



**FOUNDATION PHASE PRE-SERVICE TEACHERS' REFLECTIONS ON A
READING INTERVENTION PROGRAMME**

by

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A full dissertation submitted in fulfilment of the requirements for the degree of
Master of Education

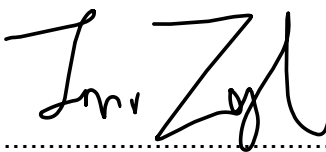
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DECLARATION

I, Jean-Mari van Zyl, hereby declare that an investigation into the support strategies used by Foundation Phase teachers to enhance the social skills of learners with High Functioning Autism is my own work and that it has not been submitted for any degree in any other university.

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Date: November 2025

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ABSTRACT

The Department of Basic Education (DBE) confirmed a national reading crisis after the Progress in International Reading Literacy Study identified that 78% of South African Grade 4 learners could not read with comprehension which indicates a crisis in reading in the Foundation Phase (FP). In an attempt to address this crisis, there are a plethora of assessments and interventions focusing on reading comprehension. However, in all these assessments and interventions, reading fluency remains a critical component of reading development and necessary for these assessments to be completed.

The rationale of conducting this research study developed through the researcher's experiences when she taught in the FP for three years in a variety of schools situated in both suburban and township areas. During this time, she observed this reading crisis worsening in the early grades. She observed during her teaching, that FP teachers were not applying reading fluency targeted interventions that engaged their learners in an exciting way. The interventions she saw and used were concentrated on other facets of the five essential reading skills, such as phonemic awareness, word recognition, comprehension and vocabulary. No interventions were targeted at reading fluency. During her undergraduate studies she was fortunate to be involved in a digital storytelling (DST) project that focused on fluent recording of text. This experience gave her the idea that DST could be used to help learners with low reading fluency. Since then, she identified there was a dearth of recent research where authors used DST to teach FP reading fluency.

This research project is a smaller project of a much larger service-learning project that used DST to teach fluency in Grade 2. This study explores pre-service teachers' weekly reflections after participating in an intervention programme (IP). This research project was conducted at a university in the Western Cape targeting FP pre-service teachers.

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DEDICATION

To Karen Leurs van Zyl (1967-2022), the most inspiring Grade 1 teacher and mother who nurtured me to be inquisitive, a critical thinker and instilled a passion for teaching in me.

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LIST OF ACRONYMS/ ABBREVIATIONS

B Ed	Bachelor of Education
CAPS	Curriculum and Assessment Policy Statement
CPUT	The Cape Peninsula University of Technology
DBE	Department of Education
DCDT	Department of Communications and Digital Technologies
DST	Digital Storytelling
EFEC	Education Faculty Ethics Committee
EGRA	Early Grade Reading Assessment
ELNA	Early Learning National Assessment
FET	Further Education and Training
FP	Foundation Phase
GEM	Global Education Monitoring
GEM	Global Education Monitoring
HEI	Higher Education Institution
ICTs	Information Communication Technologies
IP	Intervention Programme
ITE	Initial Teacher Education
MRTEQ	Minimum Requirements for Teacher Education Qualifications
QR	Quick Response
SASE	South African Systemic Evaluation
SATU	South African Teachers Union
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UoT	University of Technology
UPS	United Parcel Service

WCED Western Cape Education Department

WIL Work Integrated Learning

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CHAPTER 1

ORIENTATION OF THE STUDY

1.1 Introduction

There is a global literacy crisis as many learners from poor and average-income countries are unable to read by the age of ten (World Literacy Foundation, 2023; Crawford et al., 2025). “Learning poverty” has been evidenced through a plethora of research indicating the decline of reading levels across the world (United Nations [UN], 2022:34; World Bank et al., 2022:5; Crawford et al., 2025; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2025:24). The UNESCO Global Education Monitoring (GEM) Report highlights that “countries are off-track” in achieving their reading proficiency national targets whilst the United Nations (UN) (2022:11) emphasised the need for an urgent literacy intervention (UNESCO, 2022:226). This tendency is also seen in the African context, Nigeria has been affected by the literacy crisis. According to statistics, only 26% of primary school learners meet the expected literacy and numeracy outcomes (Garba, 2018; UNICEF, 2025). In South Africa, the DBE has long confirmed a national reading crisis, but more recent literature highlights early foundational literacy as an urgent national priority (Spaull, Pretorius & Mohohlwane, 2020; DBE, 2022; Oxford University Press, 2023; van der Berg, Gustafsson & Shepherd, 2024; Metcalfe, 2025). Based on the South African Systemic Evaluation (SASE) conducted in 2022, only 22% of Grade 3 learners could read in their Home Language (DBE, 2022; Mafu, 2025). Therefore, without urgent intervention, the National Reading Barometer (2023) predicts that, by 2026, 70% of FP learners will remain illiterate (Reading Panel, 2024).

The Western Cape Education Department (WCED) data reveals similar concerns. The Grade 3 Systemic Test Results (WCED, 2025) show that only 45% of South African learners passed their Home Language in 2024, whilst only 53% passed the reading and phonics content areas. Even though SASE revealed that in Grade 3 Reading Literacy, the Western Cape had the highest number of learners on the required grade level in the country (DBE, 2024), these results still point to a widespread problem in literacy levels that could be addressed through efficient interventions (DBE, 2022:2; WCED, 2025; Oxford University Press, 2023; DBE, 2024). Therefore, the WCED

continues to prioritise literacy learning and reading. WCED (2025) specifically provides a 50-word-per-minute benchmark for Grade 2 oral reading fluency, which served as the motivation for a reading fluency service-learning project at a local school. The researcher noticed a lack of reading fluency in her own FP classrooms and considered her observations along with a discussion of the current South African reading crises (van der Berg, Gustafsson & Shepherd, 2024; Metcalfe, 2025), which inspired this study. For effective reading interventions, teachers need to identify learners' literacy challenges in each of the five main components of reading, namely: "phonemic awareness, word recognition, comprehension, vocabulary and fluency" (DBE, 2011:14). These components are interdependent of each other, complicating the measurement of fluency (DBE, 2011:14; Kuhn et al., 2018:271). There are a range of interventions and reading assessments focusing on phonics, word recognition and reading comprehension, some include: the Back on Track Programme (WCED, 2025), The Aweh! IP (Oxford University Press, 2023), the Early Learning National Assessment (ELNA) and the Early Grade Reading Assessment (EGRA), which assesses word recognition and reading comprehension (DBE, 2021).

However, in all these assessments and interventions, reading fluency remains a critical component of reading development (DBE, 2011:14; Kuhn et al., 2018:271; Oxford University Press, 2023; Reading Panel, 2024) that warrants further research. The Western Cape Reading Strategy 2020 – 2025 highlights the urgency to support FP learners "to read at the appropriate levels of fluency" (WCED, 2020:3). Likewise, the Department of Communications and Digital Technologies (DCDT) emphasised the importance of digital skill integration in schools (DCDT, 2020:9). Collectively, this highlights the importance of training pre-service teachers on Information Communication Technologies (ICTs), developing their digital skills and multiple literacies as described in The Minimum Requirements for Teacher Education Qualifications (MRTEQ) (Department of Higher Education and Training [DHET], 2015:13; Walker, 2022). Recent literature demonstrates an increase on the benefits of DST for many educational purposes (Nam, 2017:412; Garba, 2018; Chiang, 2020; Tamimi, 2024). However, the use of DST as an intervention for poor reading fluency of Grade 2 learners in South Africa has not been fully explored. Hence, to address the gap in existing literature and to explore this further, this research project investigated

how the pre-service teachers used DST to improve their Grade 2 learners' reading fluency.

In this study, DST was used as a reading fluency intervention by final year pre-service teachers as part of a Language in Education service-learning project through a local university in the Western Cape. Throughout the pre-service teachers' DST experiences, they reflected on how DST could be used to teach reading fluency as it encouraged learners to continually listen to and read their own stories. The researcher sought to gain insight into these pre-service teachers' experiences of using DST to potentially improve their Grade 2 learners' reading fluency, addressing the lack of research on FP reading fluency and DST. Having previously observed poor reading fluency as a Foundation Phase teacher, the researcher was particularly motivated to explore DST as an intervention, which is further discussed in the next section.

1.2 Background of the study

During the researcher's four-year Bachelor of Education (B Ed) degree in FP at a local university, she needed to create a digital story as an assignment for a module called Language in Education: Afrikaans Home Language. Thereafter, she became a Grade 3 teacher for one year and then a Grade 1 teacher for a year and a half, teaching at two urban Afrikaans medium Western Cape schools. She used DST in her classroom, where she taught FP learners who struggled with reading fluency. Realising there was a reading fluency problem in FP and wanting to research this phenomenon in more detail, she met with her Language in Education lecturer from her B Ed degree who is an educational researcher. Since 2019, the digital story assignment has been extended to a much larger DST service-learning project, which sought to improve Grade 2 learners' reading fluency. The lecturer agreed to co-supervise the researcher in this project to examine the use of DST as an intervention for poor reading fluency, from pre-service teachers' perspectives.

All fourth-year FP students are required to use DST as an intervention to improve Grade 2 learners' reading fluency. This compulsory service-learning project contributes towards 18% of the overall mark for the subject. Service-learning, as an

educational approach, integrates structured learning with meaningful community engagement. By emphasising community-based problem-solving and bridging the gap between literacy theory and practice, this project equips pre-service teachers with essential digital competencies for classroom success. It also fosters their active participation in society and aligns with national education policy directives (DHET, 2015:13; Walker, 2022; Narong & Hallinger, 2023:339).

This University of Technology (UoT) promotes attributes similar to The Cape Peninsula UoT's (CPUT) graduate attributes which are facilitated during students' undergraduate and postgraduate years of training. These attributes are defined as the qualities and skills that shape their professional teaching and learning experiences so they may contribute positively to communities (CPUT, 2025). One of the fundamental skills of "technological capability and foresight" is applying practical insights in a way that is "environmentally sustainable" (CPUT, 2025:2). Linking this service-learning project with the graduate attribute qualities of the educational institution, align well with both fostering the environmental sustainability of our communities as well as building current graduate skills and technological knowledge.

This service-learning project provided the ideal environment for the researcher to examine pre-service teachers' experiences of using DST to teach reading fluency. The researchers' objective was to explore pre-service teachers' perspectives, informed by her own observations of reading fluency challenges and the preparation of FP pre-service teachers in using DST. Existing research indicated that FP learners were likely to struggle with reading fluency and face additional challenges within the South African context (Gummere, 2004:1; Pretorius et al., 2016:4). The DST process required a range of pre-reading and pre-writing activities leading up to the creation of the learners' own digital story with the guidance of the pre-service teachers. Word and sentence-level interventions formed a critical part of the DST process. Consequently, through DST, pre-service teachers practised teaching multiple components of reading, contributing to reading fluency, while developing their own and the learners' digital skills (Walker, 2022). To gain authentic insights, the researcher analysed written

reflections and conducted focus groups to explore their experiences with DST as a tool for teaching reading fluency.

1.3 The rationale of the study

To justify the rationale for this study and investigate the issue of poor reading fluency, the researcher aimed to explore pre-service teachers' experiences with using DST as an intervention. The study focused on understanding their unique perspectives, identifying effective practices, and examining the perceived benefits of DST. Equally important was the investigation of the challenges encountered in implementing DST with Grade 2 learners. By exploring both the benefits and challenges, the research sought to gain a deeper understanding of how pre-service teachers experienced DST, thereby shedding light on its potential as an effective intervention for addressing reading fluency in the FP.

1.4 The context of the study

This research project was inspired by a well-established DST service-learning project, spearheaded by the co-supervisor of this project. The service-learning project required pre-service teachers to execute eight 50-minute intervention sessions at a rural school close the university campus. This service-learning project formed part of the pre-service teachers' Language in Education: Afrikaans Home Language subject. They were required to address Grade 2 learners' poor reading fluency by implementing the theory they learned in this subject, in practice at the school, during the project. Small groups of two pre-service teachers spent time with small groups of two to three learners, guiding them to create their own unique digital story. During the creation of the digital story, pre-service teachers addressed additional poor reading skills through word and sentence-level exercises. Reading fluency was addressed through repeated reading of the digital story by the Grade 2 learners, and the recording of their own narration to include in the story. Hence, the researcher sought to gain an understanding of the pre-service teachers' experiences of using DST to address Grade 2 learners' poor reading fluency, focusing on the benefits and challenges.

1.4 The approach to the study

The researcher conducted qualitative research to gain the most valuable understanding of pre-service teachers' experiences during the DST project, through examining their reflections. The interpretivist paradigm led the researcher to seek a descriptive understanding of the study the subjective experiences of the pre-service teachers (Okeke & van Wyk, 2017:52; Maree, 2020:89). To ensure triangulation, three types of data were collected from pre-service teachers: weekly written reflections, focus group discussions and overall written reflections. These three types were inductively and deductively analysed to identify relevant themes from the data collected, discussed in Chapter 4.

1.5 The purpose and goals of the study

To critically examine eight pre-service teachers' written reflections, was the main objective as the researcher sought to gain an understanding of their experiences throughout their DST interventions. Sub-objectives included identifying relevant challenges and benefits of using DST to teach reading fluency to their Grade 2 learners. Data was collected from weekly written reflections and two small focus group interviews where eight pre-service teachers were invited to reflect on their experiences. At the end of the project, the pre-service teachers also wrote an overall written reflection to describe their experiences.

1.6 The research title

Foundation Phase pre-service teachers' reflections on a reading intervention programme.

1.7 The main research question and sub-questions

1.8.1 Main research question

How did Foundation Phase pre-service teachers experience the DST reading intervention programme?

1.8.2 Sub-questions

What benefits did pre-service teachers experience during the DST IP?

What challenges did pre-service teachers experience during the DST IP?

1.9 Clarification of terms

1.9.1 Pre-service teachers

Pre-service teachers, also called student teachers, are B Ed students with limited classroom experience who participate in supervised teaching under university guidance (van der Merwe, 2022). In this study, the term specifically refers to 4th-year B Ed students using DST as part of a service-learning project.

1.9.2 Reading fluency

Reading fluency is the ability to read smoothly, accurately, and with understanding, encompassing pace, rhythm, and speed (DBE, 2022). It also depends on the learners' phonemic awareness, word recognition, phonics, vocabulary, and comprehension, making it a key skill for developing reading in the Foundation Phase (Spaull et al., 2020). In this study, pre-service teachers targeted learners' reading fluency using DST.

1.9.3 Digital storytelling

DST is a multimodal ICT-based method that uses ICT tools to combine text, visuals, and audio to produce a digital story. This method makes the storytelling more immersive, and enhances comprehension, creativity, communication, and active knowledge construction (Yang et al., 2022). In this study, pre-service teachers guided Grade 2 learners in creating and recording their own digital stories.

1.9.4 Foundation Phase

According to the Policy on MRTEQ (DHET, 2011:23), FP is the educational phase that includes Grade 1 to Grade 3. FP programmes must equip students with a knowledge

mix that includes disciplinary, pedagogical, practical learning and knowledge of ICT tools. Additionally, FP teachers are expected to teach all three subjects—Literacy, Numeracy, and Life Skills—in Grades 1 to 3, drawing from a broad range of general knowledge to implement the national school curriculum effectively (DHET, 2011:23). FP teachers require extensive and specialized knowledge of early childhood learning to teach foundational skills in reading, writing, and numeracy, which are crucial for future learning phases (DHET, 2011:23).

1.9.5 Intervention Programme

An IP can be defined as a structured, targeted plan designed to address a specific learning barrier, with the aim of supporting learners to improve particular skills or competencies (DBE, 2000:19; DHET, 2011:23). In this study, the IP was specifically developed to enhance the reading fluency of Grade 2 learners through the integration of DST.

1.9.6 Service-learning

Service-learning refers to a thoughtful and social skills educational method combining structured educational activities with community or public service (Heffernan, 2011:1; Narong & Hallinger, 2023:339). By being intrinsically linked to an educational goal, service-learning strengthens skills like communication, critical thinking, collaboration, and community building (Heffernan, 2011:1; Narong & Hallinger, 2023:339). Furthermore, service-learning provides pre-service teachers with the opportunity to consider how their in-practice experiences relate to educational values, community principles, and curriculum materials (DHET, 2011:50; Narong & Hallinger, 2023:339). This ultimately inspires pre-service teachers to become involved in their local communities and recognise the educational needs in their communities.

Additionally, the National Education Policy Act (27/1996): Norms and Standards for Educators document specifies the seven roles of the educator and states that teachers must be trained to serve in a “community, citizenship and pastoral role” (DHET

2011:50). Therefore, service-learning is incorporated into pre-service teacher training through service-learning projects. Service-learning prepares pre-service education students for real-world, community-based problem solving. The experience of service-learning enables teachers to investigate the connections between theoretical classroom knowledge and the real-world demands of a community and classroom, as opposed to only training them for certain roles of the educator (Heffernan, 2011:1; DHET 2011:50). Hence, all South African universities include teaching practice and/or service-learning programmes as part of their B Ed course programmes.

1.10 Significance of the study

This study demonstrates that the DST intervention is valued by pre-service teachers as a strategy to enhance Grade 2 learners reading fluency and that participation supports pre-service teachers' digital skill development as mandated by Initial Teacher Education (ITE) curricula (DCDT, 2020:9). These pre-service teachers shared their experiences through reflection on their intervention sessions, noting an existing literacy crisis in the South African context. They shared their experiences by engaging in different levels of reflection (Strampel & Oliver, 2007:976), allowing them to identify the beneficial influence of DST, including enhanced reading fluency and various levels of learner engagement throughout the digital story process.

Challenges that the pre-service teachers encountered with the implementation of DST were also communicated. Challenges include how learners struggle with reading fluency within the South African context (Spaull, Pretorius & Mohohlwane, 2020; DHET, 2021:5). As pre-service teachers reflected further, they also expressed time management as a major challenge in implementing DST as a reading intervention. In essence, this study presented pre-service teachers' perspectives on using DST for the advancement of reading fluency, considering the South African context and an existing reading crisis.

1.11 Limitations of the study

This study was limited by a few factors, of which the researcher is aware. The study was limited to an investigation of DST for Grade two learners' fluency and did not

investigate the previous or subsequent grades. Due to the nature of the study, the researcher focused solely on pre-service teachers' experiences, even though a lot of the data was about the Grade 2 learners that the pre-service teachers were working with. The pre-service teachers' point of view could be one sided as perspectives of the learners, in service teachers and lecturer was not investigated. Only eight pre-service teachers participated in the voluntary study, limiting the amount of participants and perspectives considered in this study.

Examining reflections, partly through focus group discussions, posed the danger that participants provide the responses that they think are required or correct instead of their honest experiences and perspectives (Puri, 2024). The researcher included confidential written reflections before and after the focus group discussion to set forth a balanced representation of pre-service teachers' experiences. Even though students were prompted to reflect on challenges experienced in the written reflection templates and focus group discussion questions, pre-service teachers reflected minimally on their challenges during this DST project. In future, the focus group questions should probe further into challenges experienced by pre-service teachers to avoid a performative response from participants.

1.12 Assumptions of the study

A reasonable assumption which was justified by existing literature (DBE, 2022:2; WCED, 2023; Oxford University Press, 2023; DBE, 2024), indicated that the Grade 2 learners would have poor reading ability. It was assumed that all the pre-service teachers would have a good understanding of the DST process, which included an understanding that word and sentence level instruction as well as traditional writing form part of the process. Some of the pre-service teachers however demonstrated confusion by considering all interventions preceding the final copy of the digital story as unrelated to the DST process. It was also assumed that the participants would have good vocabulary to describe their experiences because data was collected in their Home Language (Afrikaans). However, the terminology that pre-service teachers used did not always reflect the concept accurately. Moreover, a major assumption was that by teaching learners the sub-components of reading (word recognition and phonics) with reading fluency strategies (pause, exclamation, character voices) would enhance learners' reading fluency, even though they only worked on one digital story.

1.13 Organisation of the dissertation

Chapter 1: Introduction

This chapter introduces the research project by outlining South Africa's literacy crisis and its urgent call for action. In contrast to the South African literacy crises, DST is presented as a possible intervention for low reading fluency. The study's background is explained in detail, followed by its justification and context. This study's qualitative approach is introduced, along with some of its methods. Prior to the research title, the study's objectives and purpose are explained. Then, the primary and secondary research questions are presented. Lastly, this chapter provides a clarification of terms used throughout the study and concludes with the significance, limitations and assumptions of the study.

Chapter 2: Theoretical Framework and Literature Review

Chapter 2 explains the theoretical framework of this study in terms of Strampel and Oliver's levels of reflection (2007:976). Then relevant literature is reviewed in terms of DST, reading in the South African context, reading fluency, service-learning and pre-service teachers use of DST to teach reading fluency. Different types of learner engagement such as behavioural, emotional, intellectual engagement as well as learner progress is explained in this chapter in review of current research.

Chapter 3: Research design and methodology

The research design and methodology is explained in Chapter 3 by starting with an interpretivist paradigm. Following the paradigm, the research's qualitative approach is explained along with the case study design chosen. The methodology section of this chapter includes the selection of site and participants, pre-service teachers. Subsequently, in this section, the data collection instruments are explained as focus group discussions, final written reflections and weekly written reflections. The next section, data analysis, explains how thematic analysis was used to analyse the data. The assurance of trustworthiness in the study was explained by discussing its

credibility, transferability, dependability and confirmability. The researcher's role and ethical considerations conclude this chapter.

Chapter 4: Findings

In the fourth chapter, the findings of this study are presented. Each research question is discussed with its relevant themes and findings. In answering the first sub-question, contributing to the main research question, the researcher thematically presents two benefits of using DST. In seeking to answer the second sub-question, the researcher identifies three themes pertaining to the challenges of using DST to teach reading fluency.

Chapter 5: Conclusion

This concluding chapter outlines the main findings of the study through discussion. Limitations of the study is also briefly discussed in this chapter along with relevant recommendations. Finally, the thesis is concluded with the researchers' own critical reflection of the study.

CHAPTER 2

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

In this section, Strampel and Oliver's levels of reflection (2007:976) will be discussed as the theoretical framework in this study. This study examines pre-service teachers' own reflections on teaching reading fluency through DST in the South African educational context. Each of the levels of reflection set forth by Strampel and Oliver (2007:976) will be explained. Reflection refers to the exercise which any professional can conduct where their experiences are evaluated and is the focus of this study that examines pre-service teachers' experiences of a reading intervention. Through a series of intervention sessions, pairs of pre-service teachers used a DST IP to improve pairs of FP learners' reading fluency. Following each intervention session, they reflected on their experiences, guided by the weekly written reflection questions. They also participated in reflective focus group interviews at the end of the IP to reflect on the IP.

2.1.1 Theoretical framework

To theorize the ways in which South African pre-service teachers, the researcher considered many different theories which included the Narrative Theory (Herman, 2012:44) and the metacognitive theory (Flavell, 1979:906). The Narrative theory studies how stories are structured, understood, and interpreted in the case of DST it could examine the development of the digital story itself. Whereas the metacognitive theory refers to thinking about one's own thinking which pre-service teachers innately exercise during reflection. As the focus was on the pre-service teacher's experiences of this DST IP, the researcher chose the levels of reflection set forth by Strampel and Oliver (2007:976) as theory. This allowed pre-service teachers to reflect throughout their DST experiences. This framework for critical reflection, enhances the value of the reflection as it probes the writer to think about applications of the new knowledge in a variety of situations. Strampel and Oliver's (2007:976) developing levels of reflection lead to new levels of cognitive processing, as illustrated in Figure 1.

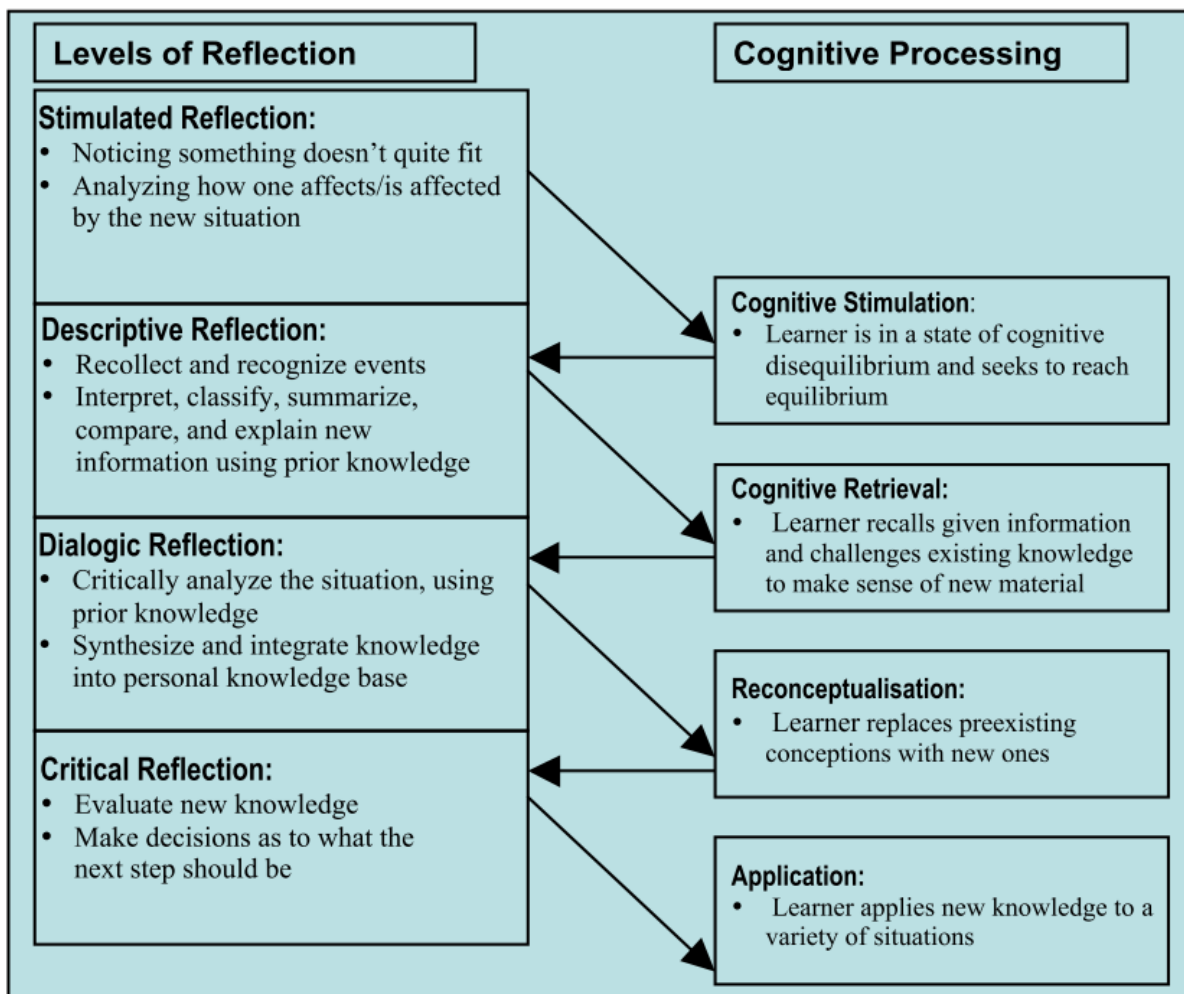


Figure 1: Strampel and Oliver's levels of reflection (2007:976)

- Stimulated reflection and cognitive stimulation: Teachers at this stage become cognisant of new material, experience intellectual stimulation, and feel compelled to make sense of it. They are in a state of disequilibrium until the new information can be absorbed and adjusted (Strampel & Oliver, 2007:976; Ivala et al., 2013:221; Fredericks, 2025). Unless they are driven to achieve high levels of reflection, students who do not try to accommodate the new information adopt a surface-level learning style and frequently only memorise the material given to them for assessment purposes (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). In this study stimulated reflection refers to pre-service teachers' adaption of their IPs to accommodate their new knowledge, gained from considering what was successful and unsuccessful after each session.

- Descriptive reflection and cognitive retrieval: Teachers at this level reflect on their prior experiences, remember events, and respond to circumstances. They give detailed descriptions of the circumstances without passing judgement, but they also acknowledge opposing viewpoints and make an effort to offer explanations or arguments for their actions (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). Teachers are able to stand back at this point and view the event from a different angle and in a larger perspective (Ivala et al., 2013:221). Recalling, remembering, and recognising past knowledge from long-term memory encourages pupils to engage in cognitive retrieval, which encompasses remembering and understanding. By interpreting, exemplifying, categorising, summarising, inferring, and comparing, students may explain ideas or concepts and create meaning from written, spoken, and visual communications (Strampel & Oliver, 2007:976; Ivala et al., 2013:221; Fredericks, 2025). Descriptive reflection is the lowest ideal level of reflection described by Strampel and Oliver (2007:976). In this study descriptive reflection was indicated when pre-service teachers exercised cognitive retrieval and recall of events from the intervention sessions to reflect on them.

- Dialogic reflection and reconceptualization: Teachers are reassessing their experiences at this level through the following processes: association (relating and connecting new knowledge with prior knowledge), integration (looking for connections among facts), and validation (checking for internal consistency between new ideas and existing knowledge as well as between the teachers' own views and those of others) (Strampel & Oliver, 2007:976; Ivala et al., 2013:221; Fredericks, 2025). Cognitive teachers can generate potential alternative answers by rethinking, examining, and evaluating past information as well as the current circumstance or experience (Strampel & Oliver, 2007:976; Ivala et al., 2013:221; Fredericks, 2025). Compared to descriptive reflection, it is a deeper degree of introspection. Dialogic reflection of pre-service teachers is evidenced in their evaluation of their own views with others, during a focus group discussion.

- Critical reflection and application: By being able to assess or estimate the worth of something, teachers at this level go beyond dialogic reflection. This is crucial for creating a fresh viewpoint and helping the teacher decide whether a change in direction is required (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). Making decisions on how to proceed can help the teacher put their newly acquired knowledge

into practice by changing how they do things, resolving problems, or honing their abilities (Ivala et al., 2013:221; Fredericks, 2025). Teachers may apply newly acquired knowledge to a range of circumstances at this greatest level of cognition. In this study pre-service teachers indicate critical reflection when they solve problems and make important decisions during the DST IP.

This process of reflection is important because it leads the pre-service teacher towards critical reflection which is essential for teaching and learning in the South African context (Strampel & Oliver, 2007:976; Fredericks, 2025). Pre-service teachers participated in small focus groups where their experiences were reflectively discussed. They also completed overall written reflections at the end of the 10-week IP. Strampel and Oliver's (2007:976) levels of reflection informed the overall reflection template used at the end of the IP. An example of reflection in this stage is when pre-service teachers reflected on the entire IP process in focus group sessions and asked themselves "What was it like, applying this IP, from start to finish?" It is important to note that pre-service teachers do not reflect linearly in this process and can flow from one level to another within the same experience. In conclusion, more recently, Shoffner (2008:123) also describes how pre-service teachers need to learn reflection skills to be reflective educators. On the other hand, Cavanagh (2021:73) explains how pre-service teachers often lack the observation skills or pedagogical knowledge to reflect effectively rather they merely describe their lessons. Therefore, reflective practice has become a core component in teacher training to produce more reflective teachers (DHET, 2025). Reflective practice is an integral part of teacher training and assists the pre-service teachers to think about alternative ways of solving academic problems, leading towards improving practical pedagogical skills in the South African context (Rodman, 2010:20; Moodley & Aronstam, 2016:5). In this study, pre-service teachers were in a constant state of reflection as they engaged in the IP with their learners. They were expected to continually reflect while teaching, reflect after teaching, and reflect for future teaching throughout the IP. As this study aims to understand pre-service teachers' experiences of using DST for reading intervention in the South African context, their reflection on their experiences became a critical source of data. Figure 1 describes the pre-service teachers' reflective processes using a DST as an IP to improve FP learner's reading fluency in terms Strampel and Oliver's levels of reflection (Strampel & Oliver, 2007:976; Segal, 2024). Because these pre-service

teachers are studying a B Ed Foundation Phase course which aims to train reflective practitioners for the teaching profession, these reflections contributed to adjusting the service-learning project in the following year which forms part of the B Ed Foundation Phase course aspiring teachers will study.

2.1.2 Literature review

The key components of this study, comprising of DST, reading fluency as well as pre-service teachers' application of DST, will be reviewed in this section based on existing literature. Additional components linked to this study will also be discussed. These components include DST, reading in the South African context, reading fluency, service-learning, pre-service teachers use of DST, learner engagement and learner progress.

2.1.2.1 Digital storytelling

Even though the focus of this study is to investigate pre-service teachers' experiences of implementing an IP for reading fluency, background information on DST will be provided in this section as it forms part of the IP that pre-service teachers used.

Storytelling is a critical exercise in the Foundation Phase classroom and integrated through a whole language approach which uses stories in phonics, various reading approaches and creative writing of learners' own and class stories throughout the curriculum to develop, amongst other skills, the five components of reading (DBE, 2008; DBE, 2011; Joubert et al, 2019). According to Soler-Pardo (2014:74) the idea behind digital stories is to convey insights into a particular subject by combining the art of storytelling with a variety of digital multimedia. Nearly all digital stories incorporate recorded audio storytelling, digital images, text, video, and music. Digital stories are presented using short videos, which are typically two to three minutes long (Yang et al., 2022:840). DST expands storytelling by integrating ICT tools such as audio, sound effects, and animation while reading the text. DST was initially used for community development due to its creative and therapeutic advantages (Lambert, 2009:79). It's use as a teaching tool has also proven valuable to teach a wide range of topics (Robin, 2016:17; Alyuvany et al. 2025:16). Research shows that DST can be used to encourage a broad range of skills for example: digital literacy skills, writing skills, language skills, storytelling ability, reflective skills, and emotional intelligence (Ribeiro, 2015:50; De Jager et al., 2017:2549). To create a digital story, learners plan

their stories, research, compile media into their stories and record their voices reading the story aloud (Morra, 2013). These benefits are particularly pertinent for addressing the ongoing literacy crisis and educational disparities like learning poverty of literacy and reading skills (World Bank et al.; 2022:7; WCED, 2024). In this research project, South African FP learners used their ideas, researched and wrote their own stories, planned their storyboard, added images, video and audio and compiled a digital story (Morra, 2013). The learners then practiced reading fluency through making audio recordings of their stories (Morra 2013). Pre-service teachers applied their reflection skills on a weekly basis after IP sessions on their experiences in the DST IP.

In the FP, DST can motivate learners to be engaged, participate, and improve their higher-order comprehension skills, while developing digital literacy and storytelling abilities as they develop their stories (Robertson et al., 2012:78 & Ribeiro, 2015:42). As DST has previously been found helpful in literacy interventions (Garba, 2018), the researcher has deemed that it will be a suitable intervention to consider for attempting to improve FP reading fluency abilities. In the South African context, the use of DST can provide free resources to a low-resourced classroom and is suitable for a whole class approach. Reading aloud while listening to an audio recording of the same story may improve reading fluency (Friedland et al., 2017:82). Similarly, when the learners participate in the DST project, they can set the pace of reading for their own digital storybook and practice at a pace that is most comfortable for them.

The nature of the intervention as a DST project, is significant as DST has been shown to be a valuable ICT tool for education. Taimimi (2024:308) cited Tsou et al. (2006:443) on DST's benefits for language learning, highlighting its positive impact on writing, reading, and listening. Taimimi (2024:310) emphasizes the benefits of DST to improve language learning, enhance learner participation and encourage collaborative teaching methods. Considering the research that supports the use of DST for teaching and learning (Tsou et al. 2006:443; Taimimi, 2024:308), the South African DBE (2011) consistently states that electronic texts must be included in reading activities (DBE, 2011:119). These electronic texts are similar to the digital stories such as the ones learners wrote and created during this reading intervention where pre-service teachers were invited to facilitate the creation of collaborative digital stories by Grade 2 learners.

2.1.2.2 Reading in the South African context

Multiple sources highlight South Africa's ongoing literacy crisis, particularly concerning young learners' reading success (DBE, 2022). Several factors contribute to this issue, including socioeconomic disparities, where children in poverty are less likely to achieve literacy due to lack of resources, scarcity of technological resources, teacher absenteeism and teacher quality (Spaull, 2012; Cronje, 2024). Additionally, challenges within the education system, such as untrained teachers, poor reading instruction, and overcrowded classrooms, are identified as significant problems (Spaull, 2012; Wills, 2024). The difficulties are further exacerbated by insufficient home language teaching policies, broader educational inequalities, and the pressures faced by teachers (Kitchen, 2025). These challenges necessitate an innovative IP to address the reading crisis in South Africa. Furthermore, the use of DST aims to address the digital divide by exposing the learners to technology use and not only providing them with the digital reading resources they create, but also the knowledge on creating digital resources.

2.1.2.2 Reading fluency

Fluency in reading means the ability to read texts comfortably, correctly, and with comprehension. It serves as an essential predictor of reading comprehension. Reading fluency, is often one of the components that South African learners who experience difficulties in reading find challenging (DBE, 2008:12; Rasinski et al., 2009:19). The key to developing reading fluency includes modelling fluent reading skills and providing opportunities for repeated reading practice while scaffolding new skills such as pronunciation, explicit reading of punctuation, tempo, accuracy, and tone (DBE, 2008:12). This can be practised when learners create and read their own digital story. During this project, the FP learners will not be reading merely to increase their reading speed, but rather to recreate the voice of the author which allows learners to develop a love for reading and literature (Rasinski et al., 2009:19). Additionally, the more the FP learners interact with their digital story, the more their reading fluency skills may improve.

The DBE (2008:11) highlight “the big five” components of reading as phonemic awareness, word recognition, comprehension, vocabulary, and fluency, which all contribute to reading for meaning. Phonemic awareness is the skill to recognise and work with individual speech sounds called phonemes (DBE, 2008:12). The better the

learners' phonemic awareness and phonics, the faster words can be decoded. Good phonemic awareness also makes it easier to blend individual sounds and read new words (DBE, 2008:12; Joubert, 2019:257). Both phonics and sight words need to be used to exercise word recognition, the second component of reading (DBE, 2008:12). Recognising individual phonics and using phonemic awareness to blend these sounds allows the learner to read the words (DBE, 2008:12; Joubert, 2019:257). Through repeating this process the learner may start recognising the word on sight as the individual phonics are blended automatically. This recognition on sight surpassing the need for blending is referred to as orthographic mapping (Ehri, 2014:16). Once a learner can read the word on paper, the focus can shift to the meaning of the word. Vocabulary refers to learners having comprehension on a wide range of words (DBE, 2008:12). Possessing a wide vocabulary can help the learner to continue reading instead of stopping to implement comprehension strategies to determine the meaning of a word (DBE, 2008:12; DBE, 2011:9). Reading comprehension, the ability to understand what is read, thus requires the application of all the reading components to enable reading for meaning (DBE, 2008:12). FP learners often struggle to read for meaning if they are not reading fluently (Gummere, 2004:1; Pretorius et al., 2016:4; Spaul et al., 2020:1). Reading fluency contributes to reading comprehension as it allows the reader to focus on the meaning of the text rather than decoding the text (Joubert, 2019:305). At the same time, if the learner is to accurately interpret the text during reading (reading fluency), reading comprehension is critical. The ability to read fluently with proper comprehension is one of the most crucial skills a child can learn yet improving reading fluency is one of the biggest obstacles for struggling readers in South Africa. Consequently, it is important to teach all the sub-components of reading explicitly and daily as poor achievement in any of the components can contribute to poor fluency. Beyond the five essential reading components (DBE, 2011), well developed oral skills contribute to oral reading fluency (Spaul, 2016). Writing skills can also enhance fluency through repeated-text familiarity (Halkowski & Kubina, 2024:626), as the learner reads text that was written authentically much faster than a new text. Several strategies have been suggested by the DBE to improve reading fluency such as establishing independent reading time, making use of a wide range of reading materials and allowing learners to re-read texts (DBE, 2008:11). This grants learners the opportunity to practice and develop word recognition, fluency, vocabulary, and comprehension skills which will manifest in reading fluently. To address reading

fluency problems specifically, repeated readings have been recommended as an instructional tool for the improvement of reading fluency (Rasinski & Homan, 2003:511). Reading the same text, a number of times allows the learner to practice their reading fluency abilities which is the practice the pre-service teachers will follow in this IP as part of the DST process. The DBE (2021:3) states that reading fluency develops through repeated exposure to texts, modelling reading, practicing independent reading, assisted reading and group-guided reading. The South African Curriculum and Assessment Policy Statement (CAPS) Home Language stipulates that reading should be practised daily in the FP in the form of group guided reading and shared reading lessons, among other reading lessons (DBE, 2011:9). Unfortunately, South African classrooms can be overcrowded (Spaull, 2012), which can make it extremely challenging for the educator to present these lessons as prescribed. If reading is not taught and practiced regularly, South African learners may likely struggle with reading fluency.

Despite the DBE's (2008:11) suggested strategies, South African learners still have significant challenges with reading fluency and are not reading with understanding (Spaull et al., 2020:1; DBE, 2022:2; WCED, 2025). Numerous studies have used DST as an intervention to improve literacy skills (Sadik 2008:487; Lambert, 2009:80; Sarica & Usluel, 2016:289; de Jager et al., 2017:2550; Shinas & Wen, 2022:3). However, there is a gap in research on DST being used as an intervention for FP reading fluency whilst simultaneously exploring South African FP pre-service teachers' experience of a DST intervention. Draper and Spaull (2015:45) highlight the need to inform teachers how to use effective strategies to teach specific reading skills. According to Pretorius et al. (2016:4) many South African FP teachers lack the pedagogical knowledge to teach reading fluency. Therefore, it is crucial to explore the experiences of pre-service teachers using DST to improve reading fluency in a service-learning project, as part of their ITE.

2.1.2.3 Service-Learning

Service-learning is a thoughtful educational method that combines structured educational activities with community or public service. This approach intrinsically links public service to an educational goal (Heffernan, 2011:1; Narong & Hallinger, 2023:339). Confirming the importance of service-learning for pre-service teachers, the

MRTEQ document stipulates the responsibility of higher and tertiary educational institutions to provide opportunities for Work Integrated Learning (WIL) that includes service-learning in community settings (DHET, 2015:13). As a result, pre-service teachers are required to participate in a service-learning project as part of their B Ed degree program, in this case a DST project as an intervention for Grade 2 learners who struggle with reading fluency. Through service-learning pre-service teachers can strengthen crucial skills such as communication, critical thinking, collaboration, and community building. Furthermore, service-learning provides pre-service teachers with the opportunity to evaluate how their in-practice experiences relate to educational values, community principles, and curriculum materials (DHET, 2011:50; Narong & Hallinger, 2023:339). This consideration ultimately inspires them to become more involved in their local communities and to recognize the academic needs present within their community.

Through participating in service-learning, pre-service teachers not only observe learner engagement but they become engaged themselves. Through this service-learning project pre-service teachers experience teaching various reading components in an attempt to improve learners' reading fluency. It further requires pre-service teachers to reflect on the application of their theoretical knowledge about reading fluency in practice. Ultimately, this service-learning project enables pre-service teachers to comment on the value that DST can have for reading fluency, whilst also gaining DST and pedagogical reading skills required for teaching in the challenging South African context.

2.1.2.3 Pre-service teachers use of digital storytelling to teach reading fluency.

DST has emerged as a popular literacy intervention in research. Literacy statistics among South African FP learners are still disheartening while new interventions and technological tools are quickly emerging (WCED, 2025). According to Moodley and Aronstam (2016:3) teachers need to determine how digital stories can best enhance reading sessions in the classroom. Consequently, for DST to be used to its fullest potential, aspiring educators need to be trained as pre-service teachers and given the opportunity to experiment with DST, reflect on their experiences and learn from their reflections (DHET, 2015:13; Walker, 2022).

DST may be effective for the improvement of other literacy components such as writing but has not been studied as an intervention for poor reading fluency in the South African context (Garba, 2018; Chiang, 2020). Many of the reading intervention strategies suggested in existing research may also develop reading fluency but are not used as part of a DST program to target reading fluency as in this IP (DBE, 2021; WCED, 2024). The significance of integrating digital skills in schools was also underlined in the MRTEQ highlighting the importance of pre-service teachers' digital abilities and multiple literacies as well as providing them with training in the use of ICTs (DCDT, 2020:9; DHET, 2015:13; Walker, 2022). Considering this, pre-service teachers should learn about innovative strategies like DST for teaching reading and reading intervention. These innovative teaching methods could be used to target the poor reading performance statistics of South African learners (WCED, 2024). Therefore, it is a relevant tool to use in this study as an IP for low reading fluency, subsequently helping the learner to read with understanding. It is also critical for South African pre-service teachers to reflect on their implementation of this IP as this can inform their pedagogy of teaching reading (Segal, 2024). Reflective practice allows teachers to consider how this IP succeeded or failed while drawing from their own experiences (Cavanagh, 2021:73; Camus et al., 2021; Segal, 2024). Subsequently, pre-service teachers will gain a broader understanding of applying DST to improve FP learners' reading fluency.

2.1.2.4 Learner engagement

For the purposes of this study, learner engagement is defined as an activity that relates to the work learners do to accomplish predetermined objectives (Lawson & Lawson, 2013:432; Li & Li, 2022:2). This definition is suited to this study as learner engagement pertains to how learners worked on a digital story to improve their reading fluency. A more detailed classification of learner engagement offered by Fredricks and Blumenfeld (2004:59), classifies learner engagement into three categories: behavioural, emotional and intellectual engagement. More recently Li and Li (2022:3) referred to Fredricks and Blumenfeld's (2004:59) three categories as a comprehensive construct of learner engagement. Each of these types of learner engagement will be discussed in detail as they pertain to South African learners.

- Behavioural engagement

The term "behavioural engagement" describes learners' visible behaviours and participation in the process of learning (Shuang et al., 2022:69; Ritoša et al., 2023:3). Shuang et al., (2022:69) examined behavioural engagement in three dimensions: adherence to rules, involvement in learning, and social interaction. For example, students are considered behaviourally engaged if they are on time, actively participate in sessions, answer questions from teachers, turn in tasks on time, and remain persistent when faced with challenges (Wang et al., 2025:4). Therefore, behavioural engagement can be observed by the educator through a wide range of interactive behaviours presented by the learner throughout the learning process. Notably, behavioural engagement has a greater impact on academic achievements for learners at an earlier stage of learning such as Grade 2 (Wang et al., 2025:4). Increased behavioural engagement results in greater academic achievement, especially in young learners (Wang et al., 2025:4). Behavioural engagement is therefore an important point of observation for educators in predicting learner progress and academic achievement. Hence, for the purpose of this study, the researcher has combined the above definitions to create an understanding of behavioural engagement in the South African context: as the behaviours a learner exhibits when actively participating in learning activities.

- Emotional engagement

The term "emotional engagement" describes a spectrum of learner feelings that are demonstrated during the learning process, including happiness, curiosity, confidence, and excitement (Li & Li, 2022:4). Emotional engagement includes the affective aspects of learning and feelings towards school in general, as well as experiences of belonging within the school community, including interactions with learners and teachers (Ulmanen et al., 2016:2). Li and Li (2022:3) state that emotional engagement can be indicated by whether or not learners feel like they belong to the learning community and if they get along well with the faculty and teachers. Hence, emotional engagement is defined as a learner's feelings and their interactions with teachers and peers.

Learners' feelings towards their learning are a key indicator of emotional engagement and needs to be intentionally fostered, taught, and tracked over time (Wilson, 2021). The manner in which learners participate in lessons, ask questions, ask for assistance, and show interest are all indicators of learner emotional involvement for teachers

(Wilson, 2021). It has been proposed that as learners' educational paths grow, emotional involvement plays a substantial and unique role in how they participate in learning (Ulmanen et al., 2016:2). In an emotionally engaged classroom, there is time for critical thinking, active listening, and the growth of curiosity that is learner-centred and full of discussion where learners converse with one another (Wilson, 2021). This interactive approach allows learners to emotionally connect and communicate with one another and subsequently demonstrate emotional engagement. Hence, emotional engagement is promoted by fostering good relationships and establishing a learning environment that is focused on the needs of learners (Wilson, 2021). For the purposes of this study, emotional engagement can be defined as the learners' expressed or observed feelings toward the learning activity, teachers and their peers.

- Intellectual engagement

Learners' intellectual effort in learning and reflecting on their own learning techniques are together considered intellectual engagement (Fredricks & Blumenfeld, 2004:59; Li & Li, 2022:3). According to Fisher, Frey, Quaglia, Smith, and Lande (2018:135) in Stobaugh (2019:7), intellectual engagement is closely associated with critical thinking and describes the "psychological effort students put into learning and mastering content". Critical thinking is known as a logical approach to topics, decisions, challenges, and questions (Stobaugh, 2019:7). Through critical thinking a learner intellectually engages in learning experiences, applies intellectual effort and reflects on their experiences. Hence, critical thinking cannot be separated from intellectual engagement because this way of thinking demonstrates intellectual engagement itself. According to Fisher et al. (2018:135), other characteristics of intellectual engagement include perseverance and experience-based learning, sharing knowledge with others, and actively participating in the learning process. This may be demonstrated by observing learners' efforts during the intervention and learners' assessments (Fredricks & Blumenfeld, 2004:59; Li & Li, 2022:3). A learner that is intellectually engaged will share ideas or advice with others, persevere in difficulties and engage in social interactions during the learning process. Young children may develop critical thinking through effective dialogue and storytelling (Vasquez et al., 2013). In this study

intellectual engagement is regarded as learners' engagement with, and contribution to, academic tasks through their interactions during the intervention and assessments.

- Learner progress

Learner progress is an important point to clarify and discuss as the DST project is part of a reading IP focussed on improving South African Grade 2 learners' reading fluency. The DBE (2023:12) published a Learning Recovery Programme where they explained the importance of teachers assessing learners' progress throughout lessons, listening to answers, providing feedback, observing learners working and reviewing the learners written work. This method of assessment is called formative assessment and must be consciously executed by the teacher. Hence, informal assessment is a critical skill for pre-service teachers to learn during their ITE so that they can conduct assessments accordingly (DBE, 2023:12). This document stipulates that teachers must continually observe the progress of their learners. In line with this expectation pre-service teachers monitored the progress of their Grade 2 learners during this DST intervention to determine any improvements or areas of difficulty. Hence, in the context of this study, the term 'learner progress' refers to improvement in reading skills in any of the five sub-components, noted through the observations of pre-service teachers whilst informally assessing learners during this DST IP.

To conclude, existing international as well as local research regarding literature that contribute to pre-service teachers using DST to strengthen reading fluency have been discussed. Current literature has been evaluated, and a gap has been identified as studying of DST as a FP reading fluency intervention from the experiences of pre-service teachers. The scope of this review encapsulates relevant information necessary to understand the utilization of DST to teach reading fluency as experienced by pre-service teachers in the South African context. The next chapter will explain the research design and methodology that was used to collect data from the pre-service teachers.

CHAPTER 3

Research design and methodology

3.1 Introduction

This chapter delves into the research design and methodology employed in this study. It outlines an interpretivist research paradigm and unpacks the rationale behind selecting a qualitative, exploratory case study method to gather and analyse data. This chapter also details the process of site selection, participant selection and data collection tools such as written reflections and small focus group sessions. Trustworthiness and ethical considerations are covered in this chapter to explain how credibility, transferability and dependability of the findings was ensured.

3.2 Research paradigm

The world view of interpretivism served as the research paradigm for this study. Interpretivist thinking helped the researcher to understand the student's subjective reality. Subjective reality refers to the participants' unique experiences with the DST process and understanding reading fluency (Willis, 2007:6; Okeke & Van Wyk, 2017:39; Alharahsheh & Pius, 2020:42; Maree, 2020:63). Since interpretive data is useful for examining in-depth responses from small numbers of participants, it led to answering the 'how' and 'why' research questions. Therefore, the interpretive paradigm worked well when working with the participants to collect data during in-depth discussions.

Interpretivist data collection was multidimensional and dynamic in nature as this study was seeking to understand the experiences of the pre-service teachers as they participated in focus group discussions and completed written reflections. Therefore, as suggested by Okeke and van Wyk (2017:39) the data was collected on the pre-service teachers' campus, a familiar space, where they were in their natural setting. Since multiple sources of data and tools were utilised in this interpretive research, a multidimensional approach was considered central in this study (Okeke & van Wyk, 2017:52; Maree, 2020:89). As a result, it gave the researcher "access to intricate layers of meaning construction from different perspectives" (Okeke & van Wyk, 2017:52). In turn, the interpretivist thinking of the researcher increased the validity of

the study by acquiring a descriptive sense of the pre-service teachers' experiences using DST to teach reading fluency.

The term "participant observers" best describes interpretative researchers, as they watch and record information that represents the participants' varying subjective viewpoints (Morehouse, 2012:12; Okeke & van Wyk, 2017:50). Consequently, upholding and preserving respect for human dignity in an "in-depth" participant study was a necessity in this interpretative study (Okeke & van Wyk, 2017:50). A trustworthy relationship with the participants was built so that participants felt comfortable enough to be honest in their responses to achieve the exchange of opinions (Okeke & van Wyk, 2017:39; 51; Alharahsheh & Pius, 2020:42). Since an interpretive researcher faces significant implications for reflexivity in how she approaches the research process and behaves with participants, it was imperative that the "social process" in terms of behaviour towards the participants be monitored closely (Morehouse, 2012:11; Okeke & van Wyk, 2017:50). To recapitulate, the researcher was aware and attentive to the interaction between herself and the participants to uphold respect for the participants while collecting descriptive data. Thereafter, the researcher gave the data she had collected "meaning". Since the interpretive data was derived from pre-service teachers' own meaning constructions (Morehouse, 2012:11; Okeke & van Wyk, 2017:54), it significantly contributed to their explanation of teaching reading fluency and authentically represented their experiences with DST.

The interpretivist paradigm emphasises the whole participant more than the responses they provide during data collection (Okeke & van Wyk, 2017:50). Therein lies interpretivism's greatest advantage: it enables respondents to give thorough and emotionally fuelled answers. However, the subjective nature of interpretivist research also holds an equal disadvantage of researcher bias as it relies on the researcher's interpretation of the participants' responses (Alharahsheh & Pius, 2020:42). Hence, the objective of this study was to develop a shared understanding of how pre-service teachers used DST to teach reading fluency, whilst balancing researcher objectivity with participant subjectivity. The researcher did not have direct involvement with the participants nor their university course except for engaging with them during the data collection period.

3.3 Research approach

Qualitative research is an umbrella term for all humanistic studies that emphasize the interpretation of meanings reserved within the social realm (Okeke & van Wyk, 2017:209). There is a clear connection between qualitative research and interpretivism as the approach aligns with the principles of the interpretivist paradigm, which include: multidimensionality, reconstructing social reality and focusing on subjective meanings (Maree, 2020:67). According to Alharahsheh and Pius (2020:42) participants' perceptions of reality and knowledge are shaped by their experiences and their understanding of it, making these experiences subjective as well as culturally and historically contextual. All study types connected to interpretative and/or naturalistic techniques are represented by qualitative research methodologies. In this context, qualitative research emphasises how individuals or groups interpret their own behaviours, making their thought processes and the meanings they attach to their actions central to the research (Okeke & van Wyk, 2017:209). Hence, selecting a qualitative approach was appropriate for this study.

This qualitative approach enabled natural responses in a natural environment from the participants. Open and exploratory research questions were used whilst placing emphasis on the pre-service teachers' perspective and their understanding of DST (Maree, 2020:59). Focus group discussions and written reflections was some of the most suited qualitative data collection methods for this study. The researcher was not only seeking to explore different interpretations and experiences of using DST as a phenomenon (Pham, 2018:3), she sought to gain an in depth understanding of using DST to teach reading fluency from the participants' point of view.

The benefits and disadvantages of qualitative research is particularly relevant to this study. Qualitative research has the advantage of providing a thorough understanding of participants' experiences. However, the time and resource restrictions that accompany qualitative research can also be adversely affected by its meticulous and time-consuming nature (Okeke & van Wyk, 2017:209). Therefore, enough time for specific tasks associated with qualitative research such as transcribing focus group session recordings, contacting participants and interpretive data analysis was allocated. The researcher also tried her best to continue with the research as planned even though resources were scarce. For instance, when there was loadshedding during one of the sessions, she availed her own personal data and devices for use

during focus group sessions with participants and used power bank batteries to support participation. The adaptability of the researcher allowed her to mitigate challenges and take full advantage of her opportunity to conduct qualitative research.

3.4 Research design

The research design that best supported this research project was an exploratory case study design which allowed this study to delve further into a particular phenomenon (Okeke & Van Wyk, 2017:177). Importantly, this study used an exploratory case study to investigate using DST to teach reading fluency in the FP as a “contemporary phenomenon”, as this technique is widely used and accepted as a teaching tool for the 21st century teacher. Additionally, case study research allows for further ventures into the phenomena through asking probing questions. This provides the necessary insights to gain an understanding of the participants’ subjective reality, diving deeper into the phenomenon.

Another element that supported this exploratory case study design in this research project was the use of “multiple sources of evidence” (Maree, 2020:121). Data from various sources; individual lesson reflections, final written reflections and small focus group discussions, allowed triangulation of the findings, making the research more trustworthy and allowing for further exploration. An exploratory case study was the most appropriate research design for this study, as it accurately captured the participants’ experiences with DST and allowed for further exploration of the phenomena (Okeke & Van Wyk, 2017:172; Maree, 2020:121).

An exploratory case study is contained within the parameters of relevant time and activity and is situated inside its actual context (Okeke & Van Wyk, 2017:171; Maree, 2020:89). The pre-service teachers in this exploratory case study were bound by time restrictions. They were only able to teach their learners for eight sessions. The task activity of the pre-service teachers also falls within set parameters. This case study only focussed on eight participants’ experiences, using DST particularly to teach reading fluency to Grade two learners. These parameters enabled the study of pre-service teachers’ experiences of using DST, in a service-learning project, to teach reading fluency - situating them in a real-life context. The context is set within the pre-service teachers’ work with their learners and their own reflective mental space.

However, this context made the research lack in generalizability as its focus was around pre-service teachers' experiences with a particular task and within a specific context. This case study design did however allow for thorough exploration of the research problem contained within the time, task, and context parameters.

3.5 Methodology

This section includes a discussion of the methodology which was used for the study. Methodology discussions require a brief discussion of the site selection, participant selection, data collection methods and data analysis. In addition, this section includes a discussion of the trustworthiness of the study that elaborates on the credibility, transferability, dependability, and confirmability of this study. Furthermore, the researcher's position, and the ethical issues that were pertinent while conducting this study will be addressed. In summary, this section gives a thorough overview of the research methodology.

The biographical information discussed in this section is taken from the Faculty of Education office and protected under the approval of ethical clearance for this study.

3.5.1 Selection of Site

Data was collected on a higher education institution's campus in the Western Cape, 45 minutes' drive 69.0 km from Cape Town. This campus is a small campus but still has nearly 92 lecturing classrooms including five computer laboratories, conference facilities, a greenhouse, sportsgrounds, offices, five student residences and a cafeteria (Butana, 2021). The education faculty lecture rooms are situated within the building between the Administration Building and Business Faculty.

There are a range of programmes offered on this campus in the faculties of Business and Management Sciences, Education, and Applied Sciences, including courses on Agriculture. This is the only higher education institution campus in the Western Cape that offers Education courses in Afrikaans (Butana, 2021). Renowned for its excellent curriculum and heightened training benchmarks, in 2014, the Education Faculty received the Medal of Honour from the South African Teachers Union (SATU) for its exceptional training of educators that has benefited the Afrikaans-speaking community. There are 1846 B Ed students enrolled on this campus (Barnard, 2024).

B Ed FP education students comprise 519 of those students of which 116 are first year, 131 are second year, 145 are third year and 127 are fourth year (Barnard, 2024). B Ed Intermediate Phase students amount to 567 consisting of 114 students in the first-year group, 135 in the second year, 137 in the third year and 181 in the fourth year (Barnard, 2024). The Faculty of Education on this campus also offers B Ed Senior Phase and Further Education and Training (FET) for 600 students of which 131 are in their first year, 166 in their second year, 189 in their third year and 114 in their fourth year of study. Other education students on this campus are enrolled for the Diploma in Education and B Ed Honours. This campus was the ideal location to conduct this research, providing ample access to education students.

There are 26 Faculty of Education lecturers working on this South African campus, teaching 1846 B Ed students (Barnard, 2024). These students may be affected by student poverty as the socio-economic circumstances of South African students generally are poor and students struggle with poverty, unemployment, and access to public health services (Ruswa & Gore, 2021:2354; Hlongwane, 2022). Luckily, the higher education institution provides a fully equipped library and multiple computer rooms which provide access to the internet and a wide range of sources (Butana, 2021). Additionally, the institution also provides students with resources like the student clinic and student counselling to support students as much as possible. Demographically, most students enrolled at this higher education institution are African and coloured, with some white and Indian students (CPUT, 2025:6). However, on the specific campus selected, most students were coloured and white Afrikaans students.

This campus has a perimeter fence around every section of the campus and security personnel regularly ensure the safety of the students to travel between campus sites. Buildings on this campus are all safely constructed with brick and concrete and allow for disability access with elevators and ramps. There is ample parking outside campus and security personnel allows students and staff to park on campus if they have a parking disc. Throughout the campus, there are also various gardens that students use to relax and study with well-tended flowers and Jacaranda trees, creating a calm atmosphere.

On this local higher education campus, in a small meeting room within the campus library, four participants were comfortably accommodated during each focus group discussion. The library is about 50 meters from the campus main entrance and

provides a quiet, private space to meet and study. This site was chosen for the focus groups because it was convenient for the participants and the researcher as both parties lived nearby and were able to access a safe and convenient meeting in a space where participants felt comfortable.

3.5.2 Participant selection

There are 519 B Ed FP registered students on this campus, of which 127 are in their 4th year of study (pre-service teachers). All 127 B Ed FP students who were in their 4th and final year of study, were enrolled in a subject called Language in Education: Afrikaans Home Language, a mandatory subject (Barnard, 2024). As part of this subject, it was mandatory that they participated in a service-learning project where they used DST to teach reading fluency to Grade 2 learners. Therefore, these pre-service teachers were the ideal participants for this study to investigate DST and reading fluency. Furthermore, most of the students on this campus are from small surrounding rural towns and speak Afrikaans as a Home Language. This suited the study as the participants could respond in their Home Language (Afrikaans), making them more comfortable. Following the discussion, the researcher was able to translate the transcripts for this thesis to be written in English.

Each student within the population group had the option to volunteer to participate in this study. From the 127 final year FP education students, only 16 volunteered for the study. Five of the volunteers withdrew from the study, and a further two were absent due to illness and injury. Only one volunteer did not respond to the researchers' messages. This left 10 willing participants. The researcher used "Random line sampling" to randomly assign the participants into two focus groups, consisting of five pre-service teachers in each (Okeke & Van Wyk, 2017:232). In each focus group session, one of the participants was absent, resulting in a total of eight pre-service teachers. Random line sampling is known as the "least bias of all sampling techniques" to use in research (Okeke & Van Wyk, 2017:232). "Least bias" refers to the effort made in the study to minimize any undue influence or prejudice that could affect the outcomes or interpretations of their study. Research bias can manifest in various forms some of which include selection bias, measurement bias, publication bias or unconscious bias (Yin, 2016:314; Okeke and Van Wyk, 2017:232). Unconscious sampling bias is when the researcher is not aware of the bias being inflicted, therefore

it is the most dangerous because it deceives the researcher. Hence, in this study, the researcher opted for a sampling technique that would pick participants randomly and paid attention to include all four participants during each focus group discussion.

Participation was encouraged by posters on the higher education campus as well as digital sign-up sheets sent to their Final Year Group chat. The 4th year pre-service teachers signed up by scanning the Quick Response (QR) code which went to the digital form, or they clicked on a link sent to them via WhatsApp. On this form they indicated their willingness to participate in the study and provided their contact details. Volunteering to participate in this research study required personal details of the volunteers, which was later used to contact them. Random line sampling was applied to the digital Microsoft Excel sheet of volunteers by using the formula =RAND(*cell-cell*) (Okeke & Van Wyk, 2017:232). Random line sampling guaranteed that each volunteer had an equal probability of being assigned to either focus group one or focus group two. Initially, the researcher planned to sample random participants from the excel sheet of volunteers. However, since only ten pre-service teachers volunteered their availability, this sheet had a list of ten student names that corresponded to a number in a single column for example, A19-A29. The formula =RAND(A19-A29) was entered into a new cell which generated a random number within the range. The formula was copied to ten cells to allocate even or odd numbers to ten volunteering participants. The researcher then grouped the even numbers as focus group one and the odd numbers as focus group 2 participants. Upon data collection, all identifying columns in the data set were removed and replaced with pseudonyms namely P1 to P8. Random line sampling ensured a fair opportunity for participation and an unbiased categorisation of pre-service teachers.

3.5.3 Data collection instruments

The data collection instruments in this study were used to gather information on the pre-service teachers' using DST to teach reading fluency. The three data collection instruments were in the form of a focus group discussion schedule, lesson reflections and overall reflections at the end of the IP. In line with the underlying theory of this study, Strampel and Oliver's levels of reflection (2007:976), all three data collection instruments of this study required the pre-service teachers to reflect upon their practice during and after the IP.

3.5.3.1 Focus group discussions

Focus groups discussions is a method which involves bringing individuals who share similar characteristics together (Okeke & van Wyk, 2017:212). In this study, eight pre-service teachers were participating in the same DST project. Mini focus groups were used by grouping four pre-service teachers together into two separate groups. Thus, these reflective focus group discussions provided richer data than one-on-one interviews to discuss their experiences of using DST to teach reading fluency as group members interacted with each other (Rabiee, 2004:656). Prompted through the focus group discussion schedule, pre-service teachers were verbally demonstrating various levels of reflection, a critical ability for teachers (Strampel & Oliver, 2007:976; Shoffner, 2008:123). These small focus groups provided interactive communities where pre-service teachers shared thoughts and opinions on using DST to teach reading fluency. Appendix 1 and 2 stipulates the protocol and points of discussion for each focus group session which were conducted exactly the same, but on alternate days within a three-week period. Appendix 2 lists ten questions which were asked in every session, with probing questions and allocates space for the researcher to note body language and observations during the discussion sessions. Observations of body language was critical because it informed the study of the pre-service teachers' true and honest experiences, on top of their discussion. Hence, focus group discussions was an appropriate data collection instrument for this study as it was valuable in conveying the participants experiences.

As advantageous as focus group discussions can be for gaining insight into participant experiences, it can also be a very time-consuming method. It took one month to do the focus group interviews with the pre-service teachers and another additional month to transcribe the voice, and video recordings that were in Afrikaans to English. Translating the data took additional time and resulted in transcription taking much longer than initially planned.

3.5.3.2 Written reflections

This study used two different types of written reflection namely: daily written reflections and overall written reflections, as justified later. Because reflections are a required

component of the higher education institution's FP undergraduate degree program in the subject Language in Education for 4th year students, these education students were already accustomed to writing them. In this section, both reflective data collection tools will be discussed with reference to the theoretical framework of this study (Strampel & Oliver, 2007:976). Written reflections were a valuable data collection instrument in this study to examine pre-service teachers' experiences using DST to teach reading fluency in an IP.

3.5.3.2.1 Weekly written reflections

Weekly reflections were collected from each participant that provided the data of the necessary evidence to understand the participants' subjective experiences. Reflective practice is not an isolated exercise, but an evidence-based experiment (Ivala et al., 2013:221; Fredericks, 2025). In this study, pre-service teachers wrote weekly written reflections, which was a compulsory component of their community service-learning project in their subject Language in Education. Similar to what Okeke and van Wyk (2017:212) describes as a diary or log entry, participants recorded their experiences of using DST to teach their individual learners reading fluency. Through these reflections, pre-service teachers were exercising descriptive reflection. Descriptive reflection is characterised by recollecting and recognising events (Strampel & Oliver, 2007:976). In this study, pre-service teachers reflected on their actions of using DST to teach reading fluency in an IP (Strampel & Oliver, 2007:976). The written reflections of the pre-service teachers were guided by relevant questions outlined in Appendix 3. Figure 1 in Chapter 2 illustrates Strampel and Oliver's levels of reflection (2007:976), encouraging pre-service teachers to think about how they experienced teaching with DST on a regular basis. These reflections helped the researcher gain insights into the participants' weekly experiences in the IP.

3.5.3.2.2 Overall written reflections

At the end of the IP, after eight weeks, similar to the daily reflections discussed above, overall reflections were written by the participants in their own chosen private space at the end of the IP. These overall written reflections were collected from each of the

eight participants to gain further insight to their overall experiences using DST to teach reading fluency to Grade 2 learners. This final reflection template (Appendix 4) had a particular question structure to the pre-service teachers that aligns with Strampel and Oliver's levels of reflection which was discussed in the theoretical framework (Strampel & Oliver, 2007:976). Overall reflections were advantageous in confirming the daily reflections and focus group discussions of each participant. However, these overall reflections were much longer than the daily reflections and needed to be translated from Afrikaans to English, which took one month to complete. This last written reflection was helpful to the study as it provided details on participants' comprehensive thoughts and opinions of using DST as an intervention for poor reading fluency.

3.6. Data analysis

Qualitative data analysis allows this study to unravel hidden meanings of participants' experiences. One of the most suited methods for qualitative research, especially when collecting narrative data such as focus group discussion transcriptions and written reflections, is thematic analysis (Okeke & van Wyk, 2017:464). Thematic analysis can be understood as "a quest to ascertain themes that surface as being significant in the narrative of the occurrence" (Okeke & van Wyk, 2017:464). It requires the researcher to procedurally and repeatedly work through the narrative data. This study inductively analysed the data from focus group interviews and the two sets of pre-service teachers' written reflections separately, before weaving them together to find similarities or differences, creating a cohesive picture of each pre-service teacher's experience using DST to teach reading fluency (Braun & Clarke, 2006:84; Haynes et al., 2020:11). At the same time, Strampel and Oliver's (2007:976) levels of reflection was used to deductively analyse the same set of data. Thematically analysing the data allowed this study to draw a narrative connecting to the themes emulating from the data.

Firstly, the focus-group interviews were transcribed, followed by reading and re-reading the written reflections (Braun & Clarke, 2006:84). Data was "pre-coded" by highlighted quotes and passages of participant responses that interested the

researcher as important and codable data (Saldaña, 2013:19). Initial codes and broader themes were illustrated through a mind map in an analytic memo, capturing the researcher's ideas and reflections during data analysis. To deductively analyse the data, specific interview questions were used as well as the literature review and theoretical framework as a guideline to develop a set of codes pertaining to the research questions of the study (Braun & Clarke, 2006:84; Guest et al., 2011:56; Saldaña, 2013:86). For example, codes assigned to the data may be “reading fluency (RF)”, “Digital stories (DS)”, “time limitation challenges (TLC)”, “learning barrier challenges (LBC)” or “reading successes (RS)”. Using these codes, a tabular summary was compiled of the data content which highlighted the differences and similarities between themes that were evident across all data sets (Saldaña, 2013:86). Importantly, links between codes that form subthemes and themes were noted in the researcher's analytic memo. Consequently, the narrative evidence gathered in this study was repeatedly being connected to the research questions.

Emerging themes were examined, and the researcher considered combining, separating, or dismissing early themes based on the connected narrative evidence (Braun & Clarke, 2006:84). Theme coherence was ensured through validating the themes in connection to the encoded data extracts. Hence, thematic analysis allowed the connection of participant experiences to overarching relevant themes pertaining to the research questions, whilst still providing narrative evidence on the findings.

3.7. Trustworthiness

This section explains the school of thought in this study towards ensuring trustworthiness. Critical elements to ensure trustworthiness are unpacked in sub-sections. These subsections namely the credibility, transferability, dependability and confirmability of the study are discussed in the following sub-sections (Creswell, 2009:177; Maree 2016:123; Yin, 2016:86). Each sub-section relates to the processes followed by the researcher throughout this study, to conduct authentic, trustworthy research.

3.7.1. Credibility

Triangulation was applied in this study through collecting and comparing weekly written reflections, focus group discussions, and overall reflections. Using instrument triangulation strengthened credibility because it enabled a richer understanding of the participants' experiences through multiple sources (Creswell, 2009:177; Yin, 2016:87). Specific and comprehensive descriptions were imperative in this study because the "thicker" the description in data, the better it communicated the experiences of the participants and the more credible the data became (Stahl & King, 2020:26; Younas et al., 2023:4). Triangulation allowed for a comprehensive understanding of participants' experiences, enhancing the credibility of the data. Consequently, a description of the background, contextual factors and data instrument triangulation enhanced the study's credibility.

To further enhance credibility, the researcher met with her supervisor and co-supervisor for regular discussions. These meetings allowed her to present her data and thesis writing to peers and supervisors, where feedback would be given on the improvement of the study in general. This method of ensuring credibility is also used to ensure dependability and discussed later in this section. These, regular discussions about the study with fellow academics were critical to conduct authentic, credible and dependable research.

Member checking was employed after data collection by sharing the final transcriptions with participants via email to verify that their responses were accurately captured and interpreted (Stahl & King, 2020:26). The pre-service teachers were invited to suggest any changes or redactions before data analysis commenced. Furthermore, upon completion of this thesis, the final document will also be shared with participants to ensure a credible and trustworthy representation of their experiences.

3.7.2. Transferability

This research study focussed on understanding pre-service teachers' experiences using DST to teach reading fluency. To be transferable, a thick description of the pre-service teachers' experiences, along with clear and comprehensive data collection methods, and descriptive contexts were essential (Creswell, 2009:177; Yin, 2016:86;

Stahl & King, 2020:26-27). To elicit richer responses in focus group sessions, the pre-service teachers were prompted to elaborate on the contextual details of their DST experiences in supporting learners' reading fluency. Additionally, they were also encouraged to use descriptive language in their written reflections. This study's in-depth discussion of the data and findings, which included contextual factors, ultimately ensured that this study had a "thick" description for it to be transferable (Creswell, 2009:178; Stahl & King, 2020:27). Moreover, methods and time frames for the collection of data were clearly described and contributed to the transferability of this study. Stahl and King (2020:27) summarises that transferability is "not a recipe but rather a suggestion that must itself be researched for its applicability to a new context". It was essential that clear and comprehensive data collection methods and rich descriptions be employed throughout this thesis.

3.7.3. Dependability

Dependability in research refers to the consistency of the findings from the data extracted. In this study, consistency was evident across the data and findings. The data remained authentic throughout using the original language used in reflection and notes made in focus group sessions in the analysis and findings (Maree, 2016:145). Furthermore, consistency was ensured across the different data collection tools as similar questions were posed. Even though some participants answered similarly on all three tools, differences indicated the various levels of reflection which increased the authenticity of the participants responses when the findings were written (Strampel & Oliver, 2007:976; Maree, 2016:145). Additionally, bias (see §3.5.2 Participant Selection) also influenced dependability, as measures were implemented to minimise bias, thereby strengthening the study's dependability. The researcher transcribed and later translated all the data she collected from Afrikaans to English. The researcher took steps to minimise bias as far as possible; however, interpretivist research that relies on reflections remains subjective to a certain degree, as discussed under §3.2 Research Paradigm.

3.7.4 Confirmability

Confirmability in qualitative research was ensured through multiple data sets, data triangulation, participant feedback, and researcher evaluation, ensuring the study's accuracy and adherence to objective reality. The use of multiple data sets and data triangulation discussed earlier in this section ensured confirmability as the focus group interviews could often confirm common findings through similarities in the written reflections (Haynes et al., 2020:11). Additionally, after data analysis, the data was returned to the participants to check the accuracy of the data's representing their experiences (Birt et al., 2016:1802). Member checking in this study ensured that the thesis supported and confirmed the data collected (Creswell, 2009:177). Additionally, for confirmability to be ensured, this study required the qualitative researcher to "get as close to objective reality as qualitative research can get" (Stahl & King, 2020:28). The researcher had to understand herself in relation to the study that she was executing. Consequently, it was critical to evaluate the position of the researcher.

3.8. The researcher's role

For the past three years, the researcher moved into tertiary education and pre-service teacher training. She did not lecture any courses to the participants involved in this study and had no contact with them, except for the data collection process. The participants in this research study were randomly categorised into focus groups to prevent bias as discussed in §3.5.2 Participant selection. At the beginning of the data collection process, the researcher introduced herself and shared her background information to encourage the conversational tone of the focus group interviews. The site of research was a place participants knew, felt comfortable and where there were few distractions. When conducting interviews, it was important to be aware of taking on a listening role in an attempt to shift the power to the participants while they shared their realities and how these experiences shaped their lives. She did this with the purpose of providing critical research, she understood that these experiences needed to be understood within the participants social and economic contexts (Henning et al., 2004:23; Maree 2020:49). Acting as a "sounding board" in the focus group discussions, the researcher played the role of an active listener who facilitated reflection and encouraged participants to articulate their experiences more clearly.

This, in turn, created an awareness of the researcher's role among the participants (Maree, 2020:49).

3.9. Ethical considerations

The researcher applied to the Education Faculty Ethics Committee (EFEC) of the CPUT with reference number EFEC 5-12/2023 (Appendix 5) and received ethical clearance on the 13th of December 2023. Okeke and Van Wyk (2017:115) highlight three values that guide ethical research: (1) informed consent, (2) beneficence and non-maleficence and (3) respect for anonymity, privacy, and confidentiality. These three values are subsequently discussed with regards to how these values guided the ethics in this study.

Informed consent was collected three times: before, during and after data collection as required by the CPUT Faculty of Education Ethics Committee. Signed and dated consent forms allowed the participants to agree to participate before, during and after the reflections of the data collection process (Appendix 6). Before the participants completed this consent form, the researcher explained to the participants how confidentiality and anonymity will be honoured and informed the participants of the purpose of the study. As informed consent is a continuous process (Okeke & Van Wyk, 2017:115), the confirmed consent forms were once again discussed before embarking onto the next stage of the data collection process which was before the focus group discussions, and finally upon collecting the final written reflections.

This study benefited participants through exercising the process of reflections which developed their critical thinking skills to improve teaching and reflection-in-practice (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). No ill-will was intended towards the participants, and they were not obligated to share information they were uncomfortable sharing.

Respect for anonymity, privacy and confidentiality refers to protecting the oral and written data in this study as well as any affiliation with the higher education institution or school involved (Okeke & Van Wyk, 2017:125). Participants were regularly told that their collected data would be stored safely on a password protected One-Drive before being discarded after five years. They were also reminded in each phase that they could withdraw at any time without any discrimination or penalty. The participants were

informed of how objectivity and anonymity was enhanced through assigning pseudonyms to participants for example, P1, P2 and P3. Therefore, adopting the ethical values of Okeke and Van Wyk (2017:115) attributed to the assurance of ethical research throughout this study.

3.10. Chapter summary

This chapter has provided a comprehensive overview of the research design and methodology employed in this study. Following a methodology grounded in theory and exploring key elements including an exploratory case study design, a qualitative research approach, and an interpretative research paradigm have all been addressed. Suitable selection of site and participants and data collection methods such as a qualitative case study method as well as measures to ensure trustworthiness like credibility, transferability and dependability were unpacked. This research study aimed to provide credible and insightful findings regarding pre-service teachers' experiences using DST to improve reading fluency through collecting data in the form of written reflections and small focus group sessions. Additionally, this research project sought to identify possible advancements and challenges in using DST as a reading fluency intervention. Therefore, the trustworthiness, the researcher's role and ethical considerations were covered in this chapter to explain how credibility, transferability and dependability of the findings was ensured, and possible issues of power and bias were prevented. The following chapter presents the study's findings.

CHAPTER 4 FINDINGS

4.1 Introduction

This chapter sets out the findings of the data that was collected in this study. After analysing the transcribed and translated (from Afrikaans to English) data from two focus group interviews and eight written reflections completed by eight pre-service teachers, the researcher presents the answers to the following research questions. The main research question is:

How did Foundation Phase pre-service teachers experience the digital storytelling reading fluency intervention programme?

To address this main research question, the supporting research questions are:

- Research sub-question 1: What benefits did the pre-service teachers experience when using DST to teach their learner's reading fluency?
- Research sub-question 2: What challenges did the pre-service teachers experience when using DST to teach their learner's reading fluency?

During this research project, pre-service teachers volunteered to share their experiences of participation in a DST project whereby they applied a reading IP to their Grade 2 learners. The pre-service teachers' role was to guide the Grade 2 learners in writing their own digital stories where they were expected to read and re-read the text as described in Chapter 2. The purpose of this process was to improve the learners' reading fluency and to produce a well-written digital story. The co-supervisor of this research project led the service-learning project, which inspired the researcher to investigate the pre-service teachers' experiences with applying DST to teach reading fluency.

After inductively and deductively analysing the data, and in an attempt to answer the main research question: "What are the pre-service teachers' experiences of using DST to improve their Grade 2 learner's reading fluency?" Three themes emerged: learner

engagement, learner enjoyment and learner support. Each one will be discussed in more detail.

4.2 Research sub-question 1: What benefits did the pre-service teachers experience when using DST to teach their learner's reading fluency?

This research was conducted with eight FP pre-service teachers; as described in Chapter 1 and 3. The data of the three data sets in the form of written reflections directly after each session, focus groups halfway through the project and written reflections entire project were inductively and deductively analysed. Following the data analysis, two benefits of using DST to teach reading emerged: learner engagement and learner progress. The learner engagement theme was further categorised into the following three sub-themes: behavioural engagement, emotional engagement and intellectual engagement. Each theme is subsequently discussed with corroborating evidence which summarizes the most significant verbatim quotes that have been arranged according to the theme and sub-themes.

- Learner engagement with three sub-themes:
 - Learners' behavioural engagement
 - Learners' emotional engagement
 - Learners' intellectual engagement
- Learner progress

4.2.1 Learner engagement

For the purpose of this study, learner engagement is described as an activity associated with the tasks learners undertake to achieve predetermined goals (Lawson & Lawson, 2013:432; Li & Li, 2022:2). This definition aligns with this study, as learner engagement refers to the way learners engaged with a digital story to enhance their reading fluency. A comprehensive framework of learner engagement, provided by Fredricks and Blumenfeld (2004:59), divides learner engagement into three types as discussed in Chapter 2: behavioural, emotional, and intellectual engagement. Behavioural engagement refers to the observable actions and participation of learners in educational activities (Shuang et al., 2022:69; Ritoša et al., 2023:3). It includes

components such as compliance with rules, active involvement in learning, and social interaction (Shuang et al., 2022:69). For instance, students who are behaviourally engaged arrive on time, take an active part in class, respond to questions, turn in assignments punctually, and persist when confronted with obstacles (Wang et al., 2025:4). Emotional engagement refers to the range of feelings that learners exhibit during the educational process, such as joy, curiosity, self-assurance, and enthusiasm (Li & Li, 2022:4). It involves the emotional components of learning and attitudes towards school overall, along with the sense of belonging within the school environment, which includes interactions with peers and teachers (Ulmanen et al., 2016:2). For instance, a student might express that they enjoy attending school. Intellectual engagement refers to the effort that learners invest in understanding and evaluating their own learning strategies (Fredricks & Blumenfeld, 2004:59; Li & Li, 2022:3). It is intrinsically connected to critical thinking, which is defined as the "mental effort students exert to learn and master content" (Stobaugh, 2019:7). Intellectual engagement includes the various ways learners are intellectually involved and how they contribute to the task through their interactions during the intervention and assessments. These three types of learner engagement were used to thematically analyse the data from the eight participants': P1, P2, P3, P4, P5, P6, P7, P8.

Pre-service teachers recalled their Grade 2 learner's emotional, social and intellectual engagement in terms of how they participated in the planned activities by exercising descriptive and dialogic reflection (Strampel & Oliver, 2007:976; Ivala et al., 2013:221; Fredericks, 2025). Descriptive reflection was evidenced by the cognitive retrieval pre-service teachers exercised to share their experiences after the sessions demonstrating the lowest ideal level of reflection (Strampel & Oliver, 2007:976). Whereas dialogic reflection is evident through the pre-service teachers' reconceptualization of using DST to teach reading fluency when they integrated their knowledge to share their opinions in a focus group discussion mid-way through the project (Strampel & Oliver, 2007:976; Ivala et al., 2013:221; Fredericks, 2025). During thematic analysis, behavioural, emotional, and intellectual engagement were used to categorise pre-service teachers' verbatim quotes from the focus group interviews, and the written reflections.

4.2.1.1 Learners' behavioural engagement

Behavioural engagement is the observable behaviours during the learning process (Wang et al.,2025:4). These observed behaviours of learners may include social interaction, co-operation, involvement in learning and remaining persistent which pre-service teachers noticed in their learners during the project (Wang et al.,2025:4). During their dialogic reflection, pre-service teachers exercised cognitive retrieval to share the ways their learners demonstrated behavioural engagement (Strampel & Oliver, 2007:976; Wang et al.,2025:4). They noted in the focus group discussion and written reflections that:

- P4: The learners *work nicely together*. They *exchange ideas* and *talk to each other*, even the shy learner.
- P6: The learners *participate spontaneously* and *share ideas* to make the story interesting.
- P8: ... when we *recorded* everything, our boy who was a bit weaker *read* something wrong and then *the other boy said to him*: Hey! No, you must record, you must not read like that.

This experience shows how DST engaged the learners to learn collaboratively during the DST process, even shy learners. Another pre-service teacher P4 confirmed collaborative learning as a benefit of DST stating: “She started *comparing herself to the other learners*. Even now in the last session we had, she started *writing really slowly* and she was so amazed that the *other children* had almost finished writing, but she started to wiggle because she had *their influence*.” Learners’ behavioural engagement is further evidenced when a pre-service teacher said: “I think definitely the little ones are *learning from each other*.” This quote demonstrates how pre-service teachers noticed co-operative learning during the DST process as interesting points of reflection. Subsequently, the instances of collaboration and co-operation that pre-service teachers shared during their reflections point to learners’ behavioural engagement being evident during the DST process.

4.2.1.2 Learners' emotional engagement

In the written reflections, pre-service teachers were exercising dialogic reflection when they critically analysed their experiences after the DST project (Strampel & Oliver, 2007:976). They reconceptualized their experiences and evaluated past information to reflect on the learners' attitude towards their DST intervention sessions. Pre-service teachers revealed that their learners demonstrated excitement, enjoyment, fun, increased confidence and anticipation during DST, engaging with each other emotionally.

P1: ... they were *excited* from the beginning ... this is something new ... that *excitement* is still there.

P4: ... it [DST] definitely brought joy ...

P8: It was so *fun* for them ...

As emotional engagement is characterised by learners expressed or observed feelings toward the learning activity with teachers and peers, these reflections point to learners being emotionally engaged in the project (Ulmanen et al. 2016:2; Li & Li, 2022:4). According to five of the pre-service teachers, learners conveyed pride for their own story they created and the importance of the learner feeling part of the story (Joubert, 2019:163). These phrases highlight the value of the DST process for emotional engagement.

P2: They are *looking forward* to writing their own story.

P3: I think the whole process [DST] is *fun*, how you see them draw certain pictures ... It adds something more *personal* to the story book for me. I think the most *fun* thing for me is when you finally give them a book and then they'll be like: Yoh, we made the book! This is our booklet [sounding proud].

P5: they were immediately like: *I want* to be that! *I want* to be that! *My hair* was going to be brown so that helped a bit ...

P6: I can see the *confidence* [of the learners].

P7: The learners enjoyed it and were very *excited* about the fact that their own ideas and stories were in the storybook

There were some points of critical reflection which portray how the pre-service teachers were developing their understanding of their experiences whilst in dialogic reflection (Strampel & Oliver, 2007:976; Ivala et al., 2013:221; Fredericks, 2025). For instance, at first, during weekly reflections, P4 said: “I noticed that their self-esteem is not very high.” Later in the focus group discussion she said: “Our children were so *relaxed* and *cheerful* you could just see it on their faces every time we arrived.” This corresponds to the instances pre-service noted that DST improved the learners’ motivation and confidence as highlighted below:

- P3: The use of technology and visual elements can *increase learners’ motivation*. When learners see themselves creating stories or interacting with digital content, it can *boost their confidence* in their reading skills.
- P7: ... that *self-confidence* also came out a lot.
- P8: It heightens their self-esteem.

Capturing emotional engagement, P6 stated: “It comes down to them [the learners] feeling important again. It’s their pictures and it’s the story they wrote. I think it makes a big contribution to self-confidence”. This phrase connects how the ownership of the story and the DST process emotionally engaged learners by increasing their motivation.

4.2.1.3 Learners’ intellectual engagement

As described in the theoretical framework, recognizing critical components of an experience and thinking about them holistically are critical abilities for teachers (Rodman, 2010:20; Moodley & Barnard, 2016:5). In the weekly written reflections and their participation in the focus group interviews, the pre-service teachers reflected on their learners’ critical thinking and creative writing to gain information and make improvements to their DST stories.

- P2: For this lesson they practiced reading fluency by *recording the text*. Here we could model one by one for every learner in correct reading. They *practiced their reading* nicely.

There were phonics wheels and pictures used to *teach new words* that learners can use in the story.

- P3: I selected reading materials that matched the learners' reading level and interests to keep them more engaged.
- P5: The learner *could demonstrate understanding* for the editing process and *learned from her mistakes*.
- P6: During this teaching, learners received their own mind map and wrote sentences independently for the story that we are working on. The *game and activities* enhanced the learners' involvement. The *repeated reading* of the story, with the *drawing of pictures* encouraged their skill to read fluently.

Through active participation in the learning process, intellectual effort, sharing of knowledge, or critical thinking, learners exhibited intellectual engagement (Fredricks & Blumenfeld, 2004:59; Li & Li, 2022:3). All the pre-service teachers shared experiences about how their learners did language exercises, wrote, read and recorded which evidences intellectual engagement (Li & Li, 2022:3). Additionally, the learners' critical thinking was evident when P7 shared: "She would read her sentences one time, and the next time she would recite them, and then she would just listen. Then she's like, "No, no, miss, I haven't felt enough here! so we'll record it again." This self-correction of the learner is indicative of critical thinking and intellectual engagement encouraged by the DST project. Moreover, the persistence of the learner was noted in this last quote, linking back to behavioural engagement. Not only do these quotes demonstrate the relationship between the different types of engagement, but it also once again highlighted the learning experience that was provided using DST, promoting learner's intellectual engagement.

4.2.2 Learner progress

During the reflective focus group sessions and written reflections, the pre-service teachers were guided to reflect on their learners' progress throughout the DST project, exercising stimulated reflection (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). Even though DST has been used previously as an intervention for writing and critical

thinking (Tamimi, 2024; Chiang, 2020), in this study, the term 'learner progress' represents the improvement of reading fluency. These skills were observed by pre-service teachers through informal assessment of learners during the DST intervention and indicated that learner progress is another benefit of DST. All (P2-P8) except P1 were able to comment positively on their learner performance by earmarking areas of improvement or achievements such as phonics, reading or punctuation (DBE, 2008:12). In most cases, the learner's improvement directly correlated to their level of engagement, either behaviourally, emotionally or intellectually (Wang et al., 2025:4, Li & Li, 2022:3). Additionally, the pre-service teachers applied their prior knowledge of reading fluency to their learner's results before, during and after the DST intervention by conducting a pre-test and evaluating results. Therefore, pre-service teachers were asked in the focus group discussion: "Considering the reading fluency pre-test, intervention, and results, how do you think your learners responded to this reading fluency intervention?" Three pre-service teachers narrated during the focus group discussion:

- P6: I could definitely see that there was *improvement*.
- P7: I can remember how he *improved* from an eight to a twelve or a thirteen. It doesn't feel like it's actually a huge *improvement*, but for me it was. If I know how long, he *struggled* just to read those first eight and then he still read them wrong.
- P8: It definitely *boosted their reading fluency*.

In the written reflections, pre-service teachers elaborated on their experiences by writing:

- P2: The learners' 2-3 letter-phonemes *improved*. The learners used new words and *progressed well* writing the story.
- P3: In the beginning most learner's phonics and reading skills were very poor but it improved throughout the lessons by reading aloud.
- P6: The learners' showed remarkable progress during the session.

P5 wrote in her written weekly reflections: "The learners had absolutely no reading fluency. They struggled immensely with the recognition of double sounds and sight

words. There were no decoding skills, which also led to no reading fluency” Yet in the focus group discussion, she shared that: “I can totally say it [DST] *worked*.” and: “... there was still some *improvement*.” These quotes highlight how pre-service teachers developed their understanding of their experiences by at first noting no fluency and then after the 8-week IP that DST improved the reading fluency of their learners.

These verbatim quotes illustrate how pre-service teachers moved through the stages of cognitive processing as theorised by Strampel and Oliver (2007:976). Stimulated reflection initiated the pre-service teachers to reflect as they were asked questions like: “How would you describe your learner’s progress during this IP?”. These questions cognitively stimulated pre-service teachers to make sense of their learners’ progress and sent them into descriptive reflection that required cognitive retrieval where they shared their experiences and recalled valuable incidences from their DST experience (Strampel & Oliver, 2007:976; Easley-Smith & Roberts-Hill, 2025). Then, they integrated their knowledge into their personal knowledge base to write reflections where probing questions were given like: “Considering your reading fluency pre-test, intervention, and results, how do you think the learner responded to this IP session?”, exercising dialogic reflection (Strampel & Oliver, 2007:976; Ivala et al., 2013:221; Fredericks, 2025). Dialogic reflection allowed them to associate, integrate and validate their experiences. Critical reflection was the highest level of reflection where pre-service teachers demonstrated their understanding of their learners’ progress by evaluating what they knew and deciding what should be focussed on next.

In conclusion, this section has answered the first research sub-question which was looking at how the FP pre-service teachers experienced the reading intervention particularly looking at the benefits they experienced. Learner engagement was the predominant theme that emerged with three sub-themes: behavioural, emotional and intellectual engagement. Learner progress was identified as a second theme where the vast majority of pre-service teachers experienced an improvement in at least one of the reading components. In some cases, improved areas were phonics, reading or punctuation which is required for and contributes to reading fluency, even though it does not constitute fluency improvement itself, as discussed by the DBE (2008:11) in Chapter 2.

The pre-service teachers that participated in this study moved through all the levels of reflection as illustrated by Strampel and Oliver (2007:976) namely: stimulated, descriptive, dialogic and critical reflection. These reflections did not develop linearly, but they moved in and between different levels throughout the DST project. Stimulated reflection and cognitive stimulation ensued when the participants were provided with guiding questions to reflect on before the project, stimulating their cognitive disequilibrium (Strampel & Oliver, 2007:976; Segal, 2024). Then, during their weekly reflections they exercised descriptive reflection and cognitive retrieval whilst writing reflections on their sessions (Strampel & Oliver, 2007:976; Segal, 2024). During the focus group discussions, pre-service teachers engaged in dialogic reflection and reconceptualization when listening and conversing with other pre-service teachers about the DST project (Strampel & Oliver, 2007:976; Segal, 2024; Fredericks, 2025). The researcher probed further into their experiences during the focus group session by asking probing questions and stimulating further reflection (Strampel & Oliver, 2007:976; Segal, 2024). These steps resulted in the highest level of reflection, critical reflection, evident in the pre-service teachers' overall written reflections completed at the end of their DST project (Strampel & Oliver, 2007:976; Segal, 2024; Fredericks, 2025).

The theoretical alignment of the findings was evidenced through the various levels of reflection exercised by pre-service teachers (Strampel & Oliver, 2007:976; Segal, 2024; Fredericks, 2025). They were stimulated to reflect on the benefits which led them to descriptive reflection where they recalled their experiences. They expressed their views and reconceptualised DST through dialogic reflection. When pre-service teachers reconceptualized DST, they indicated the beginning of their critical reflection which was not yet fully exercised. The variety of levels that pre-service teachers exercised allowed them to identify benefits of using DST to teach reading fluency.

4.3 **Research sub-question 2:** What challenges did the pre-service teachers experience when using DST to teach their learner's reading fluency?

Following an inductive and deductive analysis of the three data sets—weekly written reflections, transcriptions of two focus groups, and the final written reflections—three themes surfaced:

- Reading fluency challenges
- South African context
- Time management

To answer the second sub-question of the research, the researcher used the same triangulated sources of data as with the first supporting research question. The inductive and deductive analysis of pre-service teachers' reflections revealed the challenges of using DST: Reading fluency challenges, the South African context and time management. Each theme is subsequently discussed with corroborating evidence and Tables in 4.3.2 and 4.3.3 which summarize the most significant verbatim quotes that have been arranged according to the theme and sub-themes.

4.3.1 Reading fluency challenges

Pre-service teachers employed pre-writing and pre-reading intervention activities prior to creating a digital story. Before the learners created their own digital stories, word-level exercises were designed to improve their writing and reading fluency skills.

During the focus group interview with the pre-service teachers, reading their weekly reflections, and final reflections, all participants shared challenges they faced during the DST project with their Grade 2 learners. The quotes below highlight some of these challenges:

- P2: The learners were able to read the words well on paper but when it came to applying the reading fluency elements it was a bit of a challenge. I think the only thing I can work more with them on is uh how you use your voice in certain sentence formats. That's what we're working on now. I tell them: If you say a question, how do you say it? (using inquisitive tone). You have to sound like you're asking it to them. I show them how I do it, and then they do it themselves.

- P3: ... in the beginning most learners' phonics and reading skills were very poor but it improved throughout the lessons by reading aloud
- P5: Their recognition especially, the average one's recognition of single sounds was ok. Uhm... They struggled terribly with like they could decode but they couldn't flow it together like k-a-t... and I can tell them to put it together to make one word. The weaker learners could not recognize his single sounds, not at all. He looked at the sounds for fun and then he guessed what was written there.
- P8: At the beginning of the IP, I noticed that two of the three learners were reading more slowly and needed more help to recognize certain sounds and sight words quickly and accurately. These learners often struggled to identify words with reading comprehension, which negatively affected their confidence. It was clear that they needed extra support and repeated practice to improve their reading skills.

These experiences align with the reading fluency problems in FP described by Gummere (2004:1), Pretorius et al. (2016:4) and Spaul et al. (2020:1) described in Chapter 2: Reading fluency. From the pre-service teachers' quotes above it is evident that their learners struggled with various sub-components of reading that contribute to reading fluency as discussed in Chapter 2.1.2.2 and in a Teacher's Handbook titled Teaching Reading in the Early Grades (DBE, 2008:11). These components include phonics, sight words: phonemic awareness, word recognition, comprehension, vocabulary, and fluency – they also mentioned expression, decoding and encoding.

Phonemic awareness refers to the learners' skill to identify and use individual phonemes in reading (DBE, 2008:11), which is mentioned as challenges by P3, P5 and P8. They specify how their learners struggled to decode, to break up a word into smaller parts, which requires a knowledge of phonemic awareness. Word recognition, the ability to recognise words using knowledge of phonics and sight words (DBE, 2008:11), was highlighted by P5 as a challenge for her learners. A weakness in any of the five reading components may prevent learners from reading with comprehension which P8 mentioned as a challenging area for her learners (DBE, 2008:11). Reading fluency may also contribute to reading comprehension as the text can be better interpreted if read fluently. It was reported that the Grade 2 learners were struggling

with word identification, and this prevented them from reading with fluency which could lead to further challenges with components of fluency such as accuracy, speed and expression (DBE, 2008:11; Joubert, 2019:292). However, the learners' difficulty with reading fluency can be seen as positive and negative, as they showed progress through their types of engagement during this project.

Pre-service teachers moved through the levels of cognitive processing as they were motivated by the reflection process to reflect further on their teaching becoming more aware of their learners reading fluency challenges (Strampel & Oliver, 2007:976). As a result, the pre-service teachers provided varying opinions through consistent reflection. For instance, in her weekly reflection, P2 said: "The learner's phonics and reading is at a good level." This statement indicates that the pre-service teacher was at the descriptive reflection as she was recollecting and recognising information about her learners' reading fluency performance (Strampel & Oliver, 2007:976). However, in the final written reflection, P2 was exercising critical reflection and evaluating new knowledge when she contradicted her previous statement with: "So when I work with learners who struggle with reading, it makes it difficult for me to make sure that the learner works to his full potential." (Strampel & Oliver, 2007:976). These statements indicate that, P2 developed from being at the descriptive reflection level to becoming more critical in her thinking and working with her Grade 2 learners and has moved to the critical reflection level (Strampel & Oliver, 2007:976; Easley-Smith & Roberts-Hill, 2025; Segal, 2024).

4.3.2 South African context

The data from the weekly reflections provided no comments connecting to this theme of the South African context. However, during the focus group and final written reflections, the challenging South African context was elaborated on much more. The data from each pre-service teacher is reflected below, focussing on South African circumstances. The statements below provide evidence of a multitude of South African contextual challenges described by the pre-service teachers (Okeke & Van Wyk, 2017:39). Next to each statement, the researcher provides the actual South African contextual challenge: poverty, lack of electricity, overcrowded classrooms, home support, absenteeism, poor reading instruction, lack of reading materials, untrained teachers and poor signal.

Table 1: Challenges with DST in a South African context

		South African context
P1	... we are in a reality where your poor schools are going to remain poor. Two were absent for two sessions in a row	Poverty Absenteeism
P2	The power goes off and you are basically sitting in the dark. The children can't work because it's bad for their eyes. Then we just tell them, just wait, the power will come back soon.	Electricity [load shedding]
P3	Yes but in a classroom, they don't have TVs, they don't even have a projector ... and, you may have a phone but now you are sitting with 30 kids in a class.	Overcrowded classes
P4	If possible, you can also involve the parents. There is a big problem with parents who don't read enough with their children. With Learner A that was absent, we could not record everything because we wanted to give him a chance as well.	Home support Absenteeism
P5	Some teachers in the Foundation Phase are not teaching reading skills effectively and according to the CAPS guidelines.	Poor reading instruction
P6	This problem [reading] is exacerbated by limited access to reading materials...	Lack of reading materials
P7	The teachers may need to be trained and perhaps see how to use it. Many older teachers stick to what they see, they are not open to something like that [DST].	Untrained teachers
P8	The signal was also terribly weak on the last day, but we were outside. We were sitting under the	Poor signal

trees and the signal was really weak so we couldn't... stop on time.

Before this DST project began, all eight participants reflected that they were cognitively stimulated to reflect on their own teaching practice when they noticed evidence of the reading crisis which has been widely publicized (Joubert, 2019:292; Spaul et al., 2020:1). This put them in a state of disequilibrium (Strampel & Oliver, 2007:976; Ivala et al., 2013:221).

While attending the Language in Education subject in their third year FP course, these participants were introduced to the DST project as one possible intervention that may impact the Grade 2 learners' reading fluency abilities. Seeking to solve their cognitive disequilibrium, the pre-service teachers embarked on this service-learning project where they used DSTs with their Grade 2 learners (Segal, 2024). At the beginning of the focus group interviews, their reflections aligned with the lowest level of Strampel and Oliver's (2007) levels - stimulated reflection.

Despite their sense of disequilibrium and encouraged by their new knowledge of DST, they began to engage in descriptive reflection as they recalled and interpreted their experiences, explaining this new knowledge in detail (Strampel & Oliver, 2007:976; Ivala et al., 2013:221; Segal, 2024). The focus group discussion stimulated dialogic reflection when pre-service teachers associated, integrated and validated their new knowledge with others (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). During the focus group discussion, all pre-service teachers shared some challenges within the South African context that influenced the implementation of DST as a reading intervention strategy. At the end of this project, the pre-service teachers had more experiences to inform their reflections and realisations, upon which they completed the overall written reflection (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). Here they "judged the value" of using DSTs in a primary school within a challenging South African context and exercised critical reflection to identify these challenges (Ivala et al., 2013:221). The final written reflections guided the pre-service teachers to reflect more in depth than initially, allowing them to not merely identify challenges in the DST intervention, but also situate these challenges within a set of socio-economic

circumstances often faced in the South African context (Strampel & Oliver, 2007:976). This level of critical reflection stimulated potential improved future application of DST (Strampel & Oliver, 2007:976; Moodley & Aronstam, 2016:5), and is evidenced by pre-service teachers making decisions about what the next step should be to improve DST and suggesting DST teacher training to improve it's implementation (Strampel & Oliver, 2007:976; Segal, 2024; Roberts-Hill, 2025). Hence, by exercising developing levels of reflection, pre-service teachers were able to share their unique experiences of using DST within a South African context.

4.3.3 Time management

In an attempt to answer the second research sub-question, the researcher continued to examine all three data sources collectively to identify more challenges. After completing the inductive and deductive analysis, the data indicated that time management was a challenge for pre-service teachers during this DST project. The statements below provide evidence of the most relevant types of time management challenges experienced by the pre-service teachers. Bearing in mind that pre-service teachers' time management is a broad concept, the researcher categorised the verbatim quotes into the more specific challenges: number of sessions, content planned for time, limited time, uncontrollable circumstances leading to little time.

Table 2: Pre-service teachers' time management challenges.

		Time management challenge
P1:	Time in general was just very tight.	Limited time
P2:	Time was also a factor [referring to challenges].	Time as challenge

P3:	I think it's also time. I feel that if we have more time with the kids, even if it's an extra hour...I think it will also make the progress better.	Number of sessions
P5:	There was a lot to handle today, but little time. Our session was very rushed because there was a lot to complete.	Content planned for time
P6:	Limited time was a challenge.	Limited time
P7:	We only had 30 minutes to complete the entire lesson... the time was little.	Uncontrollable circumstances leading to little time.
P8:	Limited time is certainly a challenge.	Time as challenge

By reflecting on their actions, the majority of the pre-service teachers could identify how they struggled with time management at some time during the DST project (Strampel & Oliver, 2007:976). They shared these challenges throughout different stages of the DST project, engaging in different levels of cognitive processing (Stampel & Oliver, 2007:976). For instance, during descriptive reflection and cognitive retrieval, these pre-service teachers recalled their DST experiences, challenging their existing knowledge, to describe their challenges with time management in writing after their sessions (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). Pre-service teachers stated how their intervention sessions were limited to only 30 minutes and very rushed. As a matter of fact, sessions were 50 minutes long, however events occurred that were out of the pre-service teachers' control for example: the bell rang late, staff meeting ran longer, early break time (Dongo & Mahlangu, 2022:170). These events sometimes

led to intervention sessions being cut short. As the data collection process continued, these pre-service teachers were able to evaluate their existing knowledge as well as their new knowledge during a focus group discussion (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). This is an indication that their cognitive processing skills were moving to Strampel and Oliver's (2007:976) dialogic reflection and reconceptualization. At the end of the DST project, when the pre-service teachers were completing their overall written reflections, they shared critical reflections by providing suggestions on how to proceed with DST in the future to bridge the challenges they experienced (Strampel & Oliver, 2007:976; Ivala et al., 2013:221). For instance, P3 suggesting an "extra hour" or additional sessions with the learners. Collectively, these reflections demonstrate how throughout the data collection process, the theme of time management was an issue for most of the pre-service teachers. These discussions indicate the different levels of cognitive processing the pre-service teachers were engaging in (Strampel & Oliver, 2007:976; Segal, 2024).

In conclusion, when pre-service teachers reflected on their challenges they experienced, they highlighted instances that pertain to reading fluency challenges, South African contextual challenges and time management challenges. They experienced these challenges through their involvement in the DST project where they intervened on the poor reading fluency of Grade 2 learners. Pre-service teachers noticed that learners had trouble with several reading sub-components that influenced their reading fluency such as phonics, sight words, phonemic awareness, word recognition, comprehension, vocabulary, and fluency (DBE, 2008:12). These difficult reading components align to similar findings studied by Van Der Berg et al., (2019:60), Spaul (2022:14) and the WCED (2022:2). Other reading fluency challenges identified were expression, decoding and encoding. Pre-service teachers also described various South African contextual challenges that hindered the implementation of DST including poverty, absenteeism, electricity (load shedding), overcrowded classes, home support, poor reading instruction, lack of reading materials, untrained teachers and poor signal. Challenges with time management, due to limited time, uncontrollable events and the number of sessions was another challenge that the pre-service teachers experienced.

The researcher observed the cognitive processes these pre-service teachers were transitioning from – beginning with stimulated reflection, to descriptive reflection, to dialogic reflection, and finally to critical reflection during the three stages of data collection (Strampel & Oliver, 2007:976). Given that they alternated between several of the levels during the DST project, the pre-service teachers' levels of reflection were not linear. At the beginning of the DST project, the students were in a state of cognitive disequilibrium. However, they moved on and began the teaching of reading fluency using the DST intervention with their learners. During this process of the project and the data collection period, they regularly engaged in cognitive stimulation where they made sense of their new knowledge, exercising cognitive retrieval. Being part of the data collection process, this encouraged the pre-service teachers to synthesize and analyse their teaching of reading fluency where they tried new pedagogies to improve their Grade 2 learners' fluency, meaning that they were dialogically reflecting. During the final data collection process, the pre-service teachers critically reflected on what next steps they could take to assist their learners to read with even better reading fluency.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

5.1 Introduction

The aim of this study was to gain a more critical understanding of using DST as a potential intervention in an attempt to improve Grade 2 learner's reading fluency, from the perspective of eight pre-service teachers. They were in their final year of FP teacher education at a South African Higher Education Institution (HEI).

The main research question instigating this study was "How did Foundation Phase pre-service teachers experience the DST reading fluency IP?" To answer this question, the researcher posed two sub-questions. The first sub-question sought to identify the benefits pre-service teachers experienced in using DST to improve reading fluency. Whereas the second sub-question was focussed on the challenges that pre-service teachers experienced in their use of DST. These two sub-questions equally informed the main research question of this study highlighting pre-service teachers' experiences during this DST IP.

The researcher's B Ed degree made her aware of DST as she created a digital story for a Language in Education assignment. As a novice teacher, the researcher taught in Grades 1 and 3 for three years where she used DST in her classroom as a method of teaching. During her time as a teacher, she realised that FP learners struggled with reading fluency hence she became motivated to examine this issue in more detail. She determined the need for an intervention which became the motivation for this study. Her literature search indicated that DST had been used effectively for a wide range of interventions, yet there were no published research articles investigating reading fluency of South African FP learners. In an attempt to address this gap, the researcher sought to examine how DST could potentially be used to improve reading fluency. Pre-service teachers who were applying the DST reading intervention as part of a service-learning project were suitable participants as they could reflect critically about literacy learning elements and the use of DST to target the improvement of reading fluency.

Using the three data collection tools: weekly written reflections, focus group transcripts and overall written reflections, this chapter summarises the findings, in relation to

existing literature. Strampel and Oliver's levels of reflection (2007:976) have been used to structure the overall discussions in this chapter. The chapter concludes by addressing the limitations that were experienced during this research project and makes recommendations for policy, future research and practice. To conclude this chapter the researcher engages in her own critical reflection of this study.

5.2 Discussion

This study examined how pre-service teachers experienced using DST to teach reading fluency using Strampel and Oliver's (2007:976), levels of reflection as the theoretical framework. After rereading this whole thesis, the researcher chose to use Strampel and Oliver's (2007:976) four levels of reflection once again to summarise the most significant findings. During and after their DST sessions with Grade 2 learners in the South African context, pre-service teachers reflected on their experiences, on these four levels which will be discussed below.

- Stimulated reflection
- Descriptive reflection
- Dialogic reflection
- Critical reflection

5.2.1 Stimulated reflection

Noticing evidence of the reading crisis that has regularly been widely publicized, all eight pre-service teachers were invited to reflect on their own teaching practice and their experiences with reading fluency before this DST project began (Joubert, 2019:292; Spaul et al., 2020:1; Strampel & Oliver, 2007:976). They were in a state of disequilibrium as they began to reflect, seeking to understand how DST could be used to teach reading fluency. The use of DST to improve reading fluency was a new experience for them and they were aware that "something did not quite fit" (Ivala, 2014:221).

These pre-service teachers worked in small groups with Grade 2 learners during an IP where these learners created their own digital story. The pre-service teachers developed suitable activities targeting multiple components of reading, extending the

improvement of reading fluency as set out in the Teachers Guide to Teaching Reading in the Early Grades (DBE, 2011:96). These activities included sight word games, phonics wheels, mind maps, creative writing and audio recording. One of the core activities of the IP was the learners recording their own voice for their digital stories, which allowed the continuous practice and re-recording of their reading, leading to development of reading fluency.

The pre-service teachers used their laptops, smart phones and various software to assist the learners in creating their digital stories they wanted, exposing the learners to DST and various digital literacy skills. Despite the researcher being aware of the challenges in creating a digital story, it was interesting to note that not one pre-service teacher mentioned in their reflection, the difficulties they experienced in creating a digital story. The pre-service teachers may have experienced challenges; they did not verbalise this in their written reflections nor in their focus group interviews. This may have been because these education students who volunteered for this project were mainly high performing education students.

However, the pre-service teachers also shared that the South African context presented challenges, in the implementation of this DST project. Chapter 2 briefly outlines the South African context which alluded to some of the challenges experienced (Spaull, 2012; Cronje, 2024; Kitchen, 2025). Whilst using DST as a potentially successful pedagogical activity to improve Grade 2 learners reading fluency, the South African context proved limiting. Poverty, absenteeism, electricity (load shedding), overcrowded classes, lack of home support, poor reading instruction, lack of reading materials, untrained teachers and poor internet signal presented challenges for these pre-service teachers. These findings indicate the difficult context within which they worked while they attempted to use DST to improve the poor reading fluency of some Grade 2 learners. By continuously stimulating pre-service teachers to reflect on their work, they were able to critically evaluate their experiences of using DST to improve reading fluency and to identify their feelings of disequilibrium.

5.2.2 Descriptive reflection

DST engaged learners behaviourally, emotionally and intellectually in the learning process, contributing to learners' progress. Behavioural engagement (§2.1.2.4) refers to when learners actively participate in learning activities. Considering all the data sets and various levels of reflection (Strampel & Oliver, 2007:976), pre-service teachers noted learners' behavioural engagement through their active, and sometimes spontaneous participation in the learning process as they collaborated and exchanged ideas (Shuang et al., 2022:69; Ritoša et al., 2023:3). Findings indicated that even shy learners, who may have struggled to actively participate in a traditional setting, demonstrated behavioural engagement in their DST learning process as attested by P4: "They *exchange ideas and talk to each other*, even the shy learner." Learners' self-correction whilst reading also indicated behavioural and intellectual engagement which correlated positively to their progress, confirming the findings of Wang et al. (2025:4).

Learner progress represented the improvement of the learners' reading fluency skills during the IP that pre-service teachers applied. The benefit of the use of DST was indicated when most of the pre-service teachers were able to earmark areas of improvement directly correlating to the five components of reading discussed in §2.1.2.2 (DBE, 2008:12). Pre-service teachers reported improvements in areas such as phonics, reading, punctuation, and the use of new words, made possible by the learners' different ways of engagement. These results did not directly indicate enhanced reading fluency but rather demonstrated learners' progress in reading components connected to the use of DST and the increased engagement of the learners during their intervention sessions. However, one of the most prominent challenges that pre-service teachers encountered was the learners' existing challenges with reading fluency juxtaposed against the learners' progress and aligning to findings of Van Der Berg et al., (2019:60), Spaul (2022:14) and the WCED (2022:2). Learners struggled with several reading sub-components that influenced their reading fluency such as phonics, sight words, phonemic awareness, word recognition, comprehension, vocabulary, and fluency – they also mentioned expression, decoding and encoding (DBE, 2008:12; Spaul et al., 2020:1). These challenges were considered along with the learners' progress, indicating that progress in reading was made through effective engagement in DST.

Pre-service teachers were able to identify this progress through being stimulated to reflect on their learners' progress during focus groups and describing their experiences in written reflections (Strampel & Oliver, 2007:976). This led to descriptive reflection which was evidenced by the cognitive retrieval pre-service teachers exercised to share their experiences after the sessions demonstrating the lowest ideal level of reflection. Pre-service teachers' descriptive reflections showed that the use of DST increased the learners' engagement, resulting in better reading and writing progress.

5.2.3 Dialogic reflection

Pre-service teachers continued to earmark more ways that learners engaged through DST by engaging in dialogic reflection. During focus group sessions for example, pre-service teachers exercised dialogic reflection when they associated, integrated and validated their experiences with one another. Dialogic reflection led pre-service teachers to reconceptualize DST with the new knowledge they had gained through the DST project.

Pre-service teachers noticed how much the learners enjoyed and looked forward to creating a digital story, which demonstrated emotional engagement (Li & Li, 2022:4). Pre-service teachers further noted learners' increased motivation and self-esteem through the creation and ownership of their own digital stories emphasising emotional engagement as another benefit of using DST to teach reading fluency. These Grade 2 learners not only presented emotional engagement but also expressed pride in their stories and anticipation for writing, providing evidence for how DST increased the concept of the learner as author (Joubert, 2019). These instances of emotional engagement was identified through pre-service teachers' dialogic reflection on their DST experiences.

By further engaging in dialogic reflection and being stimulated to reflect further, pre-service teachers shared how learners engaged intellectually (Strampel & Oliver, 2007:976). Pre-service teachers prepared activities to practice reading fluency and related components of reading by recording text, using phonics wheels, and pictures to build learners' own vocabulary required for story writing. These activities equipped the learners in the writing of their digital story (DBE, 2011:96). Additionally, the learners

demonstrated an understanding of editing through writing sentences independently, and self-correcting their reading (DBE, 2011:96; Joubert, 2019:163). These instances of intellectual engagement aligned with learners' progress and their reading fluency challenges, as these cognitively led activities played a critical role in how pre-service teachers experienced using DST to teach reading fluency. Consequently, through dialogic reflection pre-service teachers identified learner engagement as a key advantage of DST for reading interventions.

5.2.4 Critical reflection

When pre-service teachers engaged in the stimulated, dialogic and descriptive reflection, it developed their reflective skills which led to critical reflection by the end of the DST project (Strampel & Oliver, 2007:976). In their last overall written reflections completed after all their sessions with the learners, pre-service teachers noted the benefits of DST in how it engaged learners and boosted their progress. Whilst engaging in critical reflection, pre-service teachers were able to link the different kinds of learner engagement to learners' progress. They also opened up about their challenges of using DST to teach reading fluency - such as the state of poor reading fluency within the South African context which hindered the implementation of the IP. Details about the challenges that the pre-service teachers' experienced with DST, increased as their reflection developed. They also critically evaluated how they responded to challenges and what they might do differently in future DST application. Through the overall reflections of the pre-service teachers, it was clear that even though they experienced challenges, they remained persistent to find ways to improve their learners' reading fluency.

5.3 Limitations

This section briefly revises the limitations discussed in Chapter 1 and makes recommendations for policy, future research and practice. This research project was limited to investigation of Grade two learners' reading fluency and did not include the rest of the FP grades. Moreover, only eight pre-service teachers' experiences were examined in this study, exclusively as volunteers, which may have introduced bias

(Puri, 2024). These limitations are discussed in more detail under §1.11 Limitations of the study.

5.4 Recommendations

The rest of this chapter outlines recommendations and the researcher's own critical reflection.

5.4.1 Recommendations for future research

- Future research should investigate how the CAPS document could be revised and updated to support the integration of 21st century literacy skills (DBE, 2011).
- It is recommended that future studies investigate how the infrastructure such as electricity (load shedding) and poor signal within the South African context influence the implementation of digital storytelling as a pedagogy in Foundation Phase classrooms. These studies could investigate possible solutions such as providing the necessary devices, chargers, United Parcel Service (UPS), generators and wireless internet to allow technology integration.

5.4.2 Recommendations for future in service teachers

- One of the recommendations that pre-service teachers made was if this study on DST as an intervention strategy, were to be replicated, is to extend the time and number of the intervention sessions to allow room for circumstances beyond the pre-service teachers' control.
- DST must still be investigated as a literacy teaching tool to use in practice by novice and experienced teachers in the FP.

5.4.3 Recommendations for initial teacher education and the practice of teaching.

- Educational institutions should provide students with digitally literate lecturers that can encourage and present education students with new teaching tools suitable for FP learners of the 21st century.
- Lecturers should continue to use DST in service-learning projects to guide pre-service teachers to implement theory of DST in practice.

- ITEs need to train pre-service teachers on how to teach reading, to prevent that they lack the knowledge and skills to address poor reading skills. In doing so, ITE institutions could ensure new and prospective teachers who enter the profession have the skills to address poor reading fluency.
- Based on emotional engagement that DST encourages, it can be implemented in Foundation Phase classrooms to make writing and reading lessons more enjoyable for the learners.
- DST should be used in the classroom more often along with other electronic texts like blogs, emails or presentations as writing tasks. These tasks should aim to equip the FP learner with the necessary digital literacy for the 21st century.

5.4 Concluding critical reflection

The researcher was stimulated to reflect on DST as an effective teaching tool when she first applied DST in a Language in Education assignment in 2019. Following her first application of DST, she used it in a well-resourced Grade 3 classroom for First Additional Language reading, where it brought a fun element to the lesson (Strampel & Oliver, 2007:976). However, after transitioning to a low resource school, where DST was not as easy to implement, she noticed how FP learners struggle with reading fluency and how it negatively impacts their comprehension and participation during reading (Strampel & Oliver, 2007:976). She discussed this phenomenon with colleagues and senior researchers who validated her observations and appropriated her new knowledge as she became interested in the service-learning project (Strampel & Oliver, 2007:976). Upon continuous discussion of the service-learning project, this dialogic reflection led her to the main research question which sought to discover how pre-service teachers experienced DST to improve reading fluency. Whilst conducting the literature review of this study, she found herself engaged in descriptive reflection as she tried to make sense of DST in a South African context (Strampel & Oliver, 2007:976). Completing this research project, she has spent time critically defending her findings and relating them to existing research, which allowed her to develop a new perspective about DST in the FP (Strampel & Oliver, 2007:976). In applying her new knowledge from this thesis, she made recommendations to necessitate changes

5.5 Concluding thoughts

In conclusion, pre-service teachers supported DST as an intervention for poor reading fluency, despite a challenging context. In this DST IP, pre-service teachers worked on phonics and sight words with their Grade 2 learners before proceeding to planning the story board and writing their own story, retaining elements of traditional literacy in the planning process. Ultimately, learners practiced their reading repeatedly, recording and re-recording to improve their fluency. Pre-service teachers supported DST as a methodology to teach reading because of the benefits like behavioural, emotional, and intellectual engagement and learners' progress in various reading components. However, contextual limitations like poverty, teacher training issues, poor internet signal, load shedding and infrastructural problems presented difficulties in using DST. Furthermore, pre-service teachers also struggled with time management during their DST sessions, suggesting longer sessions which is necessary for successful implementation of DST in Grade 2.

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APPENDIX 1 FOCUS GROUP DISCUSSION PROTOCOL

Institutions: Cape Peninsula University of Technology (Wellington Campus)

Interviewee (Title and Name):.....

Interviewer: Jean-Mari Van Zyl

Topic: The experiences of Foundation Phase pre-service teachers using digital storytelling to teach reading fluency.

Other	Topics	Discussed:
.....		

Additional data obtained:

Written reflection

Post Interview Comments or Leads:

Interviewer: J. Van Zyl

Interviewee:

Date:

Time:

APPENDIX 2: FOCUS GROUP DISCUSSION SCHEDULE

Introductory Protocol

To facilitate my notetaking, I would like to audio tape our conversations today. Please sign the informed consent form if you are still willing to participate. For your information, only the researcher on the project will have access to the audio tapes for this interview, which will be transcribed. Essentially, this document states that: (1) all information will be held confidential and anonymous (2) and that your participation is voluntary. You may stop at any time if you feel uncomfortable. (3) I do not intend to inflict any harm. Thank you for your agreeing to participate.

I have planned this interview to last no longer than one hour. During this time, I have several questions that I would like to cover.

Interview schedule			
Main question	Reason for the question	Possible probing questions (3)	Body movements
1. Tell me about your experiences of teaching reading fluency through DST as a pre-service teacher.	To gain an understanding of pre-service teacher's perception on teaching fluency using digital storytelling.	a) What were your expectations heading into this project as a PST? b) Did the project unfold the way you thought it would? How? How not? c) What are your opinions on the specific strategy (DST) and focus area (reading fluency) being used together?	
2. Tell me about your experiences	To gain an understanding of pre-service teacher's	a) What did you know about DST before this IP?	

with the use of DST specifically.	experiences using DST.	<p>b) How do you feel about DST?</p> <p>c) How would you describe your attitude towards this strategy before and after the IP?</p>	
3. Did you experience any challenges using DST?	To identify challenges in using DST.	<p>a) Was there anything you noticed in your sessions that did not work?</p> <p>b) Did you struggle with time, technology, electricity access or socio-economic factors?</p> <p>c) What did you do to overcome your challenges?</p>	
4. What joys did you experience when interacting with DST?	To identify highlight and positive experiences in using DST.	<p>a) Was there anything you noticed in your sessions that worked especially well?</p> <p>b) Which elements in this process did you find enjoyable for yourself?</p> <p>c) Which elements do you think your learner enjoyed?</p>	

<p>5. What benefits did you experience with using DST to reach reading fluency?</p>	<p>To identify benefits of DST to teach reading fluency.</p>	<p>a) What benefits did you expect to see embarking on this project?</p> <p>b) Do you think DST is beneficial to teachers Why?</p> <p>c) Do you think DST is an effective strategy to teach reading fluency? Why?</p> <p>d) Where there any improvements or benefits in this project that you did not expect?</p>	
<p>6. Considering the reading fluency pre-test, intervention, and results, how do you think your learners responded to this reading fluency intervention?</p>	<p>To determine the efficacy of using DST to teach reading fluency.</p>	<p>a) How would you describe your learner's progress during this IP?</p> <p>b) How did you experience your learner's attitude towards reading before and after the intervention?</p> <p>c) Did you notice an improvement in the learners' word recognition, decoding skills, or phonics knowledge?</p>	

<p>7. Why do you think using this strategy gave the specific outcome?</p>	<p>To gain an understanding of how DST improved reading fluency.</p>	<p>a) Did you notice DST having an effect on the learners' fluency?</p> <p>b) Do you think this IP helped your learner with reading fluency?</p> <p>c) Do you think DST was an appropriate intervention for your learner's low reading fluency?</p>	
<p>8. How do you feel about your use of DST in the future?</p>	<p>To determine the effectiveness of DST to the pre-service teacher.</p>	<p>a) How will you use DST in the future.</p> <p>b) Will you use DST again?</p> <p>c) What will you do differently if you use DST again?</p>	
<p>9. What do you think about the existing strategies to teach reading fluency?</p>	<p>To determine the PST opinion on existing strategies to teach reading fluency.</p>	<p>a) Have you ever heard of these strategies?</p> <p>b) Have you used these strategies in your practical teaching?</p> <p>c) Do you think using DST to teach reading fluency is an</p>	

		effective strategy compared to those in current research?	
10. What do you think about teaching reading fluency in the future?	To explore the PST reflective process for reflection for future action.	<p>a) Will you be using the same strategy (DST) to teach reading fluency again? Why / Why not?</p> <p>b) Do you think there are alternative ways of teaching reading fluency?</p> <p>c) If you were to use DST again, is there anything you would do differently?</p>	

APPENDIX 3 WEEKLY WRITTEN REFLECTION TEMPLATE

Planning for digital story service-learning project / Lesbeplanning vir digitale storie vertelling diensleer projek:

Learning outcomes / Leeruitkomstes:	What do you want to achieve with today's lesson? Wat wil jy met vandag se les bereik?
Teaching and Learning activities / Onderrig en Leeraktiwiteite	Introduction / Aanloop: Progression / Verloop: Conclusion / Afloop:
Teaching and Learning materials/ Onderrig en leermateriale	Materials or photos thereof. / Materiaal of foto's daarvan.
Reflection / Refleksie	<p>1. Describe your experiences using DST to teach reading fluency this week. / Beskryf u ervaring oor die gebruik van digitale storievertelling om leesvlotheid te onderrig gedurende hierdie week.</p> <p>2. Describe positive points, successes that you experienced during this IP session. / Beskryf watter positiewe ervaringe en sukses u beleef het tydens hierdie intervensie sessie.</p> <p>3. What were some of the challenges in implementing this method in this week's session? / Watter uitdagings het u ervaar met die implimentering van hierdie metode gedurende hierdie week?</p> <p>4. Considering your reading fluency pre-test, intervention, and results, how do you think the learner responded to this IP session? / Hoe dink u het die leerder ontwikkel tydens hierdie leesvlotheid intervensie sessie, indien u na die voortoets, intervensie les en leerder se vordering kyk.</p> <p>5. Is there anything that stood out to you, that you found interesting in this week's session? / Is daar enige iets wat vir jou uitstaan oor hierdie week se sessie?</p>
Preliminary planning / Vooruitskouing	How you will address identified problems of the lesson? Hoe gaan u probleme wat tydens die sessie/les geïdentifiseer is in die volgende sessie aanspreek.

APPENDIX 4: OVERALL REFLECTION TEMPLATE

Overall written reflection template / Finale geskrewe refleksie templaat

Write a one-page reflection of your experience using Digital storytelling to teach reading fluency. These questions will guide you, please share any relevant experiences. / Skryf 'n refleksie van een bladsy oor u ervaring van die gebruik van digitale storievertelling om leesvlotheid te onderrig. Gebruik die onderstaande vrae as leiding en deel enige relevante ervarings wat u gehad het.

1. What do you think about reading in SA? / Wat dink jy van lees in SA?

2. How are you affected by reading in SA? / Hoe word jy deur lees in SA geaffekteer?

3. What did you do during this IP? What happened? / Wat het jy gedoen gedurende hierdie intervensie program? Wat het gebeur?

4. Do you think there was value to the participation of this IP for you as a PST? / Dink jy dit is waardevol vir jou om deel te neem aan hierdie intervensie sessies as 'n finale jaar onderwys student?

5. What did you think of your learners reading fluency in the beginning of this IP? / Wat het jy gedink van jou leerder se leesvlotheid aan die begin van die intervensie program?

6. What did you do with the learner? Why did you do this? / Wat het jy gedoen met die leerder? Hoekom het jy dit gedoen?

7. What do you think of DST as an intervention tool for reading fluency? / Wat dink jy van digitale storievertelling as 'n intervensie hulpmiddel vir leesvlotheid?

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8. How might you use DST in the future? / Hoe sal jy moontlik digitale stories in die toekoms gebruik?

9. Do you think other teachers should be trained on DST? / Dink jy ander onderwysers moet opgelei word oor digitale storievertelling?

APPENDIX 5: ETHICS LETTER



Faculty of Education Highbury Road Mowbray

7700

Tel: +27 21 680 1506

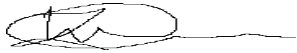
FACULTY OF EDUCATION

On the **13 December 2023**, the Chairperson of the Faculty Research Ethics Committee of the Cape Peninsula University of Technology granted ethics approval (**EFEC 5-12/2023**) to J. van Zyl for a MEd.

Title:	Foundation Phase pre-service teachers' reflections on a reading intervention programme.
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Comments:

The Faculty Research Ethics Committee unconditionally grants ethical clearance for this study. This clearance is valid until **31 December 2026**. Permission is granted to conduct research in the **Faculty of Education**. Research activities are restricted to those details in the research project as outlined by the Ethics application. Any changes wrought to the described study must be reported to the Ethics committee immediately.



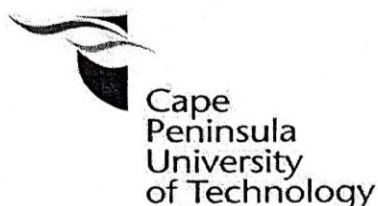
Date: 13 December 2023

Prof. Zayd Waghid

Chair of the Faculty Research Ethics Committee Faculty of Education

efec@cput.ac.za

APPENDIX 6: LETTER OF CONSEN



Faculty of Education
Ethics informed consent form

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Category of Participants (tick as appropriate):

<i>Principals</i>	<input type="checkbox"/>	<i>Teachers</i>	<input type="checkbox"/>	<i>Parents</i>	<input type="checkbox"/>	<i>Lecturers</i>	<input type="checkbox"/>	<i>Students</i>	<input checked="" type="checkbox"/>
<i>Other (specify)</i>									

You are kindly invited to participate in a research study being conducted by Jean-Mari Van Zyl from the Cape Peninsula University of Technology. The findings of this study will contribute towards (tick as appropriate):

<i>An undergraduate project</i>	<input type="checkbox"/>	<i>A conference paper</i>	<input type="checkbox"/>
<i>An Honours project</i>	<input type="checkbox"/>	<i>A published journal article</i>	<input type="checkbox"/>
<i>A Masters/doctoral thesis</i>	<input checked="" type="checkbox"/>	<i>A published report</i>	<input type="checkbox"/>

Selection criteria

You were selected as a possible participant in this study because (give reason why candidate has been chosen):

Voluntary participation from a group 4th year, Foundation Phase pre-service teachers at a university in the Western Cape.

The information below gives details about the study to help you decide whether you would want to participate.

Title of the research:

The experiences of Foundation Phase pre-service teachers using digital storytelling to teach reading fluency.

A brief explanation of what the research involves:

For this study a qualitative approach will be used through an exploratory case study design. This will be done with interpretivism acting as the underlying paradigm. In this study, DST will be used as a reading fluency intervention by pre-service teachers from a local University in the Western Cape. Pre-service teachers' will reflect on how DST can be used to teach reading fluency.

Why is this research important?

It might provide a possible strategy to help improve learners' reading fluency.

Benefits of research (Researcher please briefly describe any foreseeable benefits of the study)

Improving pre-service teachers practice of reading fluency teaching by the application and reflection on DST.

Incentives

No incentives

Procedures (duration)

Chapter 1 will be written Jan-Feb 2024. Chapter 2 will be written Feb-March 2024. Chapter 3 will be written April-June 2024. Chapter 4 will be written Aug-Des 2023. Chapter 5 will be completed July-August 2024. Final editing will be from August -December 2024. Submission for examination: January 2025

Right to withdraw/ voluntary

(Researcher please describe how you will explain to the participants how the study is voluntary and that they have the right to withdraw from the study at any time)

The participants must be aware that their participation in this study is voluntary and if they should feel uncomfortable at any time, I will be willing to stop their participation immediately.

Confidentiality and anonymity

(Researcher please describe how you will explain to the participant that their identity and the data will remain confidential and anonymous)

All data collected will be kept confidential, safe and password protected on a password protected one drive folder. This confidentiality also ensures that the data will be presented in anonymity of the participants. Respect for the participants' welfare, total anonymity and dignity will be of paramount importance.

Potential risks, discomforts or inconveniences

(Researcher please briefly describe any foreseeable risks, discomforts or inconveniences likely to affect research participants)

The participants will be required to reflect on their practice and participate in focus group discussions.

What will happen to the data when the study is completed?

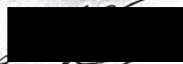

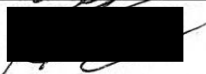
The data will be thematically analysed by the researcher and discussed in the final Masters thesis, which will be submitted for examination as well as to a Reading and Writing Journal for peer-review.

Kindly complete the table below before, during and after participating in the research.

Statement	Yes	No	Yes	No	Yes	No
	before	before	during	during	after	after
1. I understand the purpose of the research.	X		X		X	
2. I understand what the research requires of me.	X		X		X	
3. I volunteer to take part in the research.	X		X		X	
4. I know that I can withdraw at any time.	X		X		X	

5. I agree that my data may be used in this study.	X		X		X	
6. I understand that there will not be any form of discrimination against me because of my participation or non-participation.	X		X		X	
7. I agree that the data collected will be used and may be published as part of a Master's thesis	X		X		X	
8. Comment:						

Please sign the consent form three times below, confirming consent before, during and after data collection. You will be given a copy of this form on request.

Dates of signature	Signature of participant:
Date before data collection: 21/08/24	
Date of data collection:	
Date after data collection: 21/08/2024	

Researcher

	Name:	Surname:	Contact details:
1.	Jean-Mari	Van Zyl	0820215353/ vanzylj@cput.ac.za

Contact persons: Prof.Janet Condy / Dr.Carika Kriel	
Contact number: Dr.Carika Kriel: 0609657339 Prof.Janet Condy: 0828288813	Email: Dr.Carika Kriel: kriec@cput.ac.za Prof.Janet Condy: condyj@cput.ac.za

