




Learning at home for Grade 1 learners in disadvantaged communities: Insights from the Sandbox@Home COVID-19-response intervention



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Background: The spread of the coronavirus disease-2019 (COVID-19) has escalated the need for studying the home learning environment (HLE). With learners spending more time at home, understanding about learning at home, especially in disadvantaged communities, is paramount.

Aim: The aim of this research study was to explore the HLE for foundation phase learners by analysing data from an intervention that aspired to support organised learning at home during the COVID-19 pandemic.

Setting: This research study was conducted telephonically with families from 11 schools (10 in the Waterberg district, Limpopo and one in Soweto, Gauteng).

Methods: Qualitative data (recorded phone interviews) were collected from caregivers and learners from 17 households. The interview recordings were transcribed and translated into English. The constant comparative method of data analysis was used to analyse interview transcripts.

Results: Three themes emerged from the analysis: (1) challenges of learning at home, (2) perceived benefits of learning at home and (3) the desire to continue with the programme even after schools re-opened. The data showed that having access to learning material facilitated learning at home. Additionally, caregivers noted benefits to learners from engaging in learning activities. However, there were also challenges in facilitating learning at home. These include caregivers not following the learning guidelines provided.

Conclusion: Caregivers appreciated having access to learning material and were willing to facilitate learning at home. However, the challenges they faced resulted in them not executing the programme effectively. Future studies and interventions should explore how to provide adequate and accessible support to caregivers.

Keywords: home learning environment; COVID-19; foundation phase; disadvantaged communities; literacy; family engagement.

Introduction

This study explores the home learning environment (HLE) for foundation phase learners in resource-constrained settings in South Africa by presenting insights from an intervention that aimed to support organised learning at home during the coronavirus disease-2019 (COVID-19) pandemic.

The pandemic has caused major disruptions in numerous sectors, including healthcare, tourism, business and education, to name a few. However, it has also created opportunities for the same sectors to be both innovative and transformative. For example, the pandemic encouraged caregivers and teachers to start taking advantage of learning technologies in order to ensure that learning continues during school closures.

Like many other countries, the South African government imposed lockdown regulations in March 2020 as a way to mitigate the rapid spread of COVID-19. These regulations included a complete shutdown of primary, secondary and special schools for over 2 months (Parker, Morris & Hofmeyr 2020:6). Once schools re-opened, additional school days were lost because of the implementation of a phased-in return to schools and rotational timetabling. The phased-in return and rotational timetabling meant that not all learners would be allowed on the school premises at the same time to maintain social distancing protocols (DBE 2020:9–12). Some learners were in

school daily, whilst others only attended twice or thrice a week. It is because of this disruption to schooling that education stakeholders, together with the Department of Basic Education (DBE) in South Africa, decided to implement various distance learning interventions, which aimed to support learning continuity at home.

Distance learning

The United Nations Educational Scientific and Cultural Organization (UNESCO) (2016:105) defines distance or remote education quite broadly as 'modes of education in which the student and the teacher are separated in time and space'. This definition leaves room for a variety of remote learning modes and strategies, including learning through digital technologies and other, more low-tech modes, such as radio, television and mail. The concept of distance education has been in existence for many years, and there is a significant body of literature providing guidance on the various modes and good practices in this area.

However, whilst many teachers, schools and education systems around the world have responded to the pandemic in innovative ways and managed to successfully implement some form of distance learning, it is important to acknowledge that this has been – and continues to be – a form of what Hodges et al. (2020:2) refer to as 'emergency remote teaching'. Emergency remote teaching environments (ERTEs) provide a crisis response and can present many additional challenges even to pre-planned distance learning, including the need for facilitating emergency access to digital devices or learning content, problems arising from limited teacher capacity and experience in facilitating remote learning, contending with the complexities of the home environment and addressing the psychosocial effects of learning during a pandemic (Hodges et al. 2020:6–7). These complexities can be seen in accounts of local and international experiences of learning under lockdown, which describe the challenges of facilitating the adjustment to remote learning under conditions of increased socioeconomic and psychological strain (Jansen 2020:175–176; Rasmitadila et al., 2020).

The home learning environment

The first teacher that a child encounters is found in his or her home (Niklas, Cöhrssen & Tayler 2016:1–9), which means that the home environment also serves as a learning space. Niklas et al. (2016:1) defined the HLE as 'the context in which children first acquire the literacy and numeracy skills that equip them to make sense of, describe and participate in the world'. The availability of learning resources, the kinds of learning activities with which children engage, the presence of parent-child interactions and socio-economic risk factors are some of the issues that have been studied in order to understand the HLE and its impact on learning (Kluczniok & Mudiappa 2019:87–100; Lehl, Evangelou & Sammons 2020:1; Niklas et al. 2016:1–9). The COVID-19 pandemic has increased the need for researchers to better understand the HLE, especially in disadvantaged communities, and what factors make the home environment a conducive learning space.

In South Africa, almost 13 million learners from public schools were forced to stay at home in March 2020 (DBE 2020:6), with the majority of them not having essential resources, including technological tools and access, to continue learning in the home environment. The pandemic thus exacerbated inequalities between social classes (UNESCO Digital Library 2020:1) by making it easier for those who have access to technological devices to continue learning at home. In an effort to reduce this accessibility gap, the DBE worked with local television and radio stations to provide academic content for both primary and secondary school learners (Parker et al. 2020:2–8). Learners could also access zero-rated educational websites and mobile applications (i.e. they could access the internet without needing to use mobile data or Wi-Fi). Such approaches were also implemented by other countries, such as Armenia, Brazil and Canada.

Although some families had the means to access these learning resources through technology, there were several issues that have impact on the success or effectiveness of such approaches. For example, in South Africa, there were concerns about problems around accessibility to or availability of devices, such as televisions, laptops and smartphones, especially in the rural areas (Dube 2020:137; Parker et al. 2020:9–10). According to the 2018 General Household Survey, roughly 22% of South African households have a PC and 10% of households have a home internet connection (Statistics South Africa 2018:56–57). Although over 90% of households have a mobile phone, it is not certain that children would have a regular access to this device for learning. Additionally, only 60% of those with mobile phones reported having access to the internet via their device. As a way of addressing some of these challenges, the DBE and other organisations provided printed learning materials to some households (Parker et al. 2020:12). This approach was supported by some educationalists as it would help to reach most, if not all, children (Hoadley 2020:9–11; Taylor 2020:23–24). Even though this approach was highly supported, there are yet to be research studies on the effectiveness of providing printed materials to households.

In addition to concerns about access to content, some questioned the quality and coordination of the content provided on television and radio (ADEA 2020:7–9; Hoadley 2020:3; Parker et al. 2020:12). Additionally, qualitative research studies conducted in South Africa just after the lockdown show that some families were unaware of public addresses by the Minister of Basic Education, and of resources available to them to support learning at home (Taylor et al. 2020:15). Some learners also reported difficulty in navigating the DBE's resources on their own, largely without a supporting framework or guidance from their schools (Jansen 2020:173–175). The home environment is also complex insofar as learning is concerned and differs significantly from the school environment in numerous ways. At home, for example, children and caregivers have other responsibilities and concerns, including chores or

work, spending time with family members, playing and engaging in other hobbies (Taylor et al. 2020:24). During the lockdown, caregivers also reported feeling out of their depth when confronted with the challenges of curating, structuring and teaching content to their children (Taylor et al. 2020:18).

In this context, the implementing organisation and a partner university in Gauteng introduced an intervention within a broader multi-year research project, called the Sandbox Schools Project, to introduce organised learning in the home environment over a 3-month period. The intention of this intervention and analysis thereof was to contribute to the growing body of research on the topic of remote learning in the foundation phase of schooling, especially in resource-constrained environments. The 11 'Sandbox Schools' that form part of the Sandbox School Project are quintile 1–3 (no-fee) public schools in peri-urban and township areas that volunteered to participate in this multi-year research project. Ten schools are located in the Waterberg district of Limpopo, whilst one is a research school located in Soweto, affiliated to a university in Gauteng.

Intervention design

The 'Sandbox@Home' intervention was conceptualised as a response to the disruption of formal schooling, which most severely affected learners without access to digital technologies. The intervention, therefore, consisted of printed materials, designed to support caregivers – or others in the household – to facilitate learning at home with Grade 1 learners in the subject of Home Language. These materials were an extension of the Grade 1 Home Language Competency-based Learning Programme (CLP), a structured pedagogy intervention that forms part of the broader Sandbox Schools project that learners in the Sandbox Schools would have been exposed to in class, had schooling proceeded without disruption in Term 2, 2020. The Sandbox@Home resource pack was developed in three languages: Sepedi and Setswana Home Language for the 10 schools in Limpopo, and English Home Language for the school in Soweto. The pack consists of the following:

- **Learning guideline:** A short outline of recommendations for caregivers on how to set up an environment conducive to learning, how to support learning, how to develop confidence and how to establish a healthy learning routine
- **Story book:** The CLP Big Book of stories (printed in A5) contains 10 illustrated stories that have been locally developed to foster literacy skills and broader social, emotional and cognitive competencies. They are designed to be read aloud to learners, and they include questions to prompt deeper thinking and conversation about the story.
- **Activity guide:** There is a set of weekly activities related to each story:
 - mindfulness exercise
 - conversation guide
 - playful learning activity
 - reflection question

These packs were delivered to the 11 Sandbox Schools in August 2020 and distributed by the schools to families of Grade 1 learners.

Methods

This was a basic qualitative study that aimed to better understand the HLE in resource-constrained settings by exploring caregivers' and Grade 1 learners' experiences of the Sandbox@Home programme. Qualitative researchers conducting a basic qualitative study are interested in (1) how people interpret their experiences, (2) how they construct their worlds, and (3) what meaning they attribute to their experiences. The overall purpose is to understand how people make sense of their lives and their experiences (Merriam et al. 2015:24). Data for the research were generated through semi-structured interviews with a sample of caregivers and learners. Interview questions for caregivers focussed on whether they managed to implement the various components of the weekly programme, their reflections on the experience of teaching at home and their thoughts on whether or how the programme was benefitting the learner. Conversations with the learners focussed on what they had learned from the stories and weekly activities and on their experiences of learning at home.

Once resource packs were distributed to households, caregivers were given the option to volunteer as a 'research family' and participate in weekly telephonic interviews to discuss their experience of the intervention. Additionally, purposeful sampling was used based on the reasoning that in order to discover, understand and gain deep insight, researchers should select a sample from which the most can be learned. Patton (2015:53, cited in Merriam et al., 2015:96), argued that:

[T]he logic and power of qualitative purposeful sampling derives from the emphasis on in-depth understanding of specific cases: information-rich cases. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry, thus the term purposeful.

Accordingly, caregivers were asked to sign up as volunteers to participate in the weekly research calls. However, the research team experienced difficulty establishing and maintaining contact with these individuals and decided instead to ask teachers of the Grade 1 learners to recommend caregivers who were most likely to respond to weekly calls and engage with the interviewers about their experiences. In all, 56 semi-structured telephonic interviews were held between mid-September and mid-November 2020 with 17 caregivers and 11 learners. A total of 38 interviews were held with the 17 caregivers and 18 interviews with the 11 learners. The number of interviews per caregiver varied: four caregivers completed just one interview, seven completed two interviews, four completed three interviews and two completed the full series of four interviews. Similarly, six learners completed one interview, four completed two interviews and one completed the full series of four interviews.

In total, 33 caregiver and 16 Grade 1 learner interviews were conducted to explore caregivers' and learners' perspectives of the programme. The interviews were recorded and transcribed, and where they were not conducted in English, they were subsequently translated into English.

Informed consent was obtained from caregivers to use the data collected for research. This entailed an initial phone call, during which they granted consent for their conversation to be recorded. They were then notified of the purpose of the research, the fact that their anonymity would be protected, and that their involvement was voluntary, and given an opportunity to grant or withhold consent for the research process.

Data were analysed using the constant comparative method, which involves comparing one segment of data with another to determine similarities and differences (Merriam et al. 2015:32). Data are grouped together on a similar dimension, which is tentatively given a name and then becomes a category. The overall object of this mode of analysis is to identify patterns in the data.

The research team encountered numerous challenges when collecting data, such as difficulty establishing regular contact with caregivers because of shared mobile phones, outdated contact details and competing commitments. Additionally, there were mobile network challenges that affected the quality of some audio recordings and made it difficult for interviewers to engage with some of the participants, particularly the learners. Interviews were conducted in the learner's home language; however, there were some linguistic barriers because of the interviewers not being highly proficient in Sepedi. Whilst this was not generally a problem with caregivers, it was more difficult for very young learners (5–7 years old) to understand the interviewers, particularly over the telephone. Given these challenges, most interviews conducted with learners did not provide sufficient data for analysis. The insights discussed below are, therefore, drawn predominantly from conversations with the caregivers.

Ethical considerations

This study was approved by the University of Johannesburg Faculty of Education Research Ethics Committee, under the Sandbox Schools Project - Sem 1-2020-013.

Results

The following themes and insights were identified from analysis of the interviews held with caregivers and some learners.

Challenges of learning at home

Interviews with caregivers and learners highlighted the challenges of facilitating organised learning in the home environment. For example, many caregivers interviewed either did not read or did not understand the set of learning

guidelines accompanying the story book, resulting in misconceptions about the programme. One of the most common misconceptions amongst caregivers was that learners were supposed to read the stories independently, whereas the stories are designed to be read to the learner and discussed:

'I made her read, but she was all over the place.' (Caregiver, Limpopo)

'Being in Grade 1 still, she is still not able to read well. She is not able to explain who is and what are they doing.' (Caregiver, Limpopo)

'The book is hard. It is like a Grade 2 book.' (Grade 1 learner, Limpopo)

'I am not able to read Sepedi.' (Grade 1 learner, Limpopo)

This misconception was addressed during interviews with the research families; however, it is likely that many other households outside of the research sample continued with the practice or abandoned the programme altogether because the materials were too difficult for learners to read independently.

In addition, those caregivers who did follow the guidelines followed them only partially, with one or two carrying out the mindfulness and play activities and none appearing to have performed the reflection activities. Caregivers gave numerous reasons for not performing the activities, including that they had not progressed that far or did not know about them, that learners preferred to perform their own activities or that activities could not be performed outside. Feedback from the interviews also suggests that the purpose and design of the mindfulness, play and reflection activities were not fully understood by some caregivers. For example, one of the caregivers who did the play activity for the first story seemed to have difficulties in understanding the play activities for story 3:

'I do not understand how this spoon must be held in the hand because as soon as I place it in the hand, there is no need for it to fall. He will walk and end up where she is going without the spoon falling. So I do not understand how this spoon should be held in the hand or placed in the hand.' (Caregiver, Limpopo)

Some statements from caregivers also indicated that they did not associate learning with play, which may be a reason why the play activities in the programme were not prioritised:

'When it comes to play activities, I found that they get energised because they will go on playing. It is not the same as when you make her read. It becomes a bit difficult when it is just the matter of reading.' (Caregiver, Limpopo)

Many caregivers did not use the conversation guide in the activity pack, but instead used the questions in the story book itself as a means of discussing the story with the learner. As the activities came in a separate document to the story book, it is perhaps an indication that caregivers prefer to use one document rather than navigating multiple resources, which can add complexity.

Furthermore, some caregivers indicated that they experienced difficulties getting their learners to fully engage with the learning tasks. For example:

'He does read, but he keeps ducking and diving, away from the people who are helping him to read.' (Caregiver, Limpopo)

Additionally, some learners commented on the kind of treatment they received from their caregivers, which might have negatively affected their level of engagement:

'But she pinches me if I do something wrong.' (Grade 1 learner, Limpopo)

This feedback indicates that some caregivers struggled to facilitate learning at home in a way that enhanced learner engagement and created a conducive environment for learning.

Perceived benefits of learning at home

Caregivers who were able to follow most of the guidelines indicated that they thought children were learning from and enjoying the home learning programme. This can be found in their descriptions of the shared reading process and conversations, which indicate learner engagement and enthusiasm, and suggest that learners internalised the main messages of the stories:

'Looking at her, she looks extremely interested in these stories ... we have since ended up with Story number 2 ... But she still remembers them. She is still talking about them.' (Caregiver, Limpopo)

'He does ask questions. When I ask him questions, he reads the book again and again and asks me for more questions to explain ... The way I see, he is learning something from the stories. You can see that as a child, he enjoys these stories ... when he is playing and does not remember the things he read, he comes back to me to tell me and then we read again and he tells me that he does not remember [...] When I ask about what then, he tells me ... His mother told me about him that [*name of learner*] tells her the things him and I read about. It means that he grasp the material.' (Caregiver, Limpopo)

Regarding what learners appeared to have learned through the activities, this can best be summed up by what one of the caregivers referred to as 'life skills'. Caregivers considered that the stories resonated with learners' lived experiences and taught them moral lessons:

'He learns about children at play, he knows how I must play with other children, he does explain all of that when you ask him.' (Caregiver, Limpopo)

Interviews with learners also demonstrated that they could, on the whole, answer interviewers' questions about the stories, and that their learnings tied in with the caregivers' findings. Specifically, learners had learnt about friendships. For example:

Q: What did you like about the story?

A: I loved when Karabo shared his crayons ... And I also share my crayons with my friend too.

(Grade 1 learner, Limpopo)

Q: What did you learn from the story?

A: You must help the friend; you must share things when they don't have what you have.

(Grade 1 learner, Limpopo)

Few caregivers discussed impacts on literacy acquisition, and those who did were all from the Gauteng school, where English Home Language materials were distributed. These caregivers noted how the programme had helped the learners with their English:

'One other thing I saw is that it helps him with reading and how to construct a sentence, yes, it shows the way of putting a sentence across. That is my opinion.' (Caregiver, Gauteng)

'I ... realize that her grammar has improved, her grammar has improved and she likes speaking English more, even though she gets confused here and there, but I have learned that she enjoys speaking English ... she does enjoy it because here at home we speak Sesotho, but she would want us to engage more in English.' (Caregiver, Gauteng)

Caregivers expressed a desire to continue even once schools had reopened

Most caregivers interviewed expressed appreciation for the programme and a desire to continue with it. They spoke about the programme's educational value and mentioned other benefits, such as providing entertainment (bed-time stories), keeping learners off the streets, promoting enthusiasm for reading and encouraging caregivers to be more involved with children's learning:

'I would be glad to have it continue because it also entertains her. She does come back from playing in the street to say now it is time for us to read, please read to me. I would be very glad if it were to continue.' (Caregiver, Limpopo)

Whilst some caregivers found it difficult to balance their own work with the programme once learners were back at school, most caregivers said that learners were not at school all the time because of rotational timetabling, and therefore, they believed that the programme would continue to be beneficial as it could be applied when the learners were not in school and did not have homework.

Discussion

Appreciation of learning material and perceived benefits of the programme

A lack of learning resources, including textbooks, has been one of the many challenges faced by public schools in disadvantaged communities. Therefore, it is no surprise that both caregivers and learners showed great appreciation for receiving learning material, which they could use at home during the lockdown period. Although there has been a national decline in the percentage of learners reporting a lack of textbooks at public schools since 2002 (DBE 2019:3), a 2016 national survey revealed that almost six out of 10 adults live in households where there is no book present, and only 27%

of the adults report ever going to the library (South African Book Development Council 2016:81–86). These figures are inflated in Limpopo, where most of the Sandbox Schools are situated: 72% of households have no books and 21% of adults go to the library.

Considering the challenges mentioned earlier, relating to the use of technological devices for learning (Dube 2020:135–152; Statistics South Africa 2018:56–57) and the lack of reading resources in most homes, providing printed material was seen as highly beneficial by caregivers in supporting learning at home. As indicated by both Hoadley (2020:9–11) and Taylor (2020:23–24), printed learning material can be distributed to many households at a relatively low cost compared with providing access to technological devices and internet connectivity to learners.

Furthermore, both caregivers and learners expressed that they would continue to use the Sandbox@Home material even when schools reopened. This is because they found some benefits as learners engaged with the material, such as improvements in literacy skills and learners being able to relate to the content of the material and apply it in their daily lives. Caregivers went on to add that they would appreciate it if the project continued beyond the specified duration. Such feedback suggests that caregivers are willing to take part in their children's learning, and that all they need are the necessary tools to do so.

Challenges with facilitating learning at home

As much as caregivers showed appreciation for receiving learning resources that they could use to facilitate learning at home, they also expressed having various challenges with the task. As mentioned in the Results section, many caregivers did not use the Sandbox@Home material as instructed. This might be because of lack of understanding the instructions provided with the material, which could be related to caregivers' literacy levels. In a study on parental literacy levels and involvement, Sibanda (2015:1) argued that even though parents with low literacy levels value their children's education, they find it difficult to assist them. In the current study, some caregivers went to the extent of asking a family friend or even another minor (e.g. a learner in Grade 3) to assist their Grade 1 learner with the Sandbox@Home activities. This shows caregivers' willingness to facilitate learning at home, even when they themselves could not do so.

It was also noted that some caregivers did not pay attention to the guides but only focused on reading to or with their Grade 1 learner. Considering that some caregivers had time constraints because of employment commitments, whilst others were overloaded with homework given by their learner's teachers, it might have been overwhelming to do all the tasks related to teaching at home. Hence, some caregivers indicated that they had to prioritise doing the activities which were assigned by the teachers. Taylor et al. (2020:24) mentioned that in the home environment, unlike the school environment, various conflicting activities are present, which

may disrupt learning. Not only did caregivers in this study have to deal with school work but some had to look after other children, go to work and attend family events, such as funerals.

Another difficulty that was noted regarding facilitating learning at home is related to caregivers' ability to assume a 'teacher' role. Teaching is a skill that not everyone has, even if one is provided with step-by-step guidelines on what to teach. Some caregivers may not have the experience of supervising their child's learning, and therefore, might find it daunting to suddenly have to assume a teacher role (Zainuddin et al. 2020:645–651). In this study, caregivers expressed challenges with handling their children's behaviour when they did not want to engage in the Sandbox@Home activities. Either learners were not focusing on the task at hand, or they were impatient and trying to rush through the reading activity. Some learners expressed their dislike towards their caregiver's teaching style. For example, one of the learners mentioned that his or her caregiver did not give him or her breaks whilst reading. This is an example of a teaching technique that a teacher would be trained to use, of which a caregiver might not be aware. Hence, only providing learning material to caregivers without adequate teaching support could be a futile exercise.

Intervention implementation challenges

Because of COVID-19 lockdown restrictions, the implementation team was unable to make physical contact with caregivers and learners to raise awareness about the programme. Communication was, therefore, restricted to letters sent out via the school and telephonic conversations with specific research families who had provided contact details. This hindered progress in building advocacy around the programme and in ensuring that caregivers understood how it worked.

The challenges of remote learning and communication with caregivers have come into sharp focus in the South African and African contexts, where access to digital technology is highly unequal (ADEA 2020:8–12). Researchers conducting the weekly Sandbox@Home interviews found it difficult to establish and maintain a regular telephonic contact with even the small sample of families that volunteered because of shared mobile phones, multiple contact numbers, poor network, competing work schedules and other family demands.

It also became clear that the explanation provided in the printed materials was not sufficient for caregivers to understand the programme. For example, many caregivers thought that learners had to read the story books independently, whereas the instructions stated that caregivers should read to the learners. Whilst experiences elsewhere have indicated that diversifying media and including, for example, short instructional videos to caregivers can be an effective means of communication (ADEA 2020:3–4), this proved difficult in a context in which

most caregivers did not have smartphones or instant messaging services, such as WhatsApp.

Limitations

Conducting research remotely

As described above, the COVID-19 lockdown regulations meant that all research for this intervention was conducted remotely via telephone. This proved challenging, for many of the reasons outlined above, and it contributed to a high attrition rate for the 'research families' in the sample. Poor network connections in some areas also meant that a handful of audio recordings had to be discarded as the conversation was unintelligible.

Additionally, although the research had intended to explore both caregivers' and learners' experiences of the intervention, the challenges encountered when interviewing learners meant that much of these data were not useful, and thus, the analysis draws mainly from conversations with caregivers. These challenges, as mentioned earlier, included poor mobile network and general difficulty engaging telephonically with very young children who were unfamiliar with the researcher. In addition, whilst interviewers had some proficiency in the home language of learners and conducted the interviews in this language, they sometimes struggled to rephrase questions or make themselves understood clearly to the learner, which resulted in additional difficulties when conducting these interviews. Together with the factors mentioned above, this resulted in the data from the learner interviews not being as rich as we had hoped, and it constrained our ability to explore learners' experiences of the programme.

Lessons learned and future directions

Providing printed material to support learning at home

Insights from the Sandbox@Home intervention support the notion that providing printed learning material to aid learning at home can be effective, especially in reaching households from disadvantaged communities (Hoadley 2020:9–11; Taylor 2020:23–24). Caregivers also showed appreciation for having access to learning resources, especially as these came at no cost for them. A key learning from the Sandbox@Home intervention is that there is value in taking such an approach. Therefore, education stakeholders could investigate ways in which such a programme can be scaled up. Furthermore, it would be beneficial for future studies to look at the long-term benefits of such an intervention (e.g. whether there are measurable benefits towards the learner's academic performance).

Supporting home learning remotely

Experiences from the Sandbox@Home programme showed that communicating with and supporting caregivers remotely can be challenging. Experiments in similar resource-constrained environments suggest that simplifying and streamlining programmes can be an effective way of ensuring

that caregivers and learners understand what they are required to do and are able to implement it over time (Angrist et al. 2020:4). A key learning from the Sandbox@Home experience is that materials in such programmes should be reduced and streamlined, and that the key messages should be communicated using as many modes of communication as possible.

Conclusion

This article explored the HLE for foundation phase learners in resource-constrained settings by presenting insights from the Sandbox@Home intervention, which was implemented as a response to the COVID-19 pandemic and lockdown in South Africa. Feedback from interviews conducted with caregivers and learners, as well as the researchers' experiences, highlighted the variety of challenges involved in facilitating organised learning at home despite the willingness of many caregivers and the perceived benefits of home learning. These challenges included providing adequate support to caregivers so that they can understand the programme and implement it; low overall levels of literacy in the household, even amongst primary caregivers; and competing demands in the HLE.

Feedback from caregivers indicates that where they were able to implement the programme, they enjoyed the experience, appreciated the additional reading resources in the home, and perceived a variety of benefits for themselves and/or the learner. This research study has thus provided insights into the complexities of learning at home in resource-constrained settings, and it has highlighted the need for thinking creatively and planning deliberately around the provision of adequate support for caregivers. This includes streamlining programmes' materials and key messages, and diversifying channels of communication so that the messages are accessible to as many caregivers as possible.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

S.G. was responsible for conceptualising and guiding the research design, literature review and writing of this article, including reviewing drafts. T.S. was responsible for the literature review. C.M. was responsible for writing up the intervention design, methods, and results. All authors contributed to the discussion.

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Data availability

The data that support the findings of this study are available on request from the corresponding author, C.M. The data are not publicly available because of their containing information that could compromise the privacy of research participants.

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

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