



University of  
Southern  
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# Exploring the efficacy of eKindy: Building parent capacity & supporting positive learning outcomes for children

Final Report

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# Executive Summary

Children residing in rural and remote regions of Australia are “three times more likely to be developmentally vulnerable on two or more domains” (Department of Education and Training, 2019, p. 40).

Every family deserves access to resources that will set their children up for a positive start in life, successful transition to school, and equitable opportunities for developing a strong foundation and positive learning and life course trajectory (Council of Australian Governments. Education Council, 2019; NSW Department of Education, 2018; Office of the High Commissioner for Human Rights, 1990). Children residing in rural and remote regions of Australia are “three times more likely to be developmentally vulnerable on two or more domains (30.3 and 10.2 per cent)” than their metropolitan counterparts (Department of Education and Training, 2019, p. 40). This higher vulnerability reflected in the 2021 Australian Early Development Census (Department of Education, Skills and Employment, 2022), where researchers noted, “13.1”% of children in regional areas and “20.7”% of children in remote areas were “developmentally vulnerable in two or more domains” (p. 26).

“In 2021, there was an increase in developmental vulnerability for children living in regional and remote areas, driven primarily by fewer children on track in their language and cognitive skills (school-based)” (p. 5). The report’s authors (Department of Education, Skills and Employment, 2022) cite “9.0”% and “20.0”% developmental vulnerability on this domain (p. 27). Given these types of statistics, quality early childhood learning is an essential ingredient in successfully transitioning to school, as well as influencing later life. This is particularly important for specific populations such as families in rural and remote communities and Indigenous children and families, that are, by their postcode or circumstance, identified as “vulnerable” (Arabena et al., 2015; Ritte et al., 2016).

Virtual ECE programs, such as unique eKindy program (Education Queensland) affords for greater opportunities for access and participation in early childhood learning, increasing school readiness, particularly for children whose primary education is through distance education. Programs like eKindy can build parents’ capacity as their children’s first teachers, similar to those of the Abecedarian approach (Sparling & Meunier, 2019). The need for quality virtual ECE programs, particularly for children and families who experience disadvantage, has been highlighted by virtual programs during COVID-19 lockdowns in many countries (Australian Council for Educational Research [ACER], 2021; Atilas et al., 2021; Ford et al., 2021; OECD, 2020, 2021).

Quality early childhood learning is an essential ingredient in successfully transitioning to school, as well as influencing later life trajectories.

The innovative eLearning model, eKindy, is delivered to children in the year prior-to-formal schooling in a unique way. In this report understandings of eLearning draws from Sangrà et al. (2012). As an “educational model”, eLearning is “based on the use of electronic media and devices as tools for improving access to training, communication and interaction and that facilitates the adoption of new ways of understanding and developing learning” (p.152). The eKindy program entails a teacher providing part of the program online each week and the child’s parents or a significant caregiver, delivering the remainder of the program.

The eKindy program, therefore, largely takes place in the child’s home environment. Such a delivery mechanism implies that eKindy can be used to build capacity in two ways. First, it builds parents’ capacity as a child’s first teacher. Second, it helps build learning and developmental outcomes for children. The positive support for learning is particularly important as many children in the eKindy program live in rural or remote areas distant from “an early childhood education and care service” (Queensland Government. Early Childhood Education and Care, 2020, paragraph 4), or where children with medical needs are unable to access a ‘physical kindergarten context, or whose family is *itinerant*’.

This report highlights key points in the **literature, and key findings from two research projects investigating the efficacy of the eKindy program**. The literature review draws attention to early learning contributing to positive outcomes later in life, parents as first teachers, and early childhood teachers forming partnerships with parents to further parents' role as first teachers. Initiatives such as eKindy can, therefore, contribute significantly to early learning for young children, particularly those with limited access to a physical 'pre-school' through increasing access and equity. The review draws attention to virtual early childhood programs being brought into focus during COVID-19 lockdowns, suggesting the ongoing and need for flexibility in the provision of early childhood education.

In **Project 1**, researchers explored *whether eKindy built parents' capacity as their children's first teachers*. Data is drawn from parents' responses to questions about (1) *their goals and expectations of the eKindy experience for both their child and themselves* and (2) *whether they thought they had achieved these goals*. Parents expected, through eKindy, they would develop greater understanding of how their child learnt, and how they might support their child's learning styles. They also hoped that, through their participation as a parent in supporting their child's learning during eKindy, they would develop a closer relationship with their child.

Findings from Project 1 data indicates that the majority of parents participating in this program had these expectations fulfilled. In addition, parents observed their child was ready to start school. Notably, there was considerable respect for the power of play in supporting their children's learning. This reflects the approach that eKindy adopts, where play-based pedagogy is at the heart of the eKindy program. Some parents came to view their participation in the eKindy program as a teaching/learning opportunity for their child. The eKindy program, therefore, built parents' capacity and self-efficacy as parents and as first teachers.

Turning to **Project 2**, researchers focused on *teachers' and school leaders' perceptions of children who had participated in eKindy prior to commencing Prep at their school*. This research explored whether eKindy was supporting positive learning outcomes for children in rural or remote locations, or children unable to attend a traditional kindergarten setting due to other personal circumstances that prevent opportunities for learning. Children and parents who had participated in eKindy were more ready for and engaged in school than children and parents who had not attended a kindergarten program. Children transitioned to Prep faster. They had higher social and language and literacy skills than children who had not attended a kindergarten program. Children who attended an eKindy Pod at a state school transitioned to the physical classroom better due to familiarity with the school and the teachers. Children who attended an eKindy program also evidenced successful transitioning to distance education due to developing foundational technological skills and motor coordination. Prior to discussing the data, eKindy is located within the literature.

*This report makes 11 findings and two recommendations about eKindy*. These findings and recommendations highlight the uniqueness of the eKindy model and its benefits for children living in rural and remote areas of Queensland as they begin their schooling journey. These benefits include building the capacity of parents as their children's first teachers, and the development of school readiness for children living in rural and remote areas of Queensland. Among other elements, these benefits accrue from a play-based approach to early learning that occurs in a location that is accessible for families—namely, the home. The report highly recommends that eKindy continue to provide a play-based program in both online and Pod forms to ensure the early learning, developmental, social, and school readiness needs of children and families living in rural and remote areas of Queensland continue to be met. It is also recommended that, to enhance equity and flexibility, eKindy be promoted in hospitals and other health care settings to increase access to early learning for children with medical needs.



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# **Review of the Literature**



## Introduction

The early years of life can be understood as critical to holistic development, wellbeing, and successful transitions to school as well as to later academic, employment, and life success (Arabena et al., 2016; Clanchy et al., 2022; Moore et al., 2017; OECD, 2020; State of Queensland. Department of Education, 2020). Children's participation in an early childhood education (ECE) program in the year prior-to-school is considered essential to their future academic and life chances (Arabena et al., 2016; Fordham & Kennedy, 2017; O'Connor et al., 2017; OECD, 2020, 2021a, 2021b; Queensland Government. Department of Education, 2020; Ritte et al., 2016; Shonkoff, 2017). Traditionally, ECE has been delivered in face-to-face programs; however, not all children have easy access to an ECEC service or program. One way this difficulty might be overcome is through virtual ECE programs.

While learning from home has been more common for primary and secondary schooling, more recently it has been embraced and used for ECE, particularly in contexts such as Queensland, Australia, where it has been used for some years to enable young children in rural and remote locations to participate in an ECE program. As many children in these locations engage in distance education classes for primary schooling, a virtual ECE program can prepare and build a strong foundation for virtual school learning. Virtual ECE programs, then, have the potential to increase access and equity for young children and their families (ACER, 2021; OECD, 2020, 2021; Queensland Government. Early Childhood Education and Care, 2020).

The literature reviewed for this report indicates that eKindy — a virtual ECE program for children in rural and remote areas — is an innovative initiative that is important in a state as diverse and dispersed as Queensland. Consequently, initiatives such as virtual ECE can enable participation in early learning programs for children living in rural and remote areas, transient families, or children medically unable to attend a local early childhood service, in the year before Prep (Brisbane School of Distance Education, 2023; Queensland Government. Early Childhood Education, 2022; 2023). Virtual ECE programs can assist children in these settings to transition successfully to both distance education for primary schooling, or face to face schooling.

To reach this conclusion we first consider the context for virtual ECE. This context includes international and domestic research and policy, such as that produced by the Organisation for Economic Co-operation and Development (OECD) (2020; 2021a, 2021b) and by Australian State Education Departments (Department of Education and Training, 2019; NSW Department of Education, 2021; Queensland. Department of Education, 2018, 2020; Queensland Government, n.d.; Queensland Government. Early Childhood Education and Care, 2020). These OECD publications cover questions of *equity, quality and transition in early childhood education and digital technology in early childhood education*. The Australian Federal and State Government Education Department publications focus on early childhood development and learning. Following this literature review, we provide our methodology and present analysis of the data from both projects. To conclude the report, we argue that virtual ECE programs, such as eKindy, provide greater opportunities for access and participation in early childhood learning, increasing school readiness, particularly for children whose primary education is through distance education.

## Background and context

This review is underpinned by the belief that every family deserves access to resources that will set their children up for a positive start in life, successful transition to school, and equitable opportunities for developing a strong foundation and positive learning and life course trajectory (Council of Australian Governments. Education Council, 2019; NSW Department of Education, 2018; Office of the High Commissioner for Human Rights, 1990). It is important to recognise here, that the early years of a person's life are considered the most crucial in their development, whether that be the first 1000 - 2000

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days (Arabena et al., 2016; Moore et al., 2017; State of Queensland. Department of Education, 2020), or to the age of six (OECD, 2020), providing the basis for how successful they are academically, in employment, and in life (OECD, 2020).

Drawing on neuroscience, the OECD (2020) argues:

High quality early childhood education and care has been shown to provide a wide range of benefits ... These benefits include supporting social and emotional well-being, lowering risks of school dropout and even contributing to higher learning and employment outcomes later in life (OECD, 2017) ... Investing in early childhood education and care and ensuring universal access to quality services is not only one of the most effective ways to reduce inequities, it is also the most *efficient*. ... Research shows that disadvantaged children can benefit most from high-quality early childhood education ... (p. 4. Emphasis in original).

Consequently, the OECD (2020) suggests participation in ECE, particularly for children from disadvantaged backgrounds, needs to be encouraged through increasing “*awareness about the benefits of early childhood education and linking its provision with other services* ... as well as expanding and adapting the supply of ECE, additional outreach efforts are often needed to overcome some of the less visible barriers to equal participation ...” (p. 11. Emphasis in original). The OECD also calls for legislation, measures to make ECE free, or at least more affordable, and greater public spending on ECE. The authors of this report note, that despite the evidence showing the advantages from greater public investment in ECE, most OECD countries are spending “less than 0.5% of GDP on pre-primary education” (p. 19). Need for public spending on ECE is evident in PISA data, which indicates children from advantaged backgrounds are more likely to participate in ECE than are children from disadvantaged backgrounds (p. 16). Further, in many OECD countries, pre-primary education is largely provided by non-government organisations, with primary education being largely provided by the government sector (p. 17). In Australia, approximately 85% of pre-primary education is provided by non-government organisations, while just under 30% of primary education is provided by this sector (p. 18).

Every family deserves access to resources that will set their children up for a positive start in life, successful transition to school, and equitable opportunities for developing a strong foundation and positive learning and life course trajectory.



Considering elements of quality ECE, the OECD (2020) highlights Australia’s Early Years Learning Framework, as well as use of “guidelines and frameworks” to enhance staff-parent interactions (p. 25). The OECD (2020) also stress that staff training and professional development support quality ECE, with the importance of ECE teachers having a university Bachelor’s degree in early childhood education, and the use of relevant ongoing in-service professional development opportunities (pp. 25-26). Relevant professional development requires “policy makers to engage with early childhood education” staff (p. 27), which includes addressing issues such as employment security, staff shortages, and cost preventing attendance at professional development activities (pp. 28-30). A further element is a low staff:child ratio to enhance job quality for staff, consequently improving children’s learning (pp. 25-26). Finally, a “monitoring and quality assurance framework” (p. 27) in respect to what is essential.

This discussion of quality is important for the OECD (2020) in that it impacts the success of children’s transitions from ECE to primary school. The OECD points to “age-appropriate pedagogical practices” (p. 32), “equip[ping] pre-primary and primary staff and leaders with knowledge and skills of transitions” (p. 33), and then have “tools” to “monitor children” (p. 34). It also means having “the structural conditions that facilitate co-operation and collaboration across pre-primary and primary schools” (p. 35) such as national guidelines, developing understanding of pedagogical positions at each level, preparing both children and parents to transition and “coordination across community, family, health and social services” (p. 38).



Preparation of families and “coordinating across” (OECD, 2020, p. 38) a wide range of institutions (Arabena et al., 2016, p. 29) are also some of the points evident in Arabena et al.’s (2016) expansion and adaption the first 1000 days model to Australian Aboriginal and Torres Strait Islander communities. This work undertaken by Arabena et al. (2016) highlights the importance of partnerships with families in ECE, including increasing recognition of parents as children’s ‘first teachers’ — and their role in supporting their children’s early learning and development in particular (Chan & Ritchie, 2016). This focus acknowledges capacity and empowers capacity (Jacobs et al., 2021; O’Connor et al., 2017) in order to provide parents with credible information on topics such as infant and family nutrition, as well as quality of parenting, including interactions, relationships (Emerson et al., 2012).

As indicated above, this focus includes parental engagement and involvement in early education and early learning services (Australian Department of Education, 2017). One way to focus on the importance of families as children’s “first teachers” (State of Queensland. Department of Education, 2020, p. 17) is through the Abecedarian Approach. This approach was developed in the 1970s to serve children living in families experience disadvantage, with recent research identifying benefits into adulthood (Campbell et al., 2014; Sparling & Meunier, 2019). An Australian version of this “evidence-based” approach is Abecedarian Approach Australia or 3a (Melbourne Graduate School of Education, n.d.), which connects with Australia’s Early Years Learning Framework (Australian Children’s Education and Care Quality Authority, 2022; Sparling, 2011). In Australia, children living in rural or remote areas are more developmentally vulnerable than children living in metropolitan areas. A focus on access and equity is essential to reduce this vulnerability. As highlighted by COVID-19 lockdowns, virtual programs can be a way to increase access to early learning opportunities for children living in these areas. Literature relating to children in rural and remote areas, access and equity, and early childhood programs during COVID lockdowns are considered in this section of the report. Prior to discussing the disadvantage experience by children in rural and remote areas, the method for this literature review is summarised.

## Review Method

Researchers scanned the literature focusing on keywords referred to and contextual to the eKindy research project. Examples of key words searched are: “early childhood education”, “early learning”, “virtual early learning”, COVID-19 and early childhood, “early childhood education” or “early learning” and “rural or remote”, “early childhood” and education or learning and access or equity or flexibility. These searches were conducted in ERIC, ProQuest, Ebsco, Scopus, and Informit.

## Discussion

The context section of the review highlights the importance of quality ECE to a child’s future academic and life success. It also points to several potential barriers and concerns, which are particularly appropriate to a country such as Australia. These barriers and concerns relate to children growing up in families located in rural and remote areas; and questions of access, equity, and flexibility, such as the need for programs and services that serve the specific needs of vulnerable communities such as First Nation families (Arabena et al., 2015; Ritte et al., 2016). These issues have been further illuminated through the impact of digitisation and COVID-19, where many educational programs pivoted to virtual delivery (OECD, 2023). This discussion begins with consideration of children growing up in rural and remote areas, which is of interest in a state as diverse as Queensland, Australia.

## Rural and remote

In Australia, and in other parts of the world, children of families in rural, remote, or very remote areas are recognised as having increased developmental vulnerability (Arefadib & Moore, 2017; Australian Institute for Health and Welfare, 2019a; Department of Education, Skills and Employment, 2022). In Australia, “rural and remote” refers to all geographical “areas outside Australia’s *Major cities ...* these areas are classified as *Inner regional, Outer regional, Remote or Very remote*” (Australian Institute for Health and Welfare, 2019b, paragraph 1. *Emphasis in original*). In its 2021 Australian Early Development Census, the Department of Education, Skills and Employment (2022) found that, nationally, almost 25% of children living in regional areas and almost 35% of children living in “Remote / Very Remote” areas were “developmentally vulnerable” in at least one domain (p. 26). These domains are “physical health and wellbeing”, “social competence”, “emotional maturity”, “communication skills and general knowledge”, “language and cognitive” (Department of Education, Skills and Employment, 2022, pp. 11-12). The Queensland Government estimated that, in 2018, approximately “3%” of children lived in “remote or very remote”, 14% lived in “outer”, and 19% lived in “inner regional” areas (State of Queensland. Department of Education, 2020). There are approximately 115,000 students attending schools in these areas, with 44% in these areas identifying as Aboriginal or Torres Strait Islander (Queensland. Department of Education, 2018, p. 1). Queensland has “more than 630” ECE “services in rural and remote areas” (Queensland. Department of Education, 2018, p. 1).

In 2018, approximately 3% of children lived in “remote or very remote”, 14% lived in “outer”, and 19% lived in “inner regional” areas (State of Queensland. Department of Education, 2020).

As far back as 1985, Harley (1985) proposed “an alternative organizational model for early childhood distance education programs” based on: generating “attitudinal change” at a systems level; recognising that a ECE program at home has a different “structure” from an ECE program at a centre; recognising “the parent as the main educator and facilitator”; seeing the teachers’ role as supporting parents; and requiring teachers to have good “interpersonal skills” (p. 158). The Queensland Government (2018) is seeking to: increase how many Year 3 children in schools in rural and remote areas are “at or above the National Minimum Standard in ... reading”; retain more “teachers and school leaders in” these schools; and ensure “all rural and remote state schools have a strategy in place to create positive partnerships with students, families and their communities” (paragraph 5). Such goals draw attention to the role of programs such as eKindy to enable not only access to and participation in a kindergarten program but to also build the capacity of parents as partners in their children’s learning.

These partnerships among schools, their students and families, and wider communities are important when the ubiquitous nature of technology is considered, particularly as Australians who live in:

low-income households and those in rural and remote areas have significantly less access to high-speed Internet connections and reliable computing devices. This means some students have difficulty accessing learning material at certain times, especially if they are relying on shared devices (ACER, 2021, paragraph 14).

## Access, equity, and flexibility

The points and suggestions raised by ACER (2021) highlight the need to consider access, equity, and flexibility in delivering ECE. It is apt, therefore, to be mindful of factors that might indicate a child or family as *vulnerable*. “Developmentally vulnerable” refers to when a child is “facing some significant challenges in their development” (Department of Education, Skills and Employment, 2022, p. 7). Niklas, Tayler, and Gilley (2017) identify several risk factors that indicate a child may be vulnerable to lower academic and life outcomes in Australia. These factors include “material disadvantage”, “psychological disadvantage”, low family SES, the language used at home being different from the language used in the school system, “child characteristics”, the residential neighbourhood, and the circumstances of the time



(p.107). These factors of vulnerability have also been noted in relation to preschool attendance with respect to First Nations peoples in Australia (Hewitt & Walters, 2014). In recent research of records of than 100,000 Australian children, Falster and colleagues (2021) found that preschool had developmental benefits for Australian children. Hewitt and Walters (2014) identify these benefits as a greater vocabulary and better “school-readiness” than children who have not attended or experienced “lower” attendance at pre-school. Yet children living in families whose mothers have less education, whose families experience greater:

financial stress; with more children in the household; living in a less advantaged neighbourhood; who speak a language other than English; and who have a mother with higher levels of psychological distress or poorer parenting behaviour were less likely to be enrolled. ... children of lone parents, low employment and lower income families are less likely than their counterparts to attend preschool. ... Indigenous families are over-represented among families with many of these characteristics. (Hewitt & Walters, 2014, p. 42)

In summary, in their recently reported Australian research, Skattebol, Adamson, and Blaxland (2023) note families who experience economic hardships “are the most likely group to miss out on the advantages of regular sustained participation in high quality early childhood education and care” (p. 01). Where children have limited access to early childhood education, they are more likely to be “developmentally vulnerable”. Of note, “[i]n Australia, there are an estimated 11% of children assessed by teachers to have two or more developmental vulnerabilities and many of these children are living in economically disadvantaged contexts” (Skattebol et al., 2023, p. 01).

Similar to these Australian findings, points have been made in relation to countries such as Canada. Russell (2011) has asserted children who grow up in poverty face multiple stressors. Parents have less time and are more stressed as they struggle to meet basic needs, have less books, etc., and experience negative attitudes from other members of society. Russell (2011) adds that families living in poverty feel less worthy and are more likely to be noticed by child safety. Poverty has negative impact on child development including:

low birth weight; diminished cognitive development; and higher likelihood of both physical and mental health problems. These disadvantages frequently are cumulative and interrelated ... and child development is most adversely affected when families in poverty suffer from cumulative and prolonged adverse social and physical environmental conditions (Russell, 2011, pp. 55-56)

It might be suggested, therefore, that government policies can both increase and decrease equity among members of society. Consequently, it might be asserted, that governments enacting policies focused on enhancing access to and participation in early childhood education might be seeking to enhance equity for families living in poverty.

What the research discussed in this section indicates is increasing equity in education necessitates flexibility in how schooling, including early childhood education, is accessed. For instance:

Though we will always need brick and mortar schools, our “new normal” must include hybrid and virtual education options for students who do not have access to safe and healthy classrooms. The consequence of not making this shift will be putting an at-risk generation further behind their peers (Hatch, 2021, p. 60).

A related measure for access, equity, and flexibility is addressing the digital divide between those who have access, and the skills to use technology and those who do not have these tools or capacities. One way to assist in reducing this divide is enabling “the most isolated and unconnected students to join the connected world of the twenty-first century [which] can be described as a “chicken and egg” problem. The skills required to engage with ICT are commonly taught by ICT enhanced learning” (Hillier, 2018, p. 118). One of the ways educational institutions could reduce this digital divide is providing e-learning

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offline to students in remote and isolated communities with IT skills and content learning. These examples involving technological solutions where materials are included on USB that replicates much of what exists at the educational institution, overrides the “operating system” on the student’s hardware, and can hopefully enable “two-way communication” (Hillier, 2018, pp. 114, 115).

The need to consider ways to implement access and equity measures that might mitigate some of these barriers in respect to early childhood education is critical. This requires policies supporting equity and equality, and embrac[ing] broader social justice issues”, such as governments providing more

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“funding and resources ... to enable more time to support and engage with children and their families experiencing vulnerability and disadvantage in ECEC services” (Roberts, 2017, p. 7).

Further, to be “effective”, teacher-family “partnerships” need to be “seen to be non-judgemental, non-expert approaches that demonstrate reliability, commitment, trustworthiness, confidentiality, and empathy. ... understanding families from ‘where they are at’ and where being ‘empathetic’ is vital” (Roberts, 2017, p. 8). Developing such relationships requires “time” (Roberts, 2017, p. 8) as parents might have had previous negative experiences. Hence, “social connection, a sense of belonging, combating isolation, seeking trust, and feelings of inclusion” are important

(Roberts, 2017, p. 9). What the research reported on in the articles reviewed for this report indicates is that high quality ECE programs need to be provided in a more universal manner — which is the argument postulated by Fordham and Kennedy (2017). Such programs can be important in seeking to engage children and families who are “vulnerable”.

## COVID-19

Responses to COVID-19 across the world have brought virtual schooling into sharp focus (Bartolic et al., 2021; Chaudhary et al., 2021; Eagen et al., 2021; Eagen & Beatty, 2021; Ford et al., 2021; Hatch, 2021; OECD, 2021a; Olsen et al., 2020; Starkey et al., 2021). Lockdown responses to COVID-19 saw a rise in the use of virtual schooling. This trend was, however, more common at the primary and secondary school levels than at the prior-to-school level. Nonetheless, some ECE centres did pivot to online programs. The OECD (2021a) documents findings from a survey of countries (and in some cases sub-national jurisdictions such as Queensland, Australia) about the use of digital technologies in early childhood education pre-COVID-19, during COVID-19 lockdowns, and government strategies for the future. Both “pre-primary” (children approximately 3-6 years old) and primary (children approximately 7-8 years old) are considered. The OECD found, at both stages, there was a greater use in primary than in pre-primary and that the use of digital technologies for communicating with parents, including sending materials and supporting parents as teachers, increased during the pandemic.

While a greater use was made of technology, television programs, and radio programs at the primary level, exposure to screen time for learning was limited to approximately one hour a day at “pre-primary” level (OECD, 2021a, pp. 29, 37). In jurisdictions such as Queensland, it seems that pre-existing resources such as distance education might have been used to facilitate children’s learning. Associated difficulties evident in several OECD countries were the lack of access to technology and the content of age-appropriate or educationally appropriate technologies for early childhood education (OECD, 2021a, pp. 38-40).

In multiple studies accessed for this literature review, researchers not only identified limited work on virtual play-based learning, or on e-learning in ECE more generally, but also explored experiences of moving to or greater use of virtual teaching and learning in ECE during COVID-19 lockdowns (Ethridge, Malek-Lasater, & Kwon, 2022; Plotka & Guirguis, 2022; Viner et al., 2020). Respondents to Ford et al.’s (2021) online survey of 529 ECEs in the United States—along with writers such as Atilas et al. (2021) in



Latin America, Yildiz et al. (2023) in Turkey, Veraksa et al. (2021) in Russia, and Shaik (2023) in South Africa—highlight challenges evident in virtual teaching and learning in ECE. Teachers' challenges and concerns included their practice of virtual teaching and learning; whether digital tools were age-appropriate; the extent to which children were participating and engaged; involving or partnering with parents/caregivers; difficulties with technology; resourcing; and preparation for teaching online (Atilas et al., 2021; Ford et al., 2021; Yildiz et al., 2023). Atilas et al. (2021) reported that some teachers in low-income areas in Latin America expressed concern about the food insecurity experienced by, and wellbeing of, children's families, with schools either providing food or having parents collect learning resources.

There were, however, positive impacts of virtual ECE during COVID-19 lockdowns. Teachers and researchers in other studies highlighted how valuable family inclusion and participation were and expressed gratitude for virtual learning activities, while children appeared to like the social interaction afforded by eLearning (Ford et al., 2021; Steed et al., 2022). In this sense partnerships between teachers and families are an important element in the success of eLearning. Interestingly, in a United States study with more than 50 parents and more than 50 teachers, teachers were more positive about virtual ECE during lockdowns than parents were about the experience (Plotka & Guirguis, 2022). These challenges and successes prompted ECE teachers in Ford and colleagues' (2021) study to offer suggestions to enhance virtual ECE. Three of the suggestions for adapting to virtual learning proposed by ECE teachers include gaining professional learning; gaining support, appropriate resources, and other guidance; and collaborating with colleagues (Ford et al., 2021).

These suggestions are of interested because, as noted in this report, primarily ECE has been face-to-face. Yet not all families have access to an ECE service for their children, a point that has been reinforced by learnings from the experience of virtual teaching and learning in ECE during COVID-19 (ACER, 2021; Atilas et al., 2021; Chaudhary et al., 2021; Dabrowski et al., 2020; Ford et al., 2021; OECD, 2020, 2021). This experience brings into sharp focus thinking through questions of access, equity, and flexibility in providing ECE services. One strategy for addressing this issue is offering a virtual ECE program. However, with the exception of some ECE programs during COVID-19 (such as those noted above), there are not many examples of virtual ECE evidenced in the literature. One of only a few studies that have investigated this type of learning is a case study undertaken in the United States by Hatch (2021). This case study details a planned move to a hybrid offering of physical and virtual ECE program, with documented benefits for children.

Another study considered a short virtual ECE school readiness program offered to children in kindergarten. Families and early childhood teachers were satisfied with this program (Dore et al., 2021). This lack of examples is troublesome as it not only limits the ability for stakeholders to learn from existing models and practices, but it also limits the ability for the development of e-Learning programs that afford families access to resources that can establish an optimistic start to their children's life and learning journey (Council of Australian Governments. Education Council, 2019; Office of the High Commissioner for Human Rights, 1990).

eKindy is a unique, equitable, response to the challenges experienced by families in rural and remote, or vulnerable situations in accessing quality ECE programs.





## Summary

In this review we have considered both Australian and international literature related to ECE; children living in rural and remote areas; access, equity, and flexibility; and the impact of COVID-19 on ECE. This discussion has pointed to limited evidence of existing eLearning models, frameworks or programs for the years prior to school, before the emergence of COVID-19 as well as post pandemic, making eKindy unique in ECE. The discussion covered the increasing focus on early childhood and the veracity of the Abercedarian Approach in supporting parents as their children's first teachers. It also highlighted some of the difficulties people living in rural and remote areas have in accessing quality ECE programs, features indicating vulnerability, and examples of remote or virtual educational delivery. This review suggests, therefore, that programs, such as the eKindy e-learning program, might be considered a unique, equitable, and considered response to the challenges experienced by families in rural and remote, or vulnerable situations in accessing quality ECE programs at a national level as well as having application and consideration more broadly.

- ***Finding 1: As children living in geographically isolated areas are disadvantaged in their access to early learning opportunities, e-learning has the potential to enhance access to and equity for children living in these areas.***
- ***Finding 2: Play-based learning is important for early learning.***
- ***Finding 3: Parents are children's first teachers.***
- ***Finding 4: eKindy is a unique e-learning model that pre-dates the virtual ECE programs that emerged in response to COVID-19 lockdowns.***

**Research methods  
for investigating an e-  
learning early years  
model: Efficacy of the  
eKindy model**

## Background

eKindy is a unique program as it is one of only a few e-Learning early education programs that exists that are delivered into the home. It entails capacity building in the home, with *parents as first teachers* involved in their child's learning. As opposed to early intervention models, programs focussed on building parents' capacity not only recognises and celebrates parents as first teachers, but also supports parents in that task as a strategy to collaboratively support positive learning outcomes for children. This capacity building is important because it helps to: (1) set families and children up for success; and (2) build capacity in relation to ways to support children's early literacy, numeracy, the value of learning through play, and parenting skills. Project 1, therefore, examined *building capacity with parents and young families through engagement in the eKindy program*.

As noted in the literature review, children and families living in rural and remote areas are more vulnerable statistically than families living in urban areas (Arabena et al., 2015; Ritte et al., 2016). Such vulnerability can result in children in rural and remote areas struggling to achieve the same positive learning outcomes as their urban counterparts. *Project 2*, therefore sought to explore *the perceived impact of the eKindy program on supporting and developing strong learning outcomes for young children living in rural and remote areas*.

This research into eKindy has been two-fold:

- to explore the value and benefit parents identify from eKindy, not only for children but also for themselves (Project 1); and
- to explore the perceived impact of the eKindy program on supporting and developing strong learning outcomes for young children who are living in rural and remote areas, travelling or medically unable to attend a local early childhood service, in the year before Prep (Project 2).

In this section of the report the research method is considered. The two research projects are introduced, with both projects then explored in more depth in the following two sections. There is a focus on the research questions, participants, and analytical techniques in this section.

eKindy is a unique program as it is one of only a few e-Learning early education programs that exists that are delivered into the home.



### eKindy benefits for Prep

"The eKindy adventure this year with [our daughter]. It has set her up to enter Prep next year confidently."  
(Parent)

*Those who had attended the eKindy Pod knew the school, the teachers, and the school routine. Those who came from the online program were more confident and better at using technology. Children who attended eKindy in either form were modelling classroom behaviour for other children in Prep.*  
(Teacher)

## Research questions

Two key research questions were asked to achieve the aim of **Project 1**.

- 1) *How have parents and primary caregivers grown through their participation in the eKindy program?*
- 2) *What have parents learnt, particularly regarding strategies for supporting a child's learning?*

In 2020, parents were asked two questions prior to commencing the eKindy program and two questions at the end of the program. In 2021 and 2022, the same pre- and post-participation questions were asked, but with the addition of a third post-participation question.

Project 2 was guided by one key research question.

- 1) *What is the perceived impact of eKindy in supporting key developmental and learning outcomes for young children?*

## Participants

Forty-nine parents participated in Project 1 over 2020-2022. Data were gathered via *short answers to pre- and post-eKindy experience questions* over the three years. Early childhood teachers and leaders from six schools participated in focus groups for Project 2. These educators were drawn from three state schools and three distance education schools and participated in semi-structured focus group interviews conducted via Zoom. While educators were contacted in all three years of the project, responses were only obtained during the first two years of the research. Findings and discussion from Project 1 are considered in the next section.

## Analytical techniques

To analyse the data collected for Project 1, parents' and children's name were first anonymised and entered into an Excel spreadsheet. Participants with a complete data set were identified and their responses were transferred to a new Excel spreadsheet. Inductive coding was used to analyse the data, focusing on key words and phrases. The analyses for each response were then compared to identify common and divergent responses to each of the questions (Skjott Linneberg & Korsgaard, 2019). In Project 2, thematic analysis, guided by Braun and Clarke (2006; Clarke & Braun, 2013), was used to identify themes across the interview data provided by state school educators and distance education educators. Data drawn from parents as part of Project 1 is presented in the next section.

**Project 1: Exploring  
the efficacy of  
Building Capacity  
with Parents and  
Young Families  
through  
Engagement in the  
eKindy Program**



## Background

In considering the data from parents about their eKindy experience, their responses to the questions provided *prior to their child commencing eKindy* are presented first. Parents responses to *questions at the end of their child's eKindy experience* are then presented. Discussion of the findings is then considered.

### Pre-eKindy experience

Prior to commencing their eKindy experience parents were asked to respond to two questions that were included as part of the 'Child Family Information Form', and noted below:

#### 5. Anticipated outcomes for tutor/parent from eKindy experience

5.1 What benefits do you anticipate as the tutor/parent from engaging with your child in the eKindy program? (e.g. *understanding more about how young children learn*)

5.2 What is a personal goal you have for yourself as the tutor/parent from engaging with your child in the eKindy program? (e.g. *closer relationship with my child*)

Two themes were evident in the responses to the first question. First, parents expected they would have a connection or closer relationship with their child (2020, 2022). Second, parents expected they would gain understanding of how their child learns (2020–2022). Unlike the 2020 respondents, parents in 2021 and 2022 anticipated they would be able to better support their child or would watch their child grow. Responding to the second question, parents participating in eKindy during 2020 and 2021 identified the goal of a closer relationship with their child; a better understanding of how their child learnt; supporting their child readiness for school; and wanting to have fun while they supported their child's learning through play. Several participants in 2022 talked about having fun with their child or ensuring that the "school room" was "happy". One respondent in 2021 also emphasised gaining professional development. To summarise, the dominant themes that emerged from parents' responses as part of the Parent commencement form were about having a closer relationship with their child and having a better understanding of how their child learns. Two minor themes that emerged from the data were that their child would gain school readiness, and that parent and child would "have fun together".

### Post-eKindy experience

In 2020, two questions were asked of parents at the end of their children's eKindy year. Three questions were asked of 2021 and 2022 parents at the end of their children's eKindy year.

*Q1: How have you as a parent/primary caregiver grown through your participation in the eKindy program?*

Participants in 2020 indicated they developed understanding of learning through play. Several asserted the eKindy program taught them that *everyday life can be teaching opportunities*. Some respondents indicated they had greater confidence as a parent and greater confidence as a teacher. A couple had gained understanding that their children play and learn in different ways. The quotes below illustrate parents' responses to this question.



“The program has taught me to approach everyday life situations as teaching opportunities.”

“understanding how learning can be incorporated into so many everyday activities.”

“It’s an understanding of learning through play and having the understanding of how to help my child grow at her pace.”

In 2021-2022, parents identified the following benefits: having a better understanding of how their children learn and what they like in learning; skills to teach their child; and that learning can be fun. One parent from 2022 stated:

My eKindy student was very keen to complete days in the schoolroom as the year progressed. This proved that her love of learning was growing as she became familiar with the routine of the school day and on-air lessons. My personal goal was to have a happy school room and we did achieve that! eKindy is lots of fun. My child was learning through play.

“My child was learning through play.”

“I thoroughly enjoyed watching my daughter’s eagerness for “school” grow throughout the year and watch as she gained confidence ... and formed friendships.”

*Q2: What have you learnt about your child, their capacity, or strategies for supporting your child’s learning?*

In response to this question participants stated they had learnt how to teach in a way their child understood. Participants commented about a better understanding of how their child learns and how to support that learning style. Some participants had learnt to know when to simplify (and to increase the challenge) of learning activities so their child “understands or feels competent in having a go”. Some also commented they had a closer relationship with their child. Several found eKindy to have been fun for both their child and themselves. One participant from 2020 noted eKindy helped to identify their child was not adjusting and to implement measures to assist with adjustment. In 2022, several participants also noted their child had acquired computer skills. One participant noted that, at the conclusion of their child’s eKindy year, they felt their child was ready to commence Prep.

“We made the right choice to embark on the eKindy adventure this year with [our daughter]. It has set her up to enter Prep next year confidently.”

“I have learnt many strategies on how to support [my son] in his learning and we have both grown closer over the year.”

Q3: *What benefits did you identify as a parent from engaging with your child in the eKindy program?*

Parents whose children attended in either 2021 or 222 nominated benefits such as “satisfaction”, being more organised and having greater confidence with what their child needs for schooling (e.g., technologies and programs). They also stated that eKindy prepared their child to start school. A few were “amazed what [their child] learnt through play.” One respondent believed they now had a “more mature relationship with [their child].” Another parent expressed how satisfied they were seeing their:

“child write her name, count to 20, attempt to write numerals to 10, creating artworks from books she had enjoyed listening to all of which was brought about through eKindy. I thoroughly enjoyed watching my daughter’s eagerness for “school” grow throughout the year and watch as she gained confidence in on air lessons and formed friendships from Kindy play days. I feel the time together in the classroom strengthened our bond. I was able to see more of her strengths (and frustrations) in the schoolroom such as areas that interest her ...”.

## Discussion

Key themes across the responses were that parents expected that through their involvement in eKindy they would develop a greater understanding of how their child learnt and how they might support their child’s learning style. They also hoped that through their participation as a parent in supporting their child’s learning during eKindy they would develop a closer relationship with their child. These hopes were realised for the majority of participants. These participants also noted additional benefits from engaging in the eKindy program, primarily that their child was now ready to start school.

A notable insight that emerged from data gathered from *Project 1* was the significant *respect for the powerful vehicle that play had in support for children’s learning*. The value of play is often a difficult concept to promote or communicate to parents, so for this message to be reinforced in parent reflections was *gold* in terms of the importance of play-based pedagogy that sits at the centre of the eKindy program. Another significant insight reflected in the data was participants appreciating that their home contexts were valuable places for children to learn. This type of data indicating that the eKindy program helped build parents’ capacity and confidence as parents and as *first teachers*.

- ***Finding 5: eKindy built parents’ capacity and confidence both as parents and as first teachers. Parents increased their understanding and appreciation of play-based learning. eKindy enhanced children’s readiness for Prep.***
- ***Finding 6: eKindy enhanced parental engagement in their children’s learning.***

**Project 2: Supporting  
positive learning  
outcomes for rural,  
remote, and  
vulnerable children**

## Background

As noted in the literature review, children and families living in rural and remote areas are more vulnerable statistically than families living in urban areas (Arabena et al., 2015; Ritte et al., 2016). Such vulnerability can result in children in rural and remote areas struggling to achieve the same positive learning outcomes as their urban counterparts. Project 2, therefore sought to explore the perceived impact of the eKindy program on supporting and developing strong learning outcomes for young children living in rural and remote areas.

## State Schools

Teacher 1 (T1), the Prep teacher at State School 1, emphasised the difference eKindy made to school readiness, commenting it contributed to mitigating difficulties children who attended the school had been experiencing accessing a kindergarten program due to geographical distance and the “extra cost” this distance imposed for families. This point echoed participants from State School 2. State School 1 T1 commented, before eKindy existed, “most of” their students entered Prep with:

“maybe one day experience of Kindy, if any at all. ... kids were coming in as what you could call raw. ... [including] fine motor [skills not being] where they needed to be. ... It would take a number of consecutive weeks to get them school ready. ... There was a lot more play-based stuff you had to do ... Skilling them in how to deal with other students and basically being able to play with others ... since the eKindy has happened, a lot of those [children] are school ready. ... all parents are keen for the kids ... to be best possibly ready for school but might not have the ability or money or ... not that able to travel distances to get them in on a regular sense. ... We’ve actually had a really really strong uptake of eKindy.”

Such comments reflect the analysis in the literature review regarding access, equity, participation in respect to parents’ ability to engage with early learning opportunities for their children (ACER, 2021; Ford et al., 2021).

As noted in the quotation above, State School 1 T1 stressed the importance of eKindy’s play-based program and how it prepares children to socialise or play with other children, as well as being able to sit and concentrate in the classroom. State School 1 T1 also noted that the eKindy program enabled children to develop the skills necessary for formal literacy and numeracy learning to occur. Children who came through the eKindy program into State School 1 T1’s class had attended either an eKindy Pod at the school (four children per Pod), an online program, or a mixture of both. State School 1 T1 also spoke about transition from kindergarten into Prep. Children who had attended the Pod at the school were familiar with T1 and other teachers. The eKindy Pod students also played in the “sandpit” “at break times” with the Prep and Year 1 children.

From State School 1 T1’s perspective, the eKindy teachers are “really strong ... and they are brilliant with [the children] ... and because, again, the world of technology is staring at a screen is nothing new anymore”. State School 1 T1’s comments suggest they believed that eKindy has had a considerable positive impact on kindy access and parental involvement in early childhood learning. Their



school had “gone from having kids not accessing much prior school learning at all to an actual program” that parents were involved with and kids were “getting the benefits from and, you know, and then some accountability as well around that programming”.

State School 2 T1 also had one to two eKindy pods at their school. During their interview State School 2 T1 noted children could join the eKindy program if they lived at least 17-18 kilometres from the nearest kindergarten. During the interview State School 2 T1 commented they had “been interested in the eKindy program for some time” and had applied to the region for a Pod. Initially, due to the school having to fund it they were not able to go ahead. State School 2 T1 was keen for a Pod because of the advantages for school that come for children who have attended a kindergarten program, including social and emotional skills, adapting to classroom routines quickly.

### eKindy benefits for Prep

*Those who had attended the eKindy Pod knew the school, the teachers, and the school routine. Those who came from the online program were more confident and better at using technology. Children who attended eKindy in either form were modelling classroom behaviour for other children in Prep.*

“we’ve gone from having kids not accessing much prior school learning at all to an actual program that parents are involved with and kids are getting the benefits from and, you know, and then some accountability as well around that programming.”

Similar to students at State School 1, families in the area had difficulty accessing a kindergarten program. Children who had attended kindergarten had better word and number recognition. Those who had attended the eKindy Pod knew the school, the teachers, and the school routine. Those who came from the online program were more confident and were better at using technology. Children who attended eKindy in either form were modelling classroom behaviour for other children in Prep. State School 2 T1 noted the mix of families participating in eKindy, including families from low socio-economic backgrounds and families from affluent backgrounds. As at State School 1, each of the Pods was to have a maximum of four children; however, State School 2 sometimes had seven or eight children across the Pods.

State School 2 T1 went on to say that having the eKindy program, especially the Pod delivery, meant that they could have conversations with parents about what Prep would be like and how their child could be supported. Further, the Pod delivery meant that the eKindy “facilitator” would sometimes come and see what the Prep teacher was doing with their class and the school teachers could “pop” their “head in at lunch time and have a chat to them.” The Kindergarten children also interacted with the Prep children at times. Here, State School 2 T1 noted that the children who had been through the pod had less separation anxiety. Finally, State School 2 T1 stated that they use age-appropriate pedagogy in Prep — meaning that play was used when appropriate. State School 2 T1 did note, however, that transport, Internet connectivity, and “that parents are just not actually aware as to what’s available” were barriers to kindergarten participation in the area.

At State School 3, a school leader commented positively about eKindy. The children, and parents, who came to the Pod had experiences in socialisation. They were familiar with the school, some of the teachers and routines. Children who attended either form of eKindy had the literacy and numeracy skills necessary for Prep. Both the children and the parents were more willing to engage with the school. In terms of the eKindy pod, it was noted that a facilitator with a teacher aide qualification ran the program at the school, with a program provided by the teacher, who takes the online component of eKindy. For instance, this participant commented:



You can sort of get into the nitty gritty, the what you need to do in the Prep curriculum with them. And we're just finding like their reading level, stuff like that are a lot higher ... the Preps who've come in from the kindy last year ... their results are just a whole lot better. ... [children who attend eKindy] come a whole lot more ready and able to do things."

The participant continued noting children who had not attended a kindergarten program "struggle ... and find it harder to get into the swing of things". By contrast children who had been to kindergarten, particularly eKindy, tend to have a "positive transition" to school. The participant attributed this outcome to not only the eKindy Pod at their school but also to the children's engagement in "kindergarten ... activities". Through the Pod, children are at the school "two days a week". They also:

do about another five hours at home during the other days. ... And then it's a great way to involve the parents and what they're doing and see how they're going and that sort of thing as well. ... the parents are more attuned to school expectations because they have been in engagement with the children in the key program, even at home. ... They yet they just are a lot more in tune to everything that's going on and what the expectations are. ... So I can sort of see a real positive happening at parent-school engagement.

## Distance School Education

As eKindy primarily serves children and families in rural and remote areas of Queensland, many of these children transition into distance education rather than to physical school setting. Staff from three distance education schools were interviewed to ascertain the impact of eKindy on children in their first couple of years of school. Several staff from DE1 School participated in a Zoom focus group interview

with a member of the research team. The, DE1 T1 in particular, highlighted that students who participated in the eKindy program had higher "technology and speaking skills" than students who had not participated in a kindergarten program. A further observation the teachers and school leaders at this school made was that parental engagement with their child was essential and this engagement was important in the eKindy program.

Concurring with DE1 T1, DE1 T2 commented, "I think it does come back to parent engagement, particularly in a distant setting ... we find that those parents that prioritise and value education, their children will succeed

across the board". DE1 T2 continued that, in distance education, there is a much greater reliance "on the computer" than in a physical classroom. In terms of technological skills, eKindy children:

"I think it does come back to parent engagement, particularly in a distant setting ... we find that those parents that prioritise and value education, their children will succeed across the board".

said it came naturally to me because I had to practise. With the other ones, I had to really put in an effort to teach them those things, and so, therefore, those young eKindy children may have felt more comfortable and perhaps have been able to engage with their learning just a little bit earlier. ... Another thing we've already done when you meet a new teacher, you're going for

The teachers at this distance education school emphasised how "confident" the Prep students who had attended eKindy were at using technology, engaging with other children, and engaging with adults.

longer periods of time. ... So the kindy kids came with that skill already. So, this is one less barrier ....

The teachers at this distance education school emphasised how “confident” the Prep students who had attended eKindy were at using technology, engaging with other children, and engaging with adults. For instance, children who had attended kindergarten were faster at “developing a relationship with their teacher and in engaging in conversation with their teacher”. These children were better at “turn taking” with peers. By contrast, they noted the Prep student who had not attended a kindergarten program lacked confidence and it took the Prep teacher about “six weeks” to develop a relationship with them.

Turning to literacy and numeracy, DE1 teachers saw little difference among students attending eKindy and those who had not attended it. They did, however, view these skills to be connected with parental engagement with their child, which, as noted, earlier they saw as important for eKindy. DE1 teachers commented that children who attended eKindy had better motor skills, with one teacher stating, “they are superior in gross motor” skills. Teachers at DE1 further noted the limited opportunities for children in rural and remote areas, other geographically isolated locations, or with medical conditions to socialise with other children, including attending a kindergarten program.

Moving from children to families, DE1 teachers felt eKindy had brought “enthusiasm” and parental “involvement” into the learning experiences. They commented, “that enjoyment, that whole positive experience of schooling as [it] helps the parents to be able to provide that positive learning experience as well.” These teachers alluded to the skills that parents or home tutors built through engagement in eKindy, including:

“knowing the developmental stages of their kids. ... They did this, they hit that milestone. They have the conversations, the rich conversations with the teacher around what's expected, what they're doing, and what can they be doing to give them to the next step. ... most of the feedback is quite positive around the impact that it's had on the child's learning, regardless of what year level they're in.”

The number of children in Prep at DE2 who had attended eKindy was similar to the number of children who attended it at DE1. DE2 T1 noted that the Prep children who had attended eKindy had higher language skills than the children who had not attended any kindergarten program.

DE2 T1 felt that eKindy had assisted children to transition to Prep. She commented, “They just slotted straight in and sat down at the computer and, you know, occasionally they're looking around, but who doesn't when they're sitting at a screen for half an hour at a time?” This outcome was further aided by eKindy “using the same Web session platform” as DE2 uses. Consequently:

these children are coming probably with more computer skills than children who haven't been to a kindy because they're used to coming on and talking to their teacher in that way. ... They just confidently started to engage in lessons. ... [and] they quickly were able to begin that relationship building process with me ... because that's what they've been used to. They've been used to talking about something interesting that they did on the weekend or sharing something new that they want to show everybody saying hello to each other at the beginning of the lesson while they waiting for me to get set up or making sure they say goodbye to everybody at the end of the lesson before anyone hangs up. ... they are quite good at waiting for their turn to answer or using the tools to show me that I do want to share their thinking. ... We have some families who are very committed to their children's learning and follow our suggestions and turn up for all the lessons that they can and participate in the activities of time. And by offering that kindy and that

pre-prep skills and knowledge and activities, it certainly does make a difference if they are committed.

Finally, in terms of children and families transitioning to Prep, DE2 staff who were interviewed suggested that “transition was better when” they had an eKindy teacher based in the school and the child transitioning was “first in the family”. Teachers and leaders at DE3 also noted the “feedback” from parents about the “value” of eKindy for them and that Prep students who had come through eKindy were skilled in using the technology required for distance education.

Similar to participants at DE2, DE3 staff found students who came through eKindy were confident and familiar with the school routine. These Prep students knew how to use the technology to engage in turn taking. When the same group came through from eKindy to distance education Prep, they had already formed friendships. These students had good hand-eye coordination and good language skills. Prep students who had been through eKindy experienced “a smooth transition” to school as “they know each other. They've formed those friendships already. .... their parents are much more organised and have a bit of a classroom routine because they've done it all”. DE3 teachers further noted that the transition to Prep was “more gradual” with distance education than in a physical school as the children are at home with their parents. Compared with children who did not attend a kindergarten program, children who attended eKindy were faster at transitioning to Prep.

Commenting on access to kindergarten and enrolment in distance education, participants in the focus group at DE3 noted, like DE2, a mix of students and families who were geographically isolated or who had medical needs. These participants thought the families who are geographically isolated are enrolling their children in kindy, particularly eKindy. Those with medical needs do not seem to be aware of it. Nonetheless, participants in this focus group also noted that a child’s home context and their development can impact on their first few years of schooling. Consequently, as stressed earlier, parental engagement in a kindergarten program can be important. DE3 focus group participants surmised that “An eKindy parent transitions and supports transitions more effectively because of their experience with eKindy rather than ... just a child attending kindergarten generally because the parent often misses out on that learning or experience.” It was further suggested that eKindy parents were able to know how to support their child’s learning. This point concurs with points raised by parents that, through eKindy, they knew their child’s learning style and their stage developmentally. DE3 focus group participants added that parents who had engaged with eKindy were “creative” in terms of resources needed for teaching their child. For example, one participant discussed families using “harvesting” as a learning resource. As one DE3 participant concluded, through eKindy, parents have developed trust that enables families to build relationships with teachers.

## Discussion

Participants in the focus groups highlighted the difficulties with access to kindergarten experienced by families living in rural and remote areas. Teachers and school leaders at both state schools and distance education schools suggested children who attended eKindy were able to transition to Prep faster than children who had not attended any kindergarten program. They had better social skills and knew school routines. Children who had participated in an eKindy program also had better language and literacy skills than children who had not attended a kindergarten program. Parents were also more engaged with their children’s learning than parents who had not been able to engage with a kindergarten program.

There was some divergence between the skills of children who attended an eKindy Pod and children who engaged with the program wholly online. Many of the children who attended a Pod at a state school transitioned to a physical classroom. The three state schools involved in this research all had Pods with children transitioning to Prep at the school. Through location at the school, kindergarten children and their families could see the school, become familiar with the teachers, and interact with Prep children. By contrast, children who attended a program that was wholly online tended to transition

to distance education. These children tended to have good technological skills and motor coordination. Some of the school participants further observed that parents who had experienced eKindy with their children—whether Pod or wholly online—were engaged in their children’s schooling and they, too, transitioned to Prep more easily than parents whose children had not had a kindergarten experience.

➤ ***Finding 7: Through increasing children’s access to early learning opportunities, eKindy enables:***

- ***school readiness among children living in rural and remote Queensland; and***
- ***assists the transition to school by children living in rural and remote Queensland.***

# Conclusion



This research sought to determine the efficacy of the unique e-learning model that has driven the eKindy program. Three research questions guided this inquiry. As highlighted throughout this report, nine findings have been identified across the literature review, Project 1, and Project 2. Two recommendations have been posited from analysis of the data provided by participants in Project 1 and Project 2. These findings and recommendations are listed below. In Project 1 the value and benefit parents identify from eKindy, not only for children but also for themselves was explored. The research focus in Project 2 was to explore the perceived impact of the eKindy program on supporting and developing strong learning outcomes for young children who are living in rural and remote areas, travelling or medically unable to attend a local early childhood service, in the year before Prep. Two key research questions were asked to achieve the aim of Project 1.

1. *How have parents and primary caregivers grown through their participation in the eKindy program?*
2. *What have parents learnt, particularly regarding strategies for supporting a child's learning?*

Project 2 was guided by one key research question.

3. *What is the perceived impact of eKindy in supporting key developmental and learning outcomes for young children?*

This research has highlighted the benefits that eKindy brings to children and families living in rural and remote areas of Queensland. eKindy benefits children, parents, and teachers. Its play-based program build parents' capacity as their children's first teachers and readies children for school.

As a unique e-learning model, eKindy pre-dates the early childhood e-learning models that arose during COVID-19 lockdowns. This report has brought into sharp focus the eKindy experiences shared by parents (Project 1), and the perceptions of teachers and leaders in state schools, and teachers and leaders in distance education schools (Project 2). *Project 1*, focused on parental capacity building, with the aim of exploring the value and benefit parents have been identifying from eKindy for both their children and for themselves. Through analysis of the pre- and post-program data from parents, it is evident that parents believed that eKindy afforded opportunities to build their capacity as their child's teacher. They also achieved their goal having an experience or time with the child. Parents commented they had discovered how their child learnt and how to support that learning style. Some also talked about their child's progress developmentally.

***Finding 8: eKindy enhanced parental engagement in their children's learning.***

Findings from *Project 2*, drawing on the perceptions of teachers and school leaders, reinforced **the centrality of parental engagement to successful learning outcomes from children**. Participants from DE3, for instance, noted, with respect to distance education, parents as well as children transition to Prep. To achieve this move successfully, parents need to know how to identify and support learning opportunities. These teachers and leaders felt that eKindy assisted parents to support their child's learning in this way.

School readiness and transition to Prep were key topics of discussion with teachers and leaders who participated in Project 2. It is important to note that and the centrality of parents in their children's early learning connects with the findings from Project 1.

Project 2 explored the perceived impact of eKindy in supporting key developmental and learning outcomes for young children. Key findings indicate that:

- eKindy supports parents in rural, remote, and other geographically isolated areas to build their capacity as teachers.
- eKindy requires considerable parental engagement in their child's learning.
- eKindy supports children in these families to enhance their social skills (peer engagement, relationship with teacher, turn taking, etc.), motor coordination, and school readiness skills.

- eKindy Pods support transition to Prep classrooms in physical schools.
- eKindy wholly online develops the technological skills that children need for distance education.
- eKindy can develop children's language skills.

These findings connect with multiple points canvassed in the literature. **An important theme across both projects reported here has been parental engagement in their child's learning.** A further, and integral, dimension has been providing families in rural and remote areas of Queensland with access to, and participation in, a kindergarten program. As noted in the literature review, children who live in rural or remote areas tend to be disadvantaged. Highlighted by participants teaching at the state schools in this research, access to a kindergarten program is difficult for families due to geographical isolation. One participant spoke about the lengths one family had gone to for their child to attend the Pod. Teachers and leaders at both the state schools and the distance education schools mentioned distance and access in their interview responses.

- ***Finding 9: Through increasing children's access to early learning opportunities, eKindy enables:***
  - ***school readiness among children living in rural and remote Queensland; and***
  - ***assists the transition to school by children living in rural and remote Queensland.***

Teachers and leaders at the distance education schools also drew attention to the larger number of children with medical needs in their classes. They considered this information important as these families seemed to be unaware of eKindy and therefore, unlike families in rural and remote areas, had attended either a few or no kindergarten sessions. As noted above, children who had attended eKindy in either of its form had parents who were more engaged in their learning, had better social skills including peer and teacher relationships and turn taking, were school ready, and experienced smoother and faster transitions. Teachers at several schools also noted better language skills. Finally, in the literature review examples of ECE programs that had pivoted to online delivery, however it is important to note, and as interviewees mentioned, eKindy pre-dates these initiatives

Returning to the anticipated benefits of this research, first, the use of pre- and post-program questions provided parents with opportunities to reflect on their perceived goals and benefits from supporting their children in moving through the eKindy program. As most parents identified (1) coming to know their child's learning style and (2) how they can support their child, it might be argued that parents gained greater understanding of, and enthusiasm for, their roles as first teachers of young children.

Second, turning to school data, teachers and school leaders articulated considerable understanding of their Prep students and the benefits students who had attended a kindergarten program brought to the classroom — whether that be a physical classroom or a virtual classroom. While some teachers and school leaders understood the eKindy program, others did not. Those who did generally had a Pod at the school or had an eKindy teacher at their site. In terms of teachers' practice, the school participants noted they needed to complete additional work with children and families who entered Prep without having attended kindergarten.

By contrast, children who had completed a kindergarten program were more likely to be school ready and their parents were more likely to be engaged in their child's learning. In other words, **children and families who had attended eKindy had faster transitions to school than children and families who had not had a kindergarten experience.**

Nonetheless, as at least one participant from the distance education schools pointed out, children learning via distance education had a more gradual transition by virtue of being physically located at home. Based on the data from projects one and two, it might be argued that **completing eKindy, in either Pod and wholly online modes, would seem to serve the early learning needs of children and families living in rural and remote areas of Queensland.**

Turning to benefits for the community, the data collected from parents, teachers, and school leaders indicates that the eKindy program brings learning, developmental, social, and school readiness benefits to families in rural and remote locations who might not otherwise have access to a kindergarten program. Building parents' capacity as first teachers would seem to contribute significantly to this outcome. As noted above, this outcome assists Prep teachers in building relationships with children and teaching the Prep curriculum.

Finally, benefits for the eKindy team can be discerned. These benefits include spotlighting:

- the importance of the eKindy program/team in supporting young children to achieve positive learning outcomes across a range of developmental domains;
- the importance of eKindy's teachers' role in building parents' capacity with strategies to support children's learning, particularly through play; and
- the addition of Section 5 to the orientation form and revisiting parent responses and goals towards the end of the year to increase eKindy team awareness of the learning and benefits that parents/tutors see for themselves from the eKindy program.

- ***Finding 10: Completing eKindy serves the early learning, developmental, social, and school readiness needs of children and families living in rural and remote areas of Queensland. This finding holds for both eKindy modes investigated in this research—the Pod and wholly online. This finding is important because families in rural and remote locations might not otherwise have had access to a kindergarten program. Building parents' capacity as first teachers would seem to contribute significantly to this outcome. This enhanced capacity includes recognition of the benefits of play-based learning in the early years. These outcomes assist Prep teachers in building relationships with children and teaching the Prep curriculum.***
- ***Finding 11: The eKindy team plays an important role in supporting children and their parents to achieve these outcomes.***

Returning to theme of equity and flexibility, to conclude, it might be suggested the eKindy team consider enhancing the early learning of children with medical needs by promoting eKindy in hospitals and other health care settings to increase parents' and children's access to this valuable resource.

- **Recommendation 1: eKindy continue to provide a play-based program in both online and Pod forms to ensure the early learning, developmental, social, and school readiness needs of children and families living in rural and remote areas of Queensland continue to be met.**
- **Recommendation 2: To enhance equity and flexibility, eKindy be promoted in hospitals and other health care settings to increase access to early learning for children with medical needs.**

## Summary of findings and recommendations about the efficacy of the e-learning model

### Findings

#### *Literature Review Findings*

- Finding 1: Children living in geographically isolated areas are disadvantaged in their access to early learning opportunities. e-learning has the potential to enhance access to and equity for children living in these areas.
- Finding 2: Play-based learning is important for early learning.
- Finding 3: Parents are children's first teachers.
- Finding 4: eKindy is a unique e-learning model that pre-dates the virtual ECE programs that emerged in response to COVID-19 lockdowns.

#### *Project 1 and 2 Findings*

- Finding 5: eKindy built parents' capacity and confidence both as parents and as first teachers. Parents increased their understanding and appreciation of play-based learning. eKindy enhanced children's readiness for Prep.
- Finding 6: eKindy enhanced parental engagement in their children's learning.
- Finding 7: Through increasing children's access to early learning opportunities, eKindy enables:
  - school readiness among children living in rural and remote Queensland; and
  - assists the transition to school by children living in rural and remote Queensland.
- Finding 8: Completing eKindy serves the early learning, developmental, social, and school readiness needs of children and families living in rural and remote areas of Queensland. This finding holds for the two eKindy modes investigated in this research—the Pod and wholly online. This finding is important because families in rural and remote locations might not otherwise have had access to a kindergarten program. Building parents' capacity as first teachers would seem to contribute significantly to this outcome. This enhanced capacity includes recognition of the benefits of play-based learning in the early years. These outcomes assist Prep teachers in building relationships with children and teaching the Prep curriculum.
- Finding 9: The eKindy team plays an important role in supporting children and their parents to achieve these learning, developmental, social, and school readiness outcomes.
- Finding 10: Completing eKindy serves the early learning, developmental, social, and school readiness needs of children and families living in rural and remote areas of Queensland. This finding holds for both eKindy modes investigated in this research—the Pod and wholly online. This finding is important because families in rural and remote locations might not otherwise have had access to a kindergarten program. Building parents' capacity as first teachers would seem to contribute significantly to this outcome. This enhanced capacity includes recognition of the benefits of play-based learning in the early years. These outcomes assist Prep teachers in building relationships with children and teaching the Prep curriculum.
- Finding 11: The eKindy team plays an important role in supporting children and their parents to achieve these outcomes.

## Recommendations

- Recommendation 1: eKindy continue to provide a play-based program in both online and Pod forms to ensure the early learning, developmental, social, and school readiness needs of children and families living in rural and remote areas of Queensland continue to be met.
- Recommendation 2: To enhance equity and flexibility, eKindy be promoted in hospitals and other health care settings to increase access to early learning for children with medical needs.

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