



International Journal of Education and Teaching

Publisher's Home Page: <https://www.hsspress.com/>



Research Paper

Open Access

The Impact of Digital Platforms on Foundation Phase Learners

Ngeletshedzo A Nyadzani^{1*} and Matodzi G Sikhwari²

¹Faculty of Humanities, Social Sciences and Education, Department of Early Childhood Education, University of Venda, Private Bag X5050, Thohoyandou, 0950, South Africa. E-mail: ngeletshedzo82@gmail.com

²Faculty of Humanities, Social Sciences and Education, Department of Early Childhood Education, University of Venda, Private Bag X5050, Thohoyandou, 0950, South Africa. E-mail: matodzi.sikhwari@univen.ac.za

Article Info

Volume 6, Issue 1, June 2026

Received : 20 August 2025

Accepted : 22 March 2026

Published : 19 June 2026

doi: [10.67192/IJEDT.6.1.2026.12-23](https://doi.org/10.67192/IJEDT.6.1.2026.12-23)

Abstract

Digital platforms have become increasingly blended into learning and teaching environments, especially in early childhood education. The degree to which these platforms support or hinder learning outcomes in foundation phase learners remains underexplored, particularly in rural South African contexts. This study examines the impact of digital platforms on the academic and socio-emotional development of Foundation Phase learners in the Vhembe District, Limpopo Province. The problem underpinning the study is the limited empirical evidence on how digital tools affect young learners in under-resourced educational settings. A qualitative research paradigm within an interpretivist framework guided this study. The research design adopted was a case study, and the method used was semi-structured interviews with Foundation Phase educators and parents. Data was collected from a population of Foundation Phase teachers and caregivers across five primary schools. Purposive sampling was used to select a sample of 10 educators and 10 parents. Thematic analysis was employed to analyse the data. The study was delimited to the Vhembe District in the Limpopo Province of South Africa. To ensure trustworthiness, credibility, transferability, dependability, and confirmability, measures were followed. Ethical considerations included informed consent, confidentiality, and voluntary participation. The article reveals that digital platforms enhance learner engagement when integrated with teacher-guided instruction. It also found that a lack of access to devices and the internet in rural areas impedes equitable digital learning. Based on these, the article recommends that schools should implement blended learning approaches suited to local infrastructure. Government and private stakeholders must also invest in rural digital infrastructure for education. The article concludes that while digital platforms hold potential to support Foundation Phase learning, context-specific implementation strategies are critical for success in rural districts.

Keywords: Digital learning, Parental involvement, Rural education, Technology integration, Foundation phase

© 2026 Ngeletshedzo A Nyadzani and Matodzi G Sikhwari. This is an open access article under the CC BY license (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

1. Introduction

The use of digital learning tools has brought major changes to education, including early childhood learning. This is the

* Corresponding author: Ngeletshedzo A Nyadzani, Faculty of Humanities, Social Sciences and Education, Department of Early Childhood Education, University of Venda, Private Bag X5050, Thohoyandou, 0950, South Africa. E-mail: ngeletshedzo82@gmail.com

stage where learners start learning how to think clearly, understand feelings, and work well with others. Digital tools like tablets and online lessons can make learning more fun and help learners read and count better. They also help teachers give work that matches what each learner can do (Flewitt *et al.*, 2019). But in places like the Vhembe District in South Africa, using digital tools is not always easy. Many rural schools have old buildings, don't have enough resources, and teachers haven't been trained well in using digital technology (Mdlongwa, 2012; Mphahlele and Mkhize, 2019). Because of this, teachers struggle to use digital tools in the classroom, even when they want to. They might not have internet, or they don't know how to use the apps or websites. Even though digital tools can help learners do better in school, we still don't know much about how well they work in poor schools that don't have enough support.

This research aims to find out how these educational digital tools assist learners in rural schools with their learning and classroom participation. The study looks at small schools in the Vhembe area to better understand how digital tools can be used in ways that suit their specific needs. The goal is to help teachers teach better and to make sure all learners get a fair chance to learn with technology. Digital tools are already helping teachers give quick feedback, change tasks to match learner levels, and keep learners more involved in class activities. But we still don't have enough research about how these educational digital tools affect young learners' growth and their ability to connect with others.

Some people are worried that using too many digital tools might make it harder for learners to talk and play with others or to grow emotionally. Also, most schools don't have proper rules to guide how digital tools should be used. That's why this study is important, because it wants to show how schools can use digital learning the right way so that learners can do well in their schoolwork and grow in a healthy way (Garcia *et al.*, 2023).

The aim of this article is to explore the impact of digital platforms on the academic and socio-emotional development of Foundation Phase learners in the Vhembe District, Limpopo Province. To achieve this aim, the following research questions were identified:

- How are digital platforms currently utilized in Foundation Phase classrooms in Vhembe District?
- What are the academic and socio-emotional impacts of digital learning tools on young learners?
- Which challenges do educators and parents face in supporting digital learning?
- How can digital platforms be better integrated to support holistic learner development?

2. Conceptualizing Digital Platforms in Foundation Phase Education

Educational Digital tools have brought big changes to how Foundation Phase learners do their day-to-day schoolwork. These digital tools include learning apps, tablets, online videos, and computer programs. When teachers utilize them well, they make learning more fun and easier to comprehend because the lessons can be made to fit each learner's needs. This helps learners stay focused and learns faster. For example, some reading and maths apps give quick feedback, which helps learners understand their mistakes right away and stay interested in the lesson (Kucirkova *et al.*, 2020). In classrooms for young learners, these tools are used not only to teach but also to help build important reading and number skills. By utilizing games, videos, and activities, learners can understand basic ideas more quickly. Research shows that this kind of learning not only builds strong early academic skills but also encourages learners to be more independent (Beschorner and Hutchison, 2013). These digital tools work well with learners of different abilities because they allow teachers to adjust lessons to fit each learner's learning style.

Educational Digital platforms also help young learners become more creative and work better with others. Some apps are made to support teamwork by using group stories, role-plays, or activities where learners solve problems together. These tools build important social and thinking skills, which are very important in the Foundation Phase. When learners take part and feel curious, these educational digital lessons make learning more enjoyable and encourage them to keep trying (Neumann *et al.*, 2017).

Even though educational digital tools can help a lot, not every educator or learner has access to them. Problems like weak internet connections, not enough devices, and teachers not knowing how to utilize the digital tools can make it hard to use them well, especially in rural schools. To fix this, schools need better internet, more training for teachers, and learning materials that match the Foundation Phase curriculum and are right for the learner's age (UNESCO, 2021).

3. Theoretical Framework

In this research, Vygotsky's sociocultural theory is used to help explain how young learners learn best. This study is

based on the idea that learners learn best when they are assisted by someone who knows more than they do. A man named Vygotsky explained that learning happens through talking and working with others, like teachers, parents, or classmates. He came up with something called the “zone of proximal development,” which means the space between what a child can do alone and what they can do with help. When someone gives support in that space, the child learns better (Vygotsky, 1978).

In this study, digital learning tools like apps, games, and videos are seen as helpful ways to support young children’s learning. These tools give quick feedback using sounds, colours, and pictures. For example, when a child uses a learning app, it can tell them right away if their answer is correct or not. These digital learning tools can also change how hard or easy the work is based on how the learner is doing. This helps make learning more fun and better suited to what each learner can handle (Liu *et al.*, 2021; Hsin *et al.*, 2014).

Vygotsky also stated that the place where a child grows up, like their home or school, affects how they learn. That’s why it’s important for parents to help their children with educational digital tools. For example, if a parent helps their child with a maths app, it makes learning easier and more interesting. Learning becomes stronger when adults are involved, and it connects with what the child already knows from their daily life (Fleer, 2018). Educational digital tools give extra assistance, but they work best when there’s also an adult guiding the child.

This research uses Vygotsky’s theory to show how adults and digital tools can collaborate to assist children learn maths better in the early years. It focuses on how both people and technology can support learning, especially when the help matches the learner’s level. This way, children can grow their knowledge in a steady and supportive way

4. Literature Review

In today’s world, educational digital platforms are becoming a big part of how we learn, even for young learners. Various schools are starting to utilize educational digital tools to support teaching and learning. In the early childhood education, where learner’s first learn important skills like reading, writing, and working with others, these digital tools can make a big difference. This review looks at what other researchers have found about using digital platforms with young learner’s, especially in rural areas of South Africa. It also talks about the good things digital tools can bring, like fun learning, but also the problems that come with them, like lack of resources, teacher training, and social issues.

4.1. The Contribution of Technology to Early Childhood Learning

Technology is now playing a big role in helping young learners learn, especially in the Foundation Phase when they are learning the basics like reading, writing, and numbers. Tools like tablets, smart boards, and learning apps make lessons more fun and exciting. These tools help teachers teach in different ways that suit each learner’s learning style. According to Miller *et al.* (2023), if used properly, digital tools can adjust to each learner’s speed, helping them understand better and do well in things like reading and maths. This also helps learners feel more confident and stay focused.

Mixing old-style teaching with new technology works best in early grades. This means that teachers still teach in person, but they also use digital tools to help learners practice and explore more. For example, using a phonics app can help learners with reading sounds, and games that involve numbers can improve counting skills. Miller *et al.* (2023) say that this way of teaching supports different learning styles in one class and gives learners a chance to become more confident and learn on their own using technology.

But sometimes using technology in classrooms doesn’t always work well because of where the school is. In places like the Vhembe District in South Africa, things like no Wi-Fi, power cuts, and a lack of new devices can make it hard to use digital tools (Riva and Massari, 2022). Because of this, some learners miss out while others in better schools have more chances to learn using technology. This causes an unfair gap between schools.

Even with these problems, it’s still important for learners to learn using technology because the world is becoming more digital. Baker *et al.* (2023) stated that good utilization of educational digital tools can help learners think better and fortify cognitive, attention, and problem-solving. But they also warn that too much screen time without rules can damage learners’ emotions and social life. That’s why it’s very pivotal for educators to utilize educational digital tools in a smart way that aligns with each learner’s stage of development and fits the needs of the school.

4.2. Unequal Access to Digital Tools in Rural Settings

Even though educational digital tools can enhance learning, not all learners have the same access to educational digital

tools, especially in rural places like the Vhembe District in South Africa. Many schools in these areas don't have things like reliable electricity and internet connections. This makes it very hard for educators and learners to use educational technology in their lessons. Riva and Massari (2022) say that because of this, learners in rural schools don't get the same chances as those in towns and cities, which increases the gap in education levels.

The problem doesn't stop at school. Even if schools do use educational digital tools, some learners still struggle at home. Many rural homes don't have internet connections or Computers, so learners can't do digital work after school. Riva and Massari (2022) stated that this is mostly because families in rural areas don't earn enough money to buy devices or data. This keeps learners stuck in the same situation, where they can't do well at school just because they don't have the same resources as other learners who came from a privileged background.

Another big issue is that government support isn't always strong in these areas. Even though the country talks about using more educational digital tools in schools, some rural schools often don't get enough assistance to get this equipment. Without sufficient support, schools can't train educators, get equipment, or keep the internet running. Riva and Massari (2022) stated that to solve this, the government needs to invest more in rural schools and make sure everyone has an equal chance at learning with educational digital platforms.

To help solve these problems, the government and businesspeople around the area need to converge and work together. These groups can help by giving internet access and supporting schools in rural communities. Most importantly, they need to understand the specific problems each rural area faces. If they don't take action, many rural learners will miss out on the benefits of digital education.

4.3. Educator Preparedness and the Use of Digital Methods

Educators have a big impact on how well educational digital tools are used in early learning. In the Foundation Phase, many educators don't get proper training on how to use technology in a way that matches learners' needs. When teachers don't know how to utilize these tools, it becomes hard to utilize them in ways that help learners. Wilder (2020) says that many educators still utilize old traditional methods of teaching or don't fully use the technology they have because they don't feel confident or haven't had enough training.

Training for educators is not equal everywhere. Teachers in urban areas or well-resourced schools often get more chances to attend workshops, get help from mentors, and use devices. But teachers in rural areas often work in schools where there's little or no training. Swick and Williams (2019) explain that teachers need regular training so they can create lessons, check learner progress, and manage technology in the classroom. Without training, even good technology won't be used the right way or might be ignored.

The way educators feel about educational digital platforms also matters. If they think educational digital tools are too hard or not helpful, they might not want to utilize them. Wilder (2020) emphasized that it helps when teachers feel supported and are free to try new things and share ideas with each other. Letting teachers help choose the learning tools and giving them technical support can help them feel more confident and open to using technology.

For digital learning to become part of everyday teaching, it's important to include digital education in teacher training programmes. This means that when educators complete university, they should understand both how learners grow and how to use educational digital platforms to support learning. Long-term success needs both proper training at the start and ongoing help during their teaching career. Giving teachers the right tools, support, and attitude is the key to making digital learning work well in early childhood education.

4.4. The Role of Parents in Supporting Digital Learning

Parents play a very pivotal role in helping learners succeed when using educational digital tools, especially in the early years of school. When learners have to study at home, like during school closures, parents become the main people who help with online learning. They assist learner to follow instructions, utilize their time well, and stay interested in their schoolwork. Dearing *et al.* (2021) stated that when parents are involved, learners do better in reading, mathematics, and overall school performance.

Many parents in rural areas don't have the digital skills they need to support their learners. In places like the Vhembe District, a lot of families don't have devices or don't know how to utilize them for learning. Dearing *et al.* (2021) stated that if parents don't know how to utilize technology, they can't really help their learners, and this makes it harder for learners to stay interested and do well with digital learning. Some parents even feel stressed or unsure about helping, which makes learning from home more difficult.

Another problem is that the language or culture of the learning apps or websites may not match what families use at home. If the tools are in English or designed for city learners, some parents from rural or multilingual homes may feel confused or left out. Also, some parents might not trust educational digital tools because they think technology is a distraction or not as good as traditional ways of learning. When this happens, learners don't get as much support from home.

To solve these problems, schools and the state need to support families. This could mean running workshops in the community, giving out easy-to-follow booklets, or visiting homes to show parents how to use digital tools. When parents understand how digital learning works, they can help their learners better. If parents feel confident and informed, they can support their learners at home and make digital learning more successful.

4.5. How Digital Tools Affect Cognitive and Emotional Development

Technology can affect how young learners grow and think, but it depends on how it's used. When used the right way, digital tools can help learners improve skills like focus, memory, and problem-solving. Learning games, fun videos, and story apps make learners think more and learn in different ways. Baker *et al.* (2023) stated that these digital tools can help learners' cognitive growth by teaching them to think in flexible ways and solve problems through interaction.

But there are also problems when learners utilize screens too much or in the wrong way. If learners spend too much time on devices without adults to guide them, it can affect how they behave, how well they focus, and how they get along with others. Baker *et al.* (2023) explain that too much screen time can stop learners from learning important emotional skills, like how to share, work with others, or understand feelings, especially if they are not spending enough time with friends or family.

Another issue is that too much time on screens can take away from creative play and physical activity. Young learners need to play, as play helps them develop fine and gross motor skills, and utilize their imagination to learn properly. If they are always on digital platforms, they may not get enough chances to explore and learn in active, hands-on ways. Both parents and teachers should make sure educational digital tools do not replace physical play and traditional ways of learning, but instead are used as an extra way to assist learners' growth.

To make sure learners grow in a healthy way, parents and educators need to be extra careful about how learning digital tools are utilized. This means selecting the right content for the learner's age, setting screen time limits, and spending time with learners while they're utilizing educational digital tools. Baker *et al.* (2023) suggest that digital learning should always involve adults and match the learner's stage of development. If done the right way, technology can help learners develop well, without replacing the real-world learning they also need.

5. Methodology

This article used an interpretivist approach, which means it focused on understanding how different people feel and think about using digital platforms in early learning. This kind of research helps us find out how technology affects learning and learner interest in the Foundation Phase.

A qualitative case study was used so that the researcher could look closely at how digital tools are being used in teaching. By focusing on Foundation Phase learners in rural schools, the study gave detailed information about how technology works in real classroom situations.

To collect the data, the researcher did semi-structured interviews with teachers and parents. These interviews allowed people to share their honest thoughts and experiences about digital learning. The researcher also went into classrooms to watch how digital tools were actually being used during lessons. This helped give a better picture of what was happening.

People who took part in the study were 10 teachers and 10 parents from five rural schools in the Vhembe District, Limpopo. The researcher used purposive sampling, which means they chose people who had real experience with digital learning in the Foundation Phase, so they could give useful information.

After collecting the data, the researcher analysed it using a method called thematic analysis. This approach involves identifying common ideas or patterns that appeared frequently during the interviews and classroom observations. Some of the main themes that emerged included the usefulness of digital platforms, the challenges experienced when using them, and their impact on learners' academic performance and interest in learning.

The research followed all the right ethical steps. The researcher got permission before starting the study and explained the purpose clearly to everyone. No one was forced to take part, and the names of the people involved were kept private. They were also told they could stop participating at any time if they wanted to.

To ensure the study was trustworthy, the researcher used different ways to collect information, which is known as triangulation. The researcher also went back to the participants to check if the information collected was accurate. This is called member checking. In addition, the researcher recorded each step of the research process in detail to make the findings reliable and meaningful.

6. Presentation of Findings and Discussion

This part of the study explains the main ideas that came up during interviews with Foundation Phase educators and parents about using digital platforms in rural classrooms. The results are linked to the research questions and Vygotsky's Sociocultural Theory, which sees educational digital tools as a tool that helps learners learn better through interaction. Each theme shows both the good things and the challenges of using digital tools in schools that don't have enough resources.

6.1. Theme 1: Enhanced Engagement through Visual Learning Tools

This study discovered that utilizing visual and interactive digital tools helped increase learner interest in early childhood classrooms. Many teachers said that when they utilized educational digital platforms like tablets and projectors, learners became more excited and took part in the lessons more.

One teacher said,

"When I utilize the tablet to show them pictures and short videos, even the quiet learners become more active and participate in the lesson."

Another teacher shared,

"My learners enjoy interactive games that teach counting or letter sounds. They don't even realize they are learning because it feels like play."

These examples show that digital tools can grab learners' attention and make learning more fun and enjoyable.

This links with Vygotsky's Sociocultural Theory, which says that learners learn better when they interact with people and use the tools around them. In this study, technology acted as a learning tool to help learners understand new ideas, especially when teachers guided them through the activities. This support helps learners do more than they could on their own. Vygotsky (1978) calls this the Zone of Proximal Development (ZPD), where learners improve with help from someone more experienced, like a teacher. In many of the classrooms that were watched during the study, using digital visuals helped learners stay focused, behave better, and enjoy the lesson.

Other researchers also agree with these results. Raiyn (2016) found that learners pay more attention and understand better when videos, pictures, and animations are used during lessons. Neumann (2016) also found that visual tools are helpful for teaching young learners' basic reading and numeracy. These educational digital tools make difficult work easier to understand because they utilize movement, sound, and pictures, things that young learners enjoy and connect with.

But not all schools had the same chance to utilize these tools. Some rural schools didn't have enough devices, and some didn't even have electricity, which made it hard to use educational digital tools at all. In those schools, teachers could only use these tools sometimes. Still, even using digital tools a little bit made a big difference in how learners felt and learned.

One parent commented,

"My child becomes excited when he talks about what he learned using the teacher's phone. He remembers more from those lessons."

This shows that even just a little time utilizing digital visuals can help learners become more interested and remember what they learned.

The study clearly shows that visual learning tools help enhance learner participation and enjoyment in the Foundation Phase. They also help learners build important reading and maths skills. These tools make learning more fun and help

learners feel more connected to what they are learning. But to enjoy these benefits, all schools need fair access to educational digital tools. Teachers also need the right training and support to utilize educational digital platforms properly. If schools are given the right resources, digital learning can help all young learners, especially in rural areas, get a better education in the early years.

6.2. Theme 2: Digital Divide in Resource-Constrained Settings

This study found that using digital platforms in Foundation Phase classrooms has made it easier for teachers to assess learners and give helpful feedback. Teachers said that digital tools, especially those using AI, helped them track how well learners were doing and pick up on problems much faster than before.

One teacher explained,

“With the app, I can see immediately who is struggling with phonics or counting. I don’t have to wait until the end of the week to assess them.”

Another teacher shared,

“I like how the program marks the work instantly and gives suggestions. It saves me time and helps me decide better.”

These experiences match what is called informal assessment. This means giving learners feedback while they are still learning, not just at the end. Educational Digital tools are great for this because they check answers right away and show teachers which learners need extra help. This is especially useful in early childhood education, where learners still need close guidance and regular checking. Instead of utilizing tests at the end of the week, educators can now use apps and online tools during the lesson to see how each learner is doing. This makes it easier to support learners who are struggling.

Research backs this up. Elmahdi (2018) said that digital tools help teachers give fast and personalized feedback, which helps learners improve. Khalid and Aldahmash (2017) also found that using digital assessments saves teachers time while also improving how well they can track each learner’s progress. In this study, some teachers said they liked how they could even share progress with parents using the app.

One teacher explained,

“The parents like it when I send a screenshot of their child’s progress. It helps them know what to work on at home.”

Another big benefit was how these tools helped learners understand how they were doing. Some educators stated that digital quizzes give learners their results right away. This helps learners see what they got right or wrong and pushes them to do better. It also makes them feel more in control of their learning.

A teacher shared,

Some learners wanted to repeat the activity until they got full marks. They feel proud of themselves.”

But there were also challenges. Not all schools had the same access to educational digital tools. Some teachers in rural schools said they didn’t have enough devices or a strong internet connection, which made it hard to use these platforms.

One teacher mentioned,

“We have one tablet that we take turns using. It helps, but I wish we had more so I could assess the whole class.”

Still, even with only a few devices, teachers found digital tools better than doing everything by hand. Some teachers also used educational digital platforms to keep track of learners’ behavior and how involved they were in class. This helped them notice when learners were often absent or not keeping up. Because of this, they could get help from parents or school support teams earlier.

The results of this study show that digital platforms are very useful for helping teachers assess and support Foundation Phase learners. These tools let teachers give feedback right away, understand each learner’s progress, and make learning more personal. They also help learners see how they are doing and feel more motivated to do better.

6.3. Theme 3: Teachers' Limited Digital Skills

Using digital platforms in Foundation Phase classrooms has helped a lot with making learning more inclusive and suitable for different learners. The teachers in the study said that digital tools made it easier for them to support learners who learn in different ways and at different speeds, something that is harder to do with old teaching methods.

One teacher said,

"In my classroom, some learners need extra time, and others move quickly. With tablets, they can all work at their own pace."

Another teacher added,

"I utilize different apps for different groups. Some focus on phonics, others on vocabulary or math games."

This shows that teachers were utilizing digital platforms to give each learner what they needed. Many apps allow learners to select their level or give hints and pictures to help them when they get stuck. This helps learners who may struggle with learning, language, or special needs. Educators said these educational tools made learning less frustrating for slower learners and still fun for fast learners.

This fits well with an idea called Universal Design for Learning (UDL), which is all about using different ways to teach so that everyone can understand. Digital tools support this by using sounds, pictures, and games to help different learners learn in the way that works best for them.

One teacher shared,

"I have a learner who struggles with writing, but when he uses the drawing feature on the tablet, he participates fully. He shows me what he knows in a way that works for him."

The study found that digital platforms helped include learners who often feel left out. For example, some learners who had trouble speaking used speech-to-text or typing instead. Some shy learners felt better expressing themselves through apps instead of talking in front of the class.

Another teacher said,

"One of my learners rarely talks in class, but on the tablet, he types his answers with confidence."

But the study also showed some challenges. In poor schools, there were not enough devices for all learners. Some teachers had to share one tablet between many learners or utilize their own phones. Also, some teachers didn't have the training to use the tools fully, especially for learners with special needs.

One teacher explained,

"I can do the basics, but I still need training to use the apps better for special needs learners."

Even with these problems, teachers were creative. Some made paper versions of app activities, and others let learners work together so they could help each other. In better-resourced schools, teachers utilized online systems to give learners work based on their level and track their progress.

Educational Digital tools were also utilized for more than just learning. Some teachers used them to teach about emotions, cultures, and respect. One teacher even used stories in different home languages to make learners feel proud of where they come from.

As one teacher said,

"The kids get so excited when they hear a story in their language. It makes them feel proud."

Digital platforms are powerful tools for making learning fair and helpful for all learners in the Foundation Phase. They assist educators in reaching learners at different levels, support those with learning barriers, and create fun and welcoming classrooms. But for these educational digital tools to work well, teachers need more training, and schools need more resources. If these things are provided, every learner can get the chance to prosper.

6.4. Theme 4: Parental Skepticism and Limited Support

Even though educational digital platforms bring many benefits to teaching in early childhood education, this study

found very serious problems, especially when it comes to equal access and how ready teachers are to utilize them. These issues make it hard for digital tools to be utilized well in every classroom, and not all learners get the same benefits. Some teachers from poor schools said they don't have enough tablets or laptops. They also struggle with no electricity or weak internet, which makes it hard to use digital tools every day.

One teacher explained,

"We only have one tablet for the whole class, and sometimes we go for days without electricity. It's hard to make digital learning a routine."

The term "digital inequality" means that not everyone has the same chance to utilize technology and the internet connection. This is often because of where people live, how much money they have, or how well the school is set up. In South Africa, many schools in rural or township areas are affected by this. Teachers in these areas often use their own phones to show pictures or play sounds to help learners understand. Even though this shows they are trying, it doesn't always work for the whole class.

One teacher stated,

"Sometimes I use my own data to download videos, but it's expensive."

This shows that schools in the country still struggle with basic needs, which makes it harder to bring in new digital ways of learning.

Because of this, there's a big difference between schools that can use technology well and those that can't. In schools that are better off, learners use apps, digital stories, and games every day. But in poor schools, learners often miss out on these things.

One teacher remarked,

"I visited another school during a workshop, and I saw how their learners use tablets every day. Here, we are still using chalkboards and paper most of the time."

This difference makes it unfair, because learners in poorer schools don't get the same chances to learn or enjoy school.

The study also found that many Foundation Phase teachers don't have enough training to use digital tools well. Some teachers are excited to try, but others feel scared and unsure.

One teacher said,

"I'm willing to learn, but I was never trained to use these tools. I don't even know how to install apps."

This is a big problem because even if schools have the right tools, the teachers need to know how to use them for teaching.

The problem is worse because most training programs don't focus on helping Foundation Phase teachers learn digital skills. High school teachers sometimes get special training, but educators for young learners are often left out. This creates a gap in how well digital learning works in different grades. Kostova and Fasarin (2024) said that teachers are more likely to use technology well when they get training that matches their classroom needs.

Some teachers also worry that if learners spend too much time on screens, they might not enjoy old-school learning, like drawing or writing, anymore.

One teacher said,

"I'm concerned that they won't want to write or draw anymore because the screen is more exciting."

These concerns show that teachers need help to learn how to balance technology with traditional ways of teaching. Digital tools should be used to support, not replace, hands-on learning.

The research also found that many teachers feel nervous or stressed when it comes to digital learning. Some feel they are not good enough or are scared of failing in front of the class. Others feel like learners know more than they do, which makes them less confident.

One teacher admitted,

“Sometimes I feel embarrassed when the learners know more about the phone than I do. It makes me want to avoid using it.”

These feelings matter a lot because when teachers feel bad about using tech, they may stop trying altogether.

To deal with these challenges, teachers said they need more assistance from the Department of Basic Education and school leaders. They want proper training, support from more skilled educators, and enough resources. Some teachers said schools should start support groups or teams where teachers help each other. Others said parents need to learn about digital learning too, so they can help learners at home.

One teacher remarked,

“If parents also understand the value of digital learning, they can help us reinforce the lessons after school.”

Even though there are many challenges, the teachers in this study really want to improve. They just need support, better tools, reliable electricity, and internet. With proper training, they believe they can use digital tools fully in their teaching.

One teacher concluded,

“We want to move forward. We just need help getting there.”

In short, digital platforms have the power to make Foundation Phase learning better. But many schools still struggle with access and educational readiness. To fix this, we need to amend the school infrastructure, train teachers, and include communities in the journey. Only then will digital learning truly benefit all learners, no matter where they go to school or what resources they have.

7. Recommendations

Using both old and new ways of teaching in early childhood classrooms is a good way to make learning fair for everyone. Some learners have access to digital tools, while others don't. When teachers use both chalkboards and things like tablets, videos, and learning games, it helps all types of learners to stay interested and focused. This mix also helps when there are problems like load shedding or not enough devices. Teaching can still go on, and learners get used to working with digital tools, which they will need as they grow older in school.

Teachers also need support to learn how to utilize educational digital tools properly. Many teachers in rural areas do not feel confident utilizing tablets or apps. Most of them are willing to learn but need proper training. If schools give teachers regular workshops and help, they will feel more ready to utilize educational digital tools in creative ways. They can make fun lessons using pictures, videos, and games, which makes learning more exciting for learners.

Parents and caregivers are also very important. When they learn how to assist their learners use educational digital learning tools at home, it helps keep learning going after school. This also keeps learners interested in schoolwork. When schools and families work together, learners feel more supported and do better in class.

To make big changes that last, schools need help from the government, companies, and other groups. These groups can give support by improving the internet, providing digital devices, and fixing school buildings. With this help, all learners, no matter where they come from, can have a fair chance to learn using digital tools. This will help make classrooms better, more fun, and ready for the future.

8. Conclusion

This study looks at how educational digital learning tools are utilizing in Foundation Phase classrooms in rural areas. It shows that although these tools can make learning more enjoyable and help teachers teach better, there are still many obstacles. One major issue is that many schools don't have enough educational digital devices. Also, many teachers don't have the skills to use the technology properly. Because of this, not all learners get the same chance to learn with digital tools (Maringe and Gunter, 2022).

The study also explains that digital learning plans must match the specific needs of each school and community. Schools should focus on improving their buildings, updating learning materials, and making sure teachers get the training they need to use digital tools well. This agrees with what Johnson and Mokoena (2023) found when schools

lack digital resources, learners in rural areas find it harder to succeed. Naidoo and Ramnarain (2022) also stated that teachers need continuous training to utilize educational digital tools effectively in their classrooms.

The research shows that educational digital learning can assist in making education fairer, but only if rural schools get the support they need. If schools improve their facilities and teachers get good training, digital tools can help learners do better in class. To make this happen, schools, the government, and local communities need to work together. This teamwork will help ensure every learner, no matter where they live, gets a fair chance to learn using technology (Kekana and Botha, 2024).

References

- Baker, L., Smith, K. and White, P. (2023). *Parental Engagement and Early Mathematics Achievement: A Socio-Cognitive Perspective*. Academic Press, New York.
- Beschorner, B. and Hutchison, A. (2013). iPads as a Literacy Teaching Tool in Early Childhood. *International Journal of Education in Mathematics, Science and Technology*, 1(1), 16-24.
- Dearing, E., Kreider, H. and Simpkins, S. (2021). Family Involvement in School and Low-Income Children's Literacy: Longitudinal Associations between and within Families. *Journal of Educational Psychology*, 113(4), 589-603.
- Elmahdi, I. (2018). Using Technology for Formative Assessment to Improve Student Learning. *International Journal of Educational Technology in Higher Education*, 15(1), 1.
- Fleer, M. (2018). *Digital Play and Learning in the Early Years*. Cambridge University Press, Cambridge.
- Flewitt, R., Messer, D. and Kucirkova, N. (2019). New Directions for Early Literacy in a Digital Age: The iPad. *Journal of Early Childhood Literacy*, 19(2), 210-225.
- Garcwa, M., Martwnez, M. and Lypez, J. (2023). Exploring the Impact of Digital Platforms on Young Learners' Academic Outcomes: A Review of Current Literature. *Journal of Educational Technology*, 42(1), 45-58.
- Hsin, C.T., Li, M.C. and Tsai, C.C. (2014). The Influence of Young Children's Use of Technology on their Learning: A Review. *Educational Technology & Society*, 17(4), 85-99.
- Johnson, L. and Mokoena, T. (2023). *Digital Divide in Rural Education: Barriers to Learning in South Africa's Foundation Phase*. University of South Africa Press, Pretoria.
- Kekana, P. and Botha, R. (2024). *Empowering Early Learners through Technology: Challenges and Prospects in Rural Schools*. SA Education Research Institute, Johannesburg.
- Khalid, A. and Aldahmash, A. (2017). Effectiveness of Using Plickers as a Formative Assessment Tool on Students' Participation Learning and Saved Time. *International Journal of Educational Research*, 154, 375-382.
- Kostova, V. and Fasarín, S. (2024). Evaluating Technology-Related Professional Development: Its Impact on Teachers' ICT Competencies and Classroom Practices. *Educational and Informational Technologies*, 29(1), 81-101.
- Kucirkova, N., Messer, D., Sheehy, K. and Flewitt, R. (2020). Developing Personalized Education for Young Children with Digital Technologies. *British Journal of Educational Technology*, 51(3), 564-576.
- Liu, M., Navarrete, C.C., Maradiegue, E. and Wivagg, J. (2021). Digital Learning Tools and their Impact on Early Mathematical Development. *Computers & Education*, 165, 104150.
- Maringe, F. and Gunter, H. (2022). *Equity and Technology in Early Childhood Education*. Sage Publications, London.
- Mdlongwa, T. (2012). *Information and Communication Technology (ICT) as a Means of Enhancing Education in Schools in South Africa: Challenges, Benefits and Recommendations*. Africa Institute of South Africa.
- Miller, T., Evans, M. and Cooper, D. (2023). *Digital Learning in Early Childhood: Opportunities and Challenges*. Learning Solutions SA, Cape Town.
- Mphahlele, R. and Mkhize, M. (2019). Digital Divide and Education: Challenges and Prospects of e-Learning in South African Rural Schools. *Journal of Communication*, 10(1), 12-21.
- Naidoo, R. and Ramnarain, U. (2022). Teacher Readiness for Digital Learning in South African Schools. *South African Journal of Education*, 42(3), 75-90.

- Neumann, M.M., Finger, G. and Neumann, D.L. (2017). [A Conceptual Framework for Emergent Digital Literacy. *Early Childhood Education Journal*, 45\(4\), 471-479.](#)
- Raiyn, J. (2016). [The Role of Visual Learning in Improving Students' High-Order Thinking Skills. *Journal of Education and Practice*, 7\(24\), 115-120.](#)
- Riva, M. and Massari, L. (2022). [Socio-Economic Disparities in Parental Involvement: Evidence from Early Childhood Education. *Early Child Development and Care*, 192\(3\), 378-390.](#)
- Swick, K.J. and Williams, R.D. (2019). [Parent Involvement in Early Childhood Education: Engaging Parents in Digital Literacy. *Early Childhood Education Journal*, 47\(2\), 173-181.](#)
- UNESCO. (2021). [Using Digital Technology to Improve Teaching and Learning: Guidance for Education Policy-Makers. United Nations Educational, Scientific and Cultural Organization, Paris.](#)
- Vygotsky, L.S. (1978). [Mind in Society: The Development of Higher Psychological Processes. Harvard University Press, Cambridge, MA.](#)
- Wilder, S. (2020). [Parental Involvement and Academic Outcomes in the Early Grades: A Review of the Literature. Routledge, London.](#)