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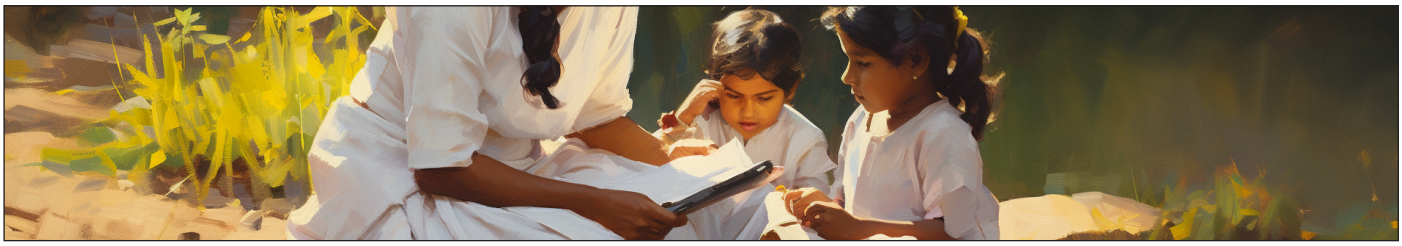

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Experiences of parents of pre-primary students on teaching and learning practices using technology during Covid-19

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Abstract

This research study explores parents' experiences teaching their pre-primary children using technology during the Covid-19 pandemic, explicitly focusing on parents from rural India. The study adopts a phenomenological qualitative research design to understand the participants' lived experiences. The research methodology includes open-ended and closed-ended questions in the interview to gather rich and in-depth data from the participants. A sample of 15 parents of pre-primary students aged between three to five years who met the selection criteria of being parents of students enrolled in rural schools in India were selected for the study. The questions gathered detailed and descriptive information about parents' experiences of pre-primary students regarding the change in teaching and learning practices imposed by the Covid-19 pandemic, specifically in rural India. The study identified several benefits the parents derived from indulging themselves in their children's teaching and learning during the pandemic. I also explore how the parents managed their overlapping roles (parenting versus teaching facilitator) during the lockdown and how technology aided this process. Investigating the questions enabled me to interpret the sustainability imperative of technology adoption in teaching and learning practice. The digital practices and their sustainability in education need to be understood in detail in the context of the digital competency of the users and

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the digital infrastructure available to them, especially in rural India. Further, study findings are expected to form an empirical base for future policies addressing the digital and education divide.

1. Introduction

The Covid-19 pandemic has triggered an intellectual explosion of future thinking of human history that is reshaping society's future (Brannen, Ahmed, & Newton, 2020). This global crisis has profoundly affected various aspects of the 21st-century world, including government, business, institutions, and other fundamental elements. Among the most impactful consequences of the pandemic is the unprecedented disruption to educational institutions worldwide, affecting approximately 1.6 billion students (UN, 2020). The ramifications have been particularly severe, with 94% of school-going children and up to 99% in low-income and lower-middle-income countries being impacted (UN, 2020). Notably, academia was one of the first sectors to experience a complete shutdown of operations, with face-to-face teaching and learning practices suspended by government mandates to curb the virus's spread (Chang & Yano, 2020).

The crisis created different approaches to the existing educational practices while disrupting and worsening the situation with pre-existing education disparities in terms of reducing the opportunities for many people (UN, 2020) and stimulating innovative exploration approaches (UN, 2020) of information and communication technology (ICT)-enabled teaching and learning practices (Azim Premji Foundation, 2020) in the sudden shift.

Governments all over the world provided various forms of support for educational systems. The studies (Alharthi, 2022) defined remote learning as an endeavour to provide education in a setting where learners were geographically separated. The government's efforts to develop national safety protocols and reduce the spread of the Covid-19 pandemic were significant factors in the shift to remote learning. Governments were trying to facilitate education through online or remote learning, but access limitations remained in many ways.

Schooling from home had become the predominant alternative format during the pandemic, which added additional roles to parents who were not well-equipped to assume the teacher's job. Burgess and Sievertsen (2020) claimed that the abrupt change in the educational system had impacted both the social and academic lives of children and parents' productivity.

Global policymakers urged educational institutions to switch to online instruction. Online and virtual approaches and assessments were reported to revolutionise teaching and learning (Burgess & Sievertsen, 2020).

The crisis during the Covid-19 pandemic created a chance to redesign long-standing educational systems and build context-appropriate, teaching-learning processes that shifted online as there was a rapid shift from face-to-face classes in school to online schooling. The Government of India announced the closure of all educational institutions by mid-March 2020. They remained closed for more than 82+ weeks and affected more than 420 million pre-primary students in India (UNESCO, 2022). The schools remained closed for months and this later changed to suspension of face-to-face learning practices in India. The shift from face-to-face teaching and learning activities to an online mode of exercise had a different influence on the lives of learners and other stakeholders. It had an immediate and long-term impact on the poorest and most vulnerable groups (United Nations, 2020).

The shift to online learning came through different approaches, according to the context of students, parents and their socio-economic and cultural backgrounds and the shift determined the impact of the Covid-19 pandemic on children's learning, the support given by the schools, and strategies used by caregivers at home to support teaching (Bhamani et al., 2020). The findings of Bhamani et al. (2020) report that the impact of the shift to online mode has impacted the learning of the children, which is in line with social-emotional learning, socialisation, as well as other practices, including the daily routines of the students and parents. The difficulties parents faced consisted of the lack of training of parents due to the rapid shift and less training by the school or other organisations (Azim Premji Foundation, 2020). The report of the Azim Premji Foundation (2020) added that 90% of parents were willing to send their children to schools with necessary health safeguards and overwhelmingly supported reopening the schools with necessary safety protocols.

The competency, consumption, and attitude towards technology usage differed in the pre- and post-Covid-19 pandemic periods. Compared to schools that had previously used little technology, or where students did not have digital web-enabled devices and the Internet at home, those who already used digital learning platforms had fewer issues with remote online education (Petrie et al., 2020). The shift to online education and the functions of the educational system were transferred to families, mainly parents (Lian et al., 2020). Studies stressed that parental involvement in

teaching and learning increased during the period; to some extent, the "outcomes have been greater than in regular school" as stated by one parent, and the dependency of the students on parents increased during the period of the pandemic (Bubb et al., 2020, p. 215).

During the Covid-19 pandemic, many parents were obliged to supervise and follow up on their children for learning purposes, which required a clearer understanding of the role of teachers. The situation also highlighted the importance of teachers' reinforcement of professional development and training, or collaboration with parents, to improve teaching and learning. Also, some studies emphasised that digital competence (Ilomäki et al., 2016) and skill in the subject, subject knowledge, and pedagogy (Shulman et al., 1986) and the "Technological Pedagogical Content Knowledge" (Mishra et al., 2006) of the parents would play a significant role in educating children about the appropriate uses of media to minimise adverse effects. These competencies and other skills positively linked literacy, digital resilience, and the parents' socio-economic backgrounds (Tran et al., 2020). In short, the expected educational outcome of the school's teaching and learning processes while delivering mainstream face-to-face education was closely related to parents' roles, socio-economic backgrounds and skills. The learner with a positive level of increase and capital had a better chance of a high learning outcome and, simultaneously, the reverse.

Parental mediation is the term used to describe the various ways that parents make an effort to govern and control their children's media experiences. There are numerous methods of parental mediation, like active or instructive, restrictive, and co-viewing (Cabello-Hutt et al., 2018). Active mediation is done by parents who talk to their children about using digital media and provide them with direction and assistance. One approach, to be stringent with rules, is to control children's online behaviour. Restrictive mediation is to set regulations and rules on the usage of digital web-enabled devices for the children by the parents; and co-viewing mediation is to use the digital devices together, by parent and child, such as when watching television together (Clark, 2021).

According to the ASER report of 2020, about 75% of students get help from family members while studying at home, which is a little higher (81.2%) in primary 1-2 classes (aged between 6 to 7 years old) compared to the total. Also, the report adds that among families where both parents have completed the 9th class (14 years and above) or more, close to 45% of students get more help from their mothers who completed nine years of schooling than from both mother and father equally, while children get 30% of assistance from fathers; this shows a significant difference of gender-specific parenting in school-going education that is visible in the involvement of teaching and learning in pre-primary students (ASER, 2020). The same report also adds that 70% of parents believe that online classes are ineffective for their children's learning, reflecting their displeasure with under-effectiveness of the online teaching and learning process (ASER, 2020). During this study, the researcher needed help finding documents or circulars from the state education departments of the participant's state, to find whether essential specific training for the parents, or the persons, who teach the children from home during the rapid shift to remote learning, was, or was not, available at all. It meant most parents would have used the competency, skill or knowledge, including of content and pedagogy, they may have gained prior to their knowledge or experience in the pandemic.

2. Rationale

The goal of this study, which was carried out in one of India's rural and semi-urban areas while students were enrolled in distance learning, was to close a research gap on parental involvement in children's learning by taking into account external pressures that had emerged as a result of the rapid shift from on-site schooling to online-remote learning. Parents had to act as tutors at home for their children while continuing to work in their regular jobs. In contrast, teachers and schools had to offer pupils learning materials, instructions, and aid remotely (Haller et al., 2021).

According to reports, the Covid-19 pandemic limited pupils' social and intellectual abilities and affected their overall well-being (Azim Premji Report, 2020). Children from underprivileged families were negatively impacted by not attending school according to the ASER Report (2021), UN Report (2020), and Azim Premji Report (2020), as they no longer had access to face-to-face education.

This current study concentrated on parents' involvement in their children's education during the Covid-19 pandemic and their experiences when face-to-face or in-person learning was suspended. This study also explores parents' experiences on teaching and learning practices of pre-primary students from low socio-economic backgrounds from socially, educational and economically marginalised communities. According to Hoover-Dempsey and Sandler, parental participation in promoting children's learning can be divided into categories: encouragement, modelling, reinforcement, and instruction (Whitaker, 2018). The present study helps

to enhance our understanding of parents' satisfaction with schools during the unique lockdown period due to the Covid-19 pandemic.

During this study, the researcher felt that parents' happiness had been significantly impacted by the emergency circumstances during the 2020 school lockdown, which resulted in highly required educational improvements. Furthermore, the study went on to assert that the difficult circumstances of the school lockdown had unique components. Additionally, this study examines factors influencing parents' perceptions of school assistance in the Indian context if their children were enrolled. Because of the Indian school lockout caused by the Covid-19 pandemic, this paper explores key indicators of parents' satisfaction with school or other organisational support.

2.1 Research questions

- What were the learnings from parents' experiences of pre-primary students about the change in teaching-learning imposed by the Covid-19 pandemic?
- What personal benefits did the parents gain by being involved with the teaching and learning of their children?
- How did parents live through overlapping roles (parenting with teaching facilitation using technology) during the Covid-19 pandemic?
- Will the rapid shift to technology-based teaching-learning due to the Covid-19 pandemic sustain when it is absent/no longer present?

2.2 Context

The research participants in this study were the mothers and fathers of preschool children during the Covid-19 pandemic who were involved in their children's learning. The parents were from rural or semi-rural areas of India selected using a theoretical sampling size of 15 participants for the current study.

3. Methodology

The researcher used a phenomenological method, which helped to "explore and investigate contemporary real-life phenomena through detailed contextual analysis of a limited number of events or conditions and their relationships" (Zainal, 2007, pp.1-2). The current study explores parents' experiences regarding teaching and learning in their home, and management during the times of the Covid-19 pandemic. A qualitative research study allows the researcher to explore the phenomenon from an individual's experiences in various situations and circumstances. The researcher used an explanatory phenomenological design to administer this study to gain relevant responses about insights into parents' real-life experiences amidst Covid-19, their beliefs and practices of teaching and learning, the changes and difficulties, and differences in using technology for educational purposes in the pre- and post-Covid pandemic contexts.

The study used a sample size of 15 participants with purposive random sampling. The researcher conducted in-depth interviews (see the Appendix) to collect narratives of parents until results indicated adequate data had been collected for detailed analysis.

To be included in the in-depth interview, the informant needed to meet the following criteria: parents from rural areas of India with at least one child in a pre-primary class during Covid-19 pandemic.

The data collection instrumentation consisted of open-ended interview questions related to the Covid-19 pandemic and learning at home during the Covid-19 pandemic period. The questions focused on how lesson delivery happened, the roles and uses of technology, the experiences, beliefs and perceptions of parents in using technology, the content divide by using technology and its sustainability in the post-pandemic period, and the supporting systems of schools or other organisations.

The researcher used a grounded theoretical approach, with thematic analysis, transcribing the interviews and analysing them using ATLAS.Ti (a qualitative data analysis software), coding to open, axial and selective coding. The scripts were analysed using thematic analysis and ATLAS.Ti (Version 9.1.3.0) helped store and organise the collected data. Data were retrieved from the sources, imported to ATLAS.Ti, and categorised into topics and themes linked directly to the study's questions. The process started with coding, which involved summarising segments of gathered data. Then, pattern codes were implemented to generate sub-themes.

In this research study, ethical considerations were diligently upheld. Prior to conducting interviews, participants were presented with an informed consent message through telephone communication. During this process, participants were provided with a comprehensive explanation of the study's purpose and objectives. Additionally, they were informed about their voluntary participation in the study and were made fully aware of their rights pertaining to

withdrawal and refusal to participate at any point. Importantly, no data were collected or sought that could potentially reveal participants' personal information or identity, both during the study and in its aftermath. These ethical safeguards were implemented in strict accordance with the standards and guidelines set forth for social science research journal articles.

The study comprised parents and guardians, primarily mothers (as fathers who were asked did not readily respond), whose children attended government or low-cost private pre-primary schools in Kerala's Malappuram and Palakkad districts. Their educational backgrounds varied from secondary school to post-graduation, with four out of 15 having completed pre-service teacher education courses such as a B.Ed. A significant characteristic was the absence of prior teaching experience among most of the participants, except four who had undergone pre-service teacher education.

Focusing on this region allowed for an exploration of its unique educational dynamics. Targeting parents and guardians, especially mothers, who played vital roles in their children's education, provided valuable insights into various aspects of the educational landscape. The study sought to understand the complex factors influencing parental involvement and engagement in these districts, with potential implications for educational policies and practices. This diverse group's experiences and perspectives offered a rich opportunity for examining the nexus between caregiver involvement and early childhood education in the specified context.

Education and parenting underwent significant changes due to the Covid-19 pandemic. The generated thematic analysis delved into various aspects of these transformations, shedding light on the pre-Covid educational landscape, engagement with schools and educational centres, parental involvement and support, child engagement and responses to online education, parenting styles and disciplining, as well as the roles of technology in teaching and learning. By examining these themes, I aimed to understand better the challenges, benefits, and evolving dynamics in education and parenting during the pandemic and beyond. From traditional schooling to schooling at home, parental involvement to child engagement, and discipline to technology integration, this analysis explored the holistic understanding of the multifaceted implications of technology in the Covid-19 pandemic and post-Covid era.

4. Education and schooling

Child engagement and responses to online education became crucial considerations amidst the transition to remote learning. This section explores, from parental perspectives, the assessment of child engagement during online education, examining how children interacted and participated in virtual learning environments. It also delves into the children's responses to online learning methods, including their attitudes, motivation, and adaptability to the new mode of instruction. Furthermore, the challenges and successes experienced during this transition are explored, shedding light on children's unique hurdles in navigating virtual classrooms. By addressing these aspects, I have gained insights into the dynamics of child engagement and responses to online education and the impact of remote learning on their educational experiences.

The participants in the study were asked whether their children attended any school, educational, or tuition centres before the Covid-19 pandemic, excluding home-schooling. The findings revealed that no onsite schooling systems were available during the pandemic, leading to the absence of traditional educational options. Moreover, considering the health and safety concerns associated with the pandemic, the participants were reluctant to send their pre-primary children to such centres. Instead, the participants (15 out of 15) reported relying on online classes, characterised by synchronous and asynchronous teaching and learning activities. These online classes utilised live videos or audio classes delivered through instant messaging applications or online platforms. The participants' responses indicated a shift towards online education as an alternative to traditional schooling arrangements, driven by the unique circumstances imposed by the Covid-19 pandemic.

Each participant preferred face-to-face classes in schools over online education from home, emphasising the significance of school-based education for their child's holistic development. Parent 3 explained, "I choose school rather than online education from home because my child does not solely rely on what I teach. The school provides an environment where children can enhance their personality, language skills, and social and personal development through interactions with peers and educators, extending beyond textbook knowledge". The parent's narrative reflects the belief that schools offer a comprehensive learning experience encompassing academic knowledge and crucial aspects of personal growth and social integration.

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The respondents' descriptions of online education engagement from home with their children's schools varied, highlighting positive and concerning aspects. Parent 1 mentioned that their child learned well with scaffolding, involving reading from books and practising letters and numbers in English, Arabic, and Malayalam. Parent 2 noted that their child engaged in self-directed learning by reading magazines such as Minnaminni and Magicpot (children's magazines). However, another parent expressed concerns about increased screen time during online learning and felt students spent excessive time on mobile devices. The additional parent emphasised that their children often required mobile telephones for motivation to study and would resist eating without them. Despite the challenges, all parents acknowledged the significant role of mobile devices in facilitating learning during the pandemic.

In summary, the respondents described the engagement between online education and their children's schools as satisfactory, with various approaches to learning, including scaffolding, self-directed reading, and technology. The mobile was the only digital web-enabled device used by the parents for these purposes. While some parents highlighted the positive aspects of online school engagement, such as diverse educational opportunities and independent learning, concerns were raised regarding increased screen time and dependence on mobile devices for studying.

4.1 Engagements of educational institutions and parents in teaching and learning

The engagement between the parents who participated in the online education of their children and their children's schools was identified as beneficial, particularly due to the absence of alternative options during the Covid-19 pandemic. This engagement was valuable in facilitating students' study of the prescribed curriculum, often through online platforms restricted to some video streaming platforms such as YouTube. Additionally, instant messaging platforms like WhatsApp maintained communication between parents, schools, and students. Given the limited availability of traditional schooling options, online education and the corresponding engagement with schools provided a crucial avenue for continued learning and educational support.

When it came to the engagement of parents in teaching and learning during the schooling period, it was notable that all the participants who took part in the discussion were females, with 14 of them being mothers. There were no fathers involved in the discussion. The majority of the participants emphasised the prominent role of mothers in this engagement. Mothers were described as the primary figures in sending their children to school, providing them with the necessary support, and assisting with homework when the mother was available at home. It was also mentioned that occasionally the child would use the father's mobile device for educational purposes. These responses highlighted the active involvement of mothers in the teaching and learning process during the schooling period.

In terms of support provided by schools to parents for adjusting to online learning, the responses varied. Some parents expressed satisfaction with the online teaching methods, while others noted challenges faced by their children. The schools offered support through various means, such as class meetings on platforms like Google Meet, subject-wise divisions, and WhatsApp groups for communication. However, it was mentioned that no specific training was provided to parents. Parent 3 highlighted that they were initially unaware of online schooling but later participated in weekend meetings, stimulating activities like origami and painting, and oral tests. The children's engagement varied, with some students showing interest and benefiting from the activities conducted in the online classes. Parent 3 suggested that the mother sits and learns alongside the child. The satisfaction with the school's shift to online learning was mixed, with some parents acknowledging it as the only available option but expressing concerns about the completeness of the learning experience. The use of the International General Certificate of Secondary Education (IGCSE) syllabus resources like "OXFORD TEXT" was mentioned. Overall, while parents generally expressed satisfaction with the school facilities, there was an awareness that some aspects of the child's education might have been compromised due to the transition to online learning.

4.2 Parenting styles and disciplining

The role of media in the family was discussed in different ways, as digital and mobile media had changed the landscape of media usage in the family (Clark, 2021). The new digital media became the medium of communication beyond the family as well as being necessary for educational purposes. According to Clark's (2021) parental mediation theory, parents use various interpersonal communications strategically to mediate or mitigate the effects of media on their children. A scale was formed by Nathanson (1998) and Valkenburg et al. (1999) to measure the mediation and its outcomes, resulting in the formation of active mediation, restrictive and co-viewing as concepts. In this paper, the mediation of the parents is analysed using the parental mediation theory.

During the Covid-19 pandemic, parents expressed different dominant/active parenting styles and approaches to disciplining and studying with their children by using technology for online education. One parent emphasised the preference for classes in school instead of online classes and the need to compel their child to engage in learning activities together by using a mobile. She preferred co-viewing (Clark, 2021) as the child was too young and needed help in using and managing digital web-enabled devices according to the expectations of the parent. Another parent, who was a student-teacher, mentioned being strict initially but not following the Montessori Method (Montessori, 2013) due to inapplicability and lack of implication knowledge (the knowledge to understand the potential impacts and consequences of an action before applying some other action) during online mode, as both parent and child were not familiar with executing the Montessori method; which could be counted as co-viewing. It was noted that pushing the child to attend online classes and complete assignments was met with resistance, as the child showed more interest in playing games on digital web-enabled devices which was part of restrictive parenting. The parents believed that games were not supposed to be used for learning and were not familiar. The absence of face-to-face teacher engagements in a Madrasa (an Arabic word referring to a primary education institution for Islamic religious teaching in Kerala) setting was highlighted by some of the parents as well as by their schools, leading to challenges in monitoring and motivating the child's academic progress. The parenting style depended on the instructions and requirements set by the school or teacher. These responses reflected the varied parenting strategies employed during the Covid-19 pandemic period and highlighted the adjustments made in response to the unique circumstances.

4.3 Technology in teaching and learning

The Covid-19 pandemic prompted individuals to acquire various digital competency skills, including instrumental skills for utilising digital tools and media, technical knowledge, theories, and concepts. Parents shared their experiences and how their attitudes towards strategic use, openness, critical understanding, creativity, accountability, and independence had evolved. For instance, parents reported using their mobile telephones as a primary tool for teaching, dividing time among several school-aged students and exploring online learning options. The parents also highlighted that the shift and engagement with their children had increased creativity, learning new skills such as animation and video editing, and gaining theoretical knowledge in subjects like psychology as they started to engage in using different software and applications in mobile telephones. The transition to online learning necessitated patience and adaptability.

Additionally, parents noted a shift in their attitudes toward technology, becoming more open and receptive to its possibilities. They acknowledged their growing proficiency in using platforms like WhatsApp and YouTube for educational purposes. The experiences shared by parents demonstrated the acquisition of digital competency skills and the transformation of attitudes toward technology during the Covid-19 pandemic.

Managing teaching and learning practices using technology requires adaptability and resourcefulness. With limited options available, participants were compelled to embrace the new situation. However, the process was challenging. The availability of only one digital web-enabled device for multiple children posed difficulties in managing their learning activities. Additionally, participants faced financial constraints and unfamiliarity with frequent device recharging.

Nevertheless, teachers played a pivotal role by sharing instructional videos, and parents reciprocated by recording videos of their children's work. This collaborative effort facilitated the teaching process and made it easier for participants to develop their teaching skills. Despite the initial difficulties, participants found time management was relatively more straightforward when handling a single child. However, balancing household chores with teaching responsibilities proved challenging. The guidance and support provided by teachers were instrumental in helping participants navigate through these unfamiliar circumstances.

Parents gained several personal benefits by actively participating in their children's teaching and learning processes. They acquired new knowledge and insights about online classes, enabling them to understand better the educational practices implemented by schoolteachers. Parental involvement in managing their children's learning activities fostered a closer bond with the teachers, transcending the traditional teacher-student relationship. Engaging in online groups and discussions with other parents provided a platform for sharing experiences and seeking peer assistance when parents were unavailable for specific tasks. As a result, parents developed connections with a broader network of individuals, getting to know other parents and building meaningful relationships. The regular schedule of online classes allowed parents to structure their time and incorporate learning activities into their daily routines. The interactions with teachers and fellow parents facilitated

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the exchange of ideas and strategies, enriching the overall learning experience for both parents and children. According to Parent 6, before the pandemic, parents communicated effectively, exchanging information regarding any missed lessons or instructions. They demonstrated a willingness to support each other, resulting in the establishment of strong interpersonal connections. This positive network of parents remained enthusiastic about convening after the reopening of schools, contributing to a dynamic environment of peer teaching and parental facilitation.

Additionally, parents found opportunities to engage in creative activities, such as colouring and drawing, which contributed to their children's learning progress. The involvement of parents in their children's education also acted as a training period, enabling them to connect theoretical knowledge gained from educational institutions with practical implementation. Furthermore, parents recognised the significance of their role as siblings in motivating and encouraging their children to study, even when facing resistance or scolding from other family members.

4.4 Managing overlapping roles of parenting and teaching facilitation

Managing overlapping roles of parenting and teaching facilitation during the Covid-19 pandemic was challenging. The use of technology played a crucial role in enabling teaching and learning, but it also added complexity to the situation. Parents gained insights into the efforts made by teachers to manage large classes of students in online settings, understanding the difficulties teachers faced in adapting to online teaching methods. Juggling the responsibilities of being a parent and a learning facilitator was relatively easy. Providing a digital web-enabled device for each child to attend online classes simultaneously posed a challenge, especially when multiple children were in the household. Despite the challenges, parents recognised the benefits of sending their children to school, as managing both roles simultaneously required significant effort and time. Understandably, frustration and comparisons with teachers might arise at times. Each child's ability to adapt and manage their studies independently varied, with some children displaying greater self-sufficiency, while others required more support and guidance. Overall, the management of overlapping roles during this period proved to be a difficult task for parents.

Parent 8 said, "During the COVID (Pandemic) period, I did not make any significant efforts to learn how to use technology to teach my children. Instead, I relied on the support and guidance provided by the teachers. There were many unknown aspects and tasks to navigate, such as completing assignments and understanding how certain tools and platforms worked. I faced network connectivity and range challenges, sometimes disrupting communication with teachers and other parents. However, I did participate in online video classes and gradually learned how to use platforms like Google Meet for virtual meetings. I also engaged in parental communication and sought assistance from friends to enhance my understanding. While I did not actively pursue personal technological learning, I still managed to navigate the teaching and learning process with my child during the COVID and post-COVID periods".

4.5 "What is education?" perspectives of parents

Education for learners aged three to six years should focus on several key areas. Firstly, it should impart the ability to recognise, write, and read letters, enabling them to understand and differentiate between different words and their spelling. Additionally, education should emphasise the development of respectful and loving attitudes towards religion and foster positive behavioural interactions with parents and families. Basic numeracy skills should also be introduced, such as recognising and understanding numbers. Reading comprehension and effective communication should be encouraged through age-appropriate activities. Moreover, values, social engagement, friendship, sharing, and general knowledge should be nurtured.

During the teaching and learning period amidst the Covid-19 pandemic, there was an effort to provide similar inputs and outputs to learners in the mentioned age group. However, it is essential to acknowledge specific differences due to the online learning environment. While efforts were made to cover the essential topics and skills, the absence of face-to-face interaction and a physical classroom environment could have impacted negatively on the learning experience. Learners may have faced challenges developing social and interactive skills typically facilitated through in-person schooling. Additionally, the engagement and individual attention levels may have varied compared to traditional classroom settings. Nevertheless, educators and parents did their best to ensure that the learners received the necessary education and guidance during the challenging circumstances of the Covid-19 pandemic.

The technology significantly facilitated education during the Covid-19 pandemic, particularly for learners aged three to six years. Smartphones and digital web-enabled devices enabled sharing of educational videos, audio, and other learning materials. Platforms such as Google Meet and WhatsApp allowed for interactive communication between teachers, parents, and students, creating opportunities for

virtual classroom discussions and collaborations. Online resources, including YouTube and educational applications, provided accessible and easy-to-understand concepts for young learners. However, it is essential to note that the use of technology was regulated to ensure appropriate and controlled access for children. Despite the limitations and challenges imposed by the pandemic, technology was vital in sustaining educational engagement and facilitating learning experiences for young learners during this unprecedented time.

4.6 Pros and cons of using technology in teaching and learning

The use of technology in the age group between three to six years poses both hazards and benefits. One hazard is the potential for 'fast' learning, where children may consume information rapidly without fully understanding or assimilating it. Misuse of technology, such as accessing inappropriate content or using applications unsuitable for their age, is another hazard. Additionally, children may become overly dependent on mobile devices, resulting in difficulties functioning without them. Excessive screen time can lead to health issues, including eye strain, sedentary behaviour, and disrupted sleep patterns. Furthermore, exposure to the digital world may introduce children to inappropriate or harmful practices.

However, there are also significant benefits of technology in this age group. Technology can enhance learning experiences by providing interactive and engaging educational materials, allowing children to explore various subjects at their own pace. Online platforms and applications can offer opportunities for self-directed learning beyond the classroom environment. Moreover, technology can facilitate communication and collaboration among children, parents, and educators, fostering social connections and sharing ideas.

Nevertheless, it is crucial to balance the use of technology and ensure appropriate supervision to mitigate the hazards associated with its use. Implementing guidelines for screen time, promoting healthy habits, and monitoring the content accessed by children were essential measures to address the potential risks and maximise the benefits of technology in the education of children aged three to six years.

4.7 Technology and usage

Digital technology, encompassing a wide array of tools such as social media, online games, multimedia, mobile telephones, computers, tablets, and Internet connections, has become an integral part of modern life. Parents emphasised that social media platforms provided communication and information-sharing avenues that could be harnessed for educational purposes. However, it is imperative to exercise caution and critical evaluation when considering the credibility and appropriateness of content shared on these platforms, based on insights from interviews with parents.

Based on interviews with parents, online games were identified as having the potential to enhance cognitive skills in young children. Nonetheless, concerns were raised regarding addiction and the potential to divert children from other beneficial activities. According to insights gathered from Table 1, analysis of "How often did your child use the following digital web-enabled devices and applications in the last two weeks?" is shown. Table 1 summarises the digital device and application usage patterns of surveyed children over the previous two weeks categorised into three frequency levels: "Never", "Rarely and Sometimes", and "Always and Often". Notably, a substantial portion of children use social media and online games, with 5 reporting frequent use of social media and 7 for online games. Multimedia and mobile phones also see frequent use, with 11 children using multimedia and 9 using mobile phones regularly. In contrast, most children rarely use computers (13 never, 2 rarely) or tablets (13 never, 2 rarely). Internet connections are widely used, with nine children reporting constant use, while "Other" devices or applications appear rarely or never used by the surveyed children. The data in Table 1 suggests several trends in the surveyed children's digital device and application usage. Notably, many children actively engage with social media and online games, indicating high interest in these platforms. Multimedia and mobile phones are also popular, with many children using them regularly. On the other hand, computers and tablets are less frequently used, with most children rarely using them, possibly reflecting a shift towards mobile devices. Internet connections are prevalent and consistently used, emphasising the importance of connectivity in children's digital activities. The infrequent use of "Other" devices or applications suggests that these were not significant points of interest for the surveyed children, possibly indicating a preference for more mainstream digital tools and platforms. This analysis suggested that the children had infrequent usage of various digital web-enabled devices and applications, with more consistent usage observed for social media, online games, multimedia, mobile telephones, and Internet connection reviews with parents, platforms like YouTube offer educational content, granting access to instructional videos and valuable learning resources for children.

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Parents, as revealed in interviews, recognised the versatility of mobile telephones, computers, and tablets, which supported on-the-go learning, communication, and research. However, it was stressed that responsible usage and active parental guidance were deemed essential to ensure safe and age-appropriate utilisation by young children.

5. Descriptive analysis

The parents provided ratings (see Table 2) for their children's usage of digital technological tools, using the categories 'Poor', 'Fair', 'Good', 'Very Good', and 'Excellent'. The ratings were recorded for different tools, including social media, online games, multimedia, mobile telephones, and Internet connection. The computer and tablet groups were removed as both of the devices were not used or did not gain responses from the parents, as validated by their responses from interviews and in Table 1.

According to the responses of the participants, the children received various ratings across the tools. For social media and online games, ratings varied between 'Poor', 'Fair', 'Good', and 'Excellent'. Multimedia had ratings ranging from 'Poor' to 'Good', while the children's mobile telephone usage received ratings mostly in the 'Fair' and 'Good' categories. Ratings for the Internet connection spanned from 'Poor' to 'Very Good', with no ratings for 'Excellent'. No one opted for the 'Other' category (see Table 2).

This descriptive analysis provides insights into the quality levels of fair usage by the children in terms of responsible and age-appropriate use of digital technology and online resources (using web-enabled digital devices to search age-appropriate digital contents for learning purposes) from the perspectives of parents.

6. Conclusion

In conclusion, the discussion sheds light on the significant role of technology in teaching and learning, particularly during the challenging times of the Covid-19 pandemic. Parents shared their experiences and highlighted the instrumental skills they acquired using digital tools and media to facilitate their children's education. They expressed gratitude for the support received from teachers and the newfound understanding of the teaching profession's challenges from classroom management to pedagogical practices. This study describes this as the parents being ready to accept the changes or the shift to online learning, with the teaching and learning converging to a hybrid mode in the future with the full support of parents. This specific finding carries significant implications in light of current pedagogical trends in global education. Jenkins (2006) argues for increased convergence in teaching approaches, while Ito et al. (2010) highlight the growing prominence of online or hybrid models of learning aimed at fostering 21st-century skills. The importance of this finding is underscored by its increasing alignment with these educational trends.

The involvement of parents in the teaching and learning processes during the pandemic brought personal benefits, including increased knowledge, stronger relationships with teachers and fellow parents, and the development of a supportive network. While managing overlapping roles was difficult, using technology, primarily through uses of smartphones and platforms like Google Meet, WhatsApp,

Table 1. How often did your child use the following digital web-enabled devices and applications in the previous two weeks?

	Never	Rarely and Sometimes	Always and Often
Social media	3	7	5
Online games	3	5	7
Multimedia	0	4	11
Mobile phone	0	6	9
Computer	13	2	0
Tablet	13	2	0
Internet connection	0	6	9
Other	15	0	0

Table 2. Rating the quality level of usage of the digital technological tools with their child in terms of usage

	Poor	Fair	Good	Very Good	Excellent
Social media	3	2	7	0	3
Online games	3	2	7	0	3
Multimedia	5	4	6	0	0
Mobile phone	0	8	7	0	0
Internet connection	3	2	7	3	0

and YouTube, proved invaluable in facilitating communication, sharing educational resources, and engaging in online classes.

However, the hazards of technology in the age group of three to six years were also acknowledged. Parents expressed concerns about potential misuse, addiction, excessive screen time, and limited social engagement. It became evident that responsible usage and proper guidance were essential to mitigate these risks and ensure a healthy and balanced learning environment.

The discussions with parents emphasised the importance of imparting foundational skills, such as the alphabet, numbers, reading, and writing to children in this age group. While the transition to online learning during the Covid-19 pandemic provided inputs such as the importance of foundational skills and outputs, nevertheless, particular challenges like teaching regional language alphabets were encountered.

Moving forward, it is crucial to recognise the benefits of technology in early education while addressing its associated risks. Parents, teachers, and policymakers must collaborate to establish guidelines and practices that promote responsible and effective use of technology for young learners. By harnessing the potential of digital tools and media, we can create engaging and interactive learning experiences that empower children and prepare them for the digital world they will navigate.

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Appendix

Profile Questions

In this section, you will be asked basic questions about you and your family background and once again, I assure you that your identity will be kept confidential.

1. Name :
2. Phone Number :
3. E-mail ID :
4. Age :
5. Gender :
    1. Male:
    2. Female:
    3. Other:
    4. Prefer not to say:
6. Town/Place/Locality of your house:
7. Do you have a child learning in the pre-primary class?

    Yes/ No
8. Name of School and Place:
9. Class/grade of your child:
10. Category
    1. Other Backward Class
    2. Scheduled Caste
    3. Scheduled Tribe
    4. Economically Weaker Section
    5. General
    6. Prefer not to say
11. Do you have a ration card? If yes, what is the Color of the Ration Card?
    1. Yellow
    2. Pink
    3. Blue
    4. White
    5. No, my family do not have a ration card
    6. Do not know

12. What kind of house are you living in?
    1. Own House
    2. Rented House
    3. My family does not have a house
    4. Other
13. The number of family members:
14. Number of earning members:

Interview Questions

- Do you have young children in the pre-primary class?
- Were they attending any school or educational/tuition centres before the COVID-19 pandemic other than home-schooling?
- If yes, why did you send your children to the school or educational/tuition centres, even after schools were closed and restricted?
- How were the school or educational/tuition centres more preferred to homeschooling?
- How would you describe home-school engagement with your children's schools?
- How could such engagement benefit the child?
- Who is more involved in this engagement from the parents?
- What kind of support does the school offer parents to adjust to online learning?
- How would you describe your satisfaction with the school's shift to online learning?
- How were child engagement and response to online education?
- What has been your dominant parenting style, disciplining, making them study during the Covid-19 pandemic? Did this change in the Covid-19 pandemic and post-Covid-19 period?
- What were digital competency skills learned from Covid-19 pandemic? like
    1. Instrumental skills for using digital tools and media.
    2. Technical knowledge, theories, and concepts.
    3. How have your attitudes about strategic use, openness, critical understanding, creativity, accountability, and independence changed over time?

  Could you explain with examples?
- How did you manage teaching and learning practices using technology?
- What personal benefits did the parents have by involving with the teaching and learning of their children?
- How did you live or manage through overlapping roles (parenting with teaching facilitation) during COVID-19; the role of technology in teaching and learning?
- Have you made any personal effort to learn the use of technology to teach your children? Furthermore, what benefits did you feel from participating in the teaching and learning process during the COVID period with your child?

  How do you cope with using technology for teaching and learning practices during COVID and post-COVID?
- According to you, what should education impart to learners aged three to six and how? Moreover,
    1. Were the same expected inputs and outputs imparted during the teaching and learning during COVID-19? explain with reason and how?
    2. What is the role of technology in imparting the same?

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- Could you explain the main hazards of using technology in the age group of three to six? What are the main benefits of technology in this age group?
- What is your understanding of digital technology and its tools like social media, online games, multimedia, mobile phones, computer, tablet and internet connection?
    1. How often did your child use the following gadgets in the last two weeks?
    2. Rate the frequency of usage of the following digital technological tools by your child in (Never – Rarely – Sometimes – Always – Often)

       1- social media, 2- online games, 3- multimedia, 4- mobile telephone, 5- computer, 6- tablet, 7- Internet connection, and 8- other
- Rate the quality level of usage of the following digital technological tools by your child in (Poor – Fair – Good – Very good – Excellent)

  1- social media, 2- online games, 3- multimedia, 4- mobile telephone, 5- computer, 6- tablet, 7- Internet connection, and 8- other
- Was it different before and during COVID-19? Explain with reasons.