor borders." (2009, p. 351). Similarly, one hundred years later, the COVID-19 pandemic also impacted all communities, all countries, and all educational systems without regard. While people in some communities from some economic levels and age groups suffered more significantly, no group was untouched by what happened during this worldwide emergency. How might educational systems, administrators, educators, and parents be more prepared in the future? While several authors (Beiner, 2022; Crosby, 2003) suggest that the Spanish Flu pandemic of 1918 is forgotten history

and, therefore, the lessons learned from that time are no longer considered relevant, we find ourselves asking what educators of that time period faced and learned. The critical question now becomes, how can today's educators take what has been learned through the ERT and apply this new knowledge to how we educate children post-pandemic and for the foreseeable future?

Limitations

This study began based on the observation and experience of one of the research team members who was also a parent of Pre-K children in the school system. Additionally, the research team consisted of faculty members who provided instruction to some of the educators who may have responded to the survey questions. These relationships may have influenced responses to the survey and could result in unintended bias, although the research team did intentionally use a variety of strategies to attempt to mitigate these factors.

Demographic information about participants is a potential limitation as well. We intentionally kept the parent survey brief and only asked parents their zip code and the school their child attended. Additional information about the parents and children could have yielded more in-depth analysis. For educators, we asked them to share whether they held a teaching license but not their current role. Given the number of unlicensed participants, many of whom may be working in a paraprofessional role, responses could not be analyzed by role, which may have provided more depth and nuance to the findings.

Responses to the survey questions represent the thoughts of educators and parents of Pre-K children in one urban school district and, therefore, are not generalizable to the broader community.

Implications and Future Research

The results of this study have important implications related to teacher preparation for working in online environments. Teachers reported limited time and opportunities for professional development related to instruction

with digital technologies. Teacher preparation programs must include more opportunities for teacher candidates to learn how to create materials for online instruction for young children. Current educators need opportunities to enhance and further develop the changes they have made as part of their pandemic modifications. Educators and parents need time to review the pandemic instructional adaptations and their joint communication needs to determine the elements that should remain in ongoing educational settings.

The ERT required educator flexibility and problem-solving skills. While support existed and was satisfactory for most teachers, almost a quarter reported a lack of support. Building skill sets around flexible approaches to instruction is essential for new teachers and those in the field for many years. Adapting modern technologies for classroom use and maintaining an open mind to new instructional methods and materials are essential skills for educators. Throughout the ERT, communication skills were vital for ensuring student progress in literacy learning. Educators and administrators have a responsibility to communicate clearly with parents about their children's needs, the instructional program, and ways that they can support classroom instruction. The vital efforts at communication begun and maintained during the pandemic need to continue in future Pre-K programming.

While the researchers did not select the school district's curriculum for this study, the use of *Creative Curriculum Cloud* (Teaching Strategies, 2023), which included information on

communicating with and assisting parents, may have contributed to the educators' positive feelings of support during the ERT. The type of curriculum in use may influence the outcomes of this type of study. Future researchers may wish to query participants about the impact of the curriculum on their perspectives.

In the future, research that brings forward additional information from the parents of Pre-K children and those learning in a broader representation of school systems would be beneficial. Future studies should address the missing voices of administrators who can describe what they were doing to support parents, teachers, and children. Interviewing parents, teachers, and school administrators to learn about the ERT would contribute to this growing body of knowledge. Using a focus group methodology for these inquiries may offer more detailed information and deepen understanding of the transitions made during the ERT.

As the world and schools return to the "new normal," researchers, parents, and teachers need to consider ERT's lasting impact on children. How did the children manage academically and socially as they entered Kindergarten and continued to first and second grade? What are the long-term consequences of literacy acquisition for those who began their educational careers during the ERT? Inquiries designed to answer these questions will provide essential insights into literacy learning trajectories for Pre-K students during school disruptions.

Author Contributions

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