

Chapter 1

Introduction and Problem Statement

1.1 Introduction

Recent reforms in the South African education system have emphasized the importance of setting high standards for all learners and increasing the level of accountability expected of education professionals, specifically teachers, in meeting these high standards for learner achievement. Setting high standards is the first step in a process that must also include teachers' use of curricular materials and instructional strategies that lead to increased achievement levels in reading. In this study, I propose that a critical component necessary for bringing these goals to fruition is a technically sound assessment system that assists teachers in determining whether the teaching that they are providing is effective. Assessment is a vital element in any educational system. The South African Department of Basic Education uses assessment data to evaluate the effectiveness of the educational system, districts use assessment data to monitor the success of the implementation of CAPS in the foundation phase, and classroom teachers use assessment data to determine learners' strengths and weaknesses in particular reading skills. However, if teachers must produce high levels of achievement among all learners, they also need assessment tools that will guide their instructional¹ decision making. With learner progress monitoring, data alert teachers when particular students are not progressing at acceptable rates. The purpose of this chapter is to discuss the research problem, to review the literature that highlights the research problem, and to give an overview of the research methodology and design that is used in this study.

1.2 Problem statement

Across the country, there is growing awareness of the dividends of early reading success and the stark consequences of early reading failure (DoE, 2002). A number of assessment studies in recent years have shown that the educational achievement of learners in South African schools is unacceptably poor. The Department of Education's

¹ Teaching and instruction are used interchangeably in this thesis.

(since 2010, the Department of Basic Education) systemic evaluations, conducted in Grade 3 (in 2001) show very low levels of literacy among learners. Scores for the Grade 3 learners averaged 39% for reading comprehension (RSA DoE, 2003). The second cycle of systemic evaluations conducted in 2007 revealed only a limited change in learners' achievement, namely 36% for literacy (Buhlungu et al., 2007). The 2011 Annual National Assessment results indicate a 35% literacy rate for South African learners in Grade 3 and a 30% literacy rate for learners in the North West Province of South Africa (DBE, 2010a). Two international studies confirm the poor performance of South African learners. These are the Southern Africa Consortium for Monitoring Educational Quality (SACMEQ) study (Buhlungu et al., 2007) and the Progress in International Reading Literacy Study (PIRLS) (Mullis et al., 2007). The South African Department of Basic Education has set a 60% achievement rate for the country in 2014 articulated in the **Action Plan to 2014: Towards the Realisation of Schooling 2025** (DBE, 2010b). The North West Province provincial target for 2013 in literacy has been set at 53.8% in Grade 3, and at 54% for literacy in the Cloudy District² within the North West Province (NWDoE, 2011).

Literacy data gathered in the above mentioned way is primarily summative. By third grade or fourth grade, learners are performing well below their peers, and it is too late to modify beginning reading instruction to promote the acquisition of initial reading skills (Torgesen, 1998). What is needed for prevention of reading failure is to begin early and assess dynamically (Torgesen, 1998). Assessment is an important part of successful teaching because instruction needs to be calibrated according to learners' knowledge, skills, and interests. It is essential that teachers "administer timely and valid assessments to identify learners lagging behind and monitor progress" (Crawford & Torgesen, 2006, p. 1). These assessments help increase the quality, consistency, and impact of teaching by focusing directly on those areas in which learners need specific assistance.

Research has demonstrated that when teachers use learner progress monitoring, learners learn more, teacher decision making improves, and learners become more aware of their own performance. A significant body of research conducted over the past 35 years has shown this method to be a reliable and valid predictor of subsequent

² In this study the names of the district, school, district officials, teachers and learners have been changed for ethical reasons.

performance on a variety of outcome measures, and thus useful for a wide range of instructional decisions (Deno, 2003; Fuchs et al., 1984; Good & Jefferson, 1998). Fuchs and Fuchs (2002) state that “[W]hen teachers use systematic progress monitoring to track their learners’ progress in reading, mathematics, or spelling, they are better able to identify learners in need of additional or different forms of instruction, they design stronger instructional programs, and their learners achieve better” (p. 1).

According to Kanjee (2008), there is a growing trend in South Africa towards the use of assessment to improve learning. In addition, the RSA Department of Higher Education and Training (2011) states that one of the competencies that newly qualified teachers should have is the ability “to assess learners in reliable and varied ways, as well as being able to use the results of assessment to improve teaching and learning” (p. 53). However, Kanjee (2008) and Frempong (2012), Chief Research Specialist of the HSRC, mention that there is limited guidance, support and information for teachers on “how” to use assessment to improve learning. Currently, there is a lack of systematic collection, analysis, use and reporting of valid and reliable formative literacy assessment data for making systems-wide decisions that can improve the quality of literacy outcomes in the South African education system (DBE, 2010a).

The aim of this study is to develop a school-wide progress monitoring assessment system for early literacy skills. In beginning literacy the development of this school-wide progress monitoring assessment system will be based on the premise that useful assessment of learner progress should be formative in its instructional effects (Fuchs & Fuchs, 1988) and that it needs to focus teacher attention on data representing the results of their efforts (Fuchs, Deno, & Mirkin, 1984; Stecker & Fuchs, 2000). Research indicates that one out of eight children not reading at grade level by the end of first grade will never read on grade level (Juel, 1994). The development of a school-wide progress monitoring assessment system can help identify and strategically intervene before learners become part of the low South African literacy rate statistic.

1.3 Literature review

The conceptual framework for this study is situated within a school-wide outcomes-based model of progress monitoring assessment as well as within a developmental framework of early literacy skills.

Assessment in education is commonly defined as “the process of collecting data for the purpose of making decisions ...” (Salvia & Ysseldyke, 2001, p. 4). Districts, schools and teachers are increasingly being requested to monitor learner progress by collecting assessment data in order to guide planning and decisions related to instructional adjustments and learner support (DBE, 2010a). However, many districts, schools and teachers continue to struggle to find ways to effectively document learner progress and track development toward important outcomes (Frempong, 2012). According to Kamil et al. (2008) and Torgesen and Miller (2009), a comprehensive assessment system is foundational to a successful school-wide reading system.

Over the last 10-15 years, some of the most important and exciting scientific advances in beginning reading have been in the area of assessment (Good, Simmons, & Kame’enui, 2001; Torgesen, 2002). For example, researchers have made significant strides in their ability to accurately and reliably assess young children’s early literacy skills (Good & Kaminski, 2003; Wagner, Torgesen, & Rashotte, 1999). Because literacy skills acquired in kindergarten/grade R and first grade serve as the foundation for the development of subsequent reading skills and strategies, the increased ability to assess these skills has provided teachers access to critical information about the development of learners’ skills and instructional needs (Coyne, Kame’enui, & Simmons, 2001); however, the capacity to assess literacy skills in and of itself does not necessarily lead to improved reading outcomes for learners. Coyne and Harn (2006) state that, “Assessment practices contribute to higher levels of reading achievement only when they (a) answer important questions for teachers and schools and (b) enable informed, data-based instructional decision making” (p. 33).

Knowing learners’ skills is key for selecting and implementing effective teaching. Research on child-by-instruction interactions indicates that the effectiveness of any specific literacy activity depends on children’s reading and language skills (Connor, Morrison, & Katch, 2004). Furthermore, research on effective teachers and effective schools converge on the notion that learner assessment data are frequently gathered and considered by those with the best learner outcomes (e.g., Taylor & Pearson, 2002, 2005). In particular, the effective schools literature supports the conclusion that, in schools considered successful in educating all learners regardless of race or class, the results of assessments are used to improve teaching and learning (Levine & Lezotte, 1990; Sammons, Hillman, & Mortimore, 1995). Frequently assessing learner learning to

adapt instruction to learners' needs is considered a critical component for increasing at-risk learners' literacy levels (Deno, 2003).

An assessment system must be in place that signals reading difficulty early and prevents early reading risk from becoming entrenched reading failure (National Research Council, 1998; Torgesen, 1998). One of the most replicated and disturbing conclusions from studies of reading is that learners with poor reading skills initially are likely to have poor reading skills later (e.g., Juel, 1988; Shaywitz, Escobar, Shaywitz, Fletcher, & Makuch, 1992). Differences in developmental reading trajectories can be explained, in part, by a predictable and consequential series of reading-related activities that begin with difficulty in foundational skills, progress to fewer encounters with and exposure to print, and culminate in lowered motivation and desire to read (Stanovich, 1986, 2000). Low initial skills and low learning trajectories make catching up all but impossible for many readers at risk for reading difficulties. Good, Simmons and Kame'enui (2001) state that, "In an era of high-stakes outcomes, the message is clear: We must have a reliable, prevention-oriented, school-based assessment and intervention system to prevent early reading difficulty from forecasting enduring and progressively debilitating reading failure. That assessment system must be dynamic in the sense that it is able to measure and track changes in learner performance over time" (p. 260).

It is generally recognized that reading is developmental and acquired over time. Multiple models of reading articulate the stages of reading development (e.g., Chall, 1983; Ehri & McCormick, 1998). From the convergence of more than 30 years of scientific research, researchers now have a solid scientific understanding of the core foundational skills in beginning reading (Adams, 1990; National Reading Panel [NRP], 2000; National Research Council, 1998). Foundational skills (commonly referred to as *big ideas*) are prerequisite and fundamental to later success in a content area or domain. These skills differentiate successful from less successful readers and most important are amenable to change through instruction (Kame'enui & Carnine, 1998; Simmons & Kame'enui, 1998). In the area of beginning reading, Basic Early Literacy Skills include: (a) phonemic awareness or the ability to hear and manipulate the individual sounds in words; (b) alphabetic principle or the mapping of print (letters) to speech (individual sounds) and the blending of these letter sounds into words; (c) accuracy and fluency with connected text; (d) vocabulary and oral language including the ability to understand

and use words orally and in writing; and (e) comprehension (Adams, 1990; National Reading Panel, 2000; National Research Council, 1998; Simmons & Kame'enui, 1998). Although these “foundational skills and processes are by no means exhaustive of beginning reading and early literacy, they represent valid indicator skills along a continuum in which overlapping stages progress in complexity toward an ultimate goal of reading and constructing meaning from a variety of texts by the end of Grade 3” (Good et al., 2001, p. 261).

One example of a comprehensive assessment system designed to assess these key foundational skills of early literacy for young learners is the *Dynamic Indicators of Basic Early Literacy Skills* (DIBELS) (Good & Kaminski, 2003). DIBELS measures, by design, are *indicators* of each of the Basic Early Literacy Skills. For example, DIBELS do not measure all possible phonemic awareness skills such as rhyming, alliteration, blending, and segmenting. Instead, the DIBELS measure of phonemic awareness, Phoneme Segmentation Fluency (PSF), is designed to be an *indicator* of a learner’s progress toward the long-term phonemic awareness outcome of segmenting words. Although DIBELS materials were initially developed to be linked to a local curriculum like curriculum-based measurement (CBM) (Kaminski & Good, 1996), current DIBELS measures are generic and draw content from sources other than any specific school’s curriculum. The use of generic CBM methodology is typically referred to as General Outcome Measurement (GOM) (Fuchs & Deno, 1994). General Outcome Measures (GOMs) like DIBELS differ in meaningful and important ways from other commonly used formative assessment approaches. The most common formative assessment approach that teachers use is assessment of a child’s progress in the curriculum, often called mastery measurement. End of unit tests in a curriculum are one example of mastery measurement. Teachers teach skills and then test for mastery of the skills just taught. They then teach the next set of skills in the sequence and assess mastery of those skills. Both the type and difficulty of the skills assessed change from test to test; therefore scores from different times in the school year cannot be compared. Mastery-based formative assessment such as end of unit tests addresses the question, “has the learner learned the content taught?” In contrast, GOMs are designed to answer the question, “is the learner learning and making progress toward the long term goal?” (Kaminski, Cummings, Powell-Smith, & Good, 2008, p. 3).

Kaminski and Cummings (2008) state that, “DIBELS were developed to be inextricably linked to a model of data-based decision making” (p. 3). The Outcomes-Driven Model was developed to address questions such as: What is the problem? Why is it happening? What should be done about it? Did it work? The model was developed within a prevention-oriented framework designed to prevent early reading difficulty and ensure step-by-step progress toward outcomes that will result in established, adequate reading achievement. “The Outcomes-Driven Model accomplishes these goals through a set of five educational decisions: (1) identify need for support, (2) validate need for support, (3) plan support, (4) evaluate and modify support, and (5) review outcomes” (Kaminski & Cummings, 2008, p. 8). A key premise of the Outcomes-Driven Model is prevention for all learners. DIBELS data help teachers to match the amount and type of instructional support with the needs of individual learners to enable all learners to reach each benchmark step. Some learners will need substantial, intensive, individualized support to reach each step. Others will benefit from general, good, large-group, classroom instruction. Some learners may achieve important reading outcomes regardless of the instruction provided (Kaminski & Good, 1996).

In 2011, the South African Department of Education administered the first Annual National Assessment (ANA) for grade levels below Grade 12. The ANA is an important strategy of the Department of Basic Education to improve the quality of learning outcomes in the education system. According to the DBE (2010a), the results of the ANA should be seen as complimenting and further supporting the assessment programmes used by schools to continuously assess the progress of learners. In conjunction with the ANA results, the use of DIBELS data (General Outcome Measurement), can form an important part of the school academic performance improvement plans.

In the Department of Basic Education document focusing on the guidelines and use of the ANA (DBE, 2010a), specific uses of assessment are identified at different levels of the system:

School level

The role of schools and classrooms is to create environments that enable learners to learn meaningfully using **evidence** to guide all decisions about learners and learning. The information that is generated from assessments is **key evidence** to continuous

improvement in learning and teaching. It must be used to inform all decisions, plans and programmes for improvement. Decisions and plans on what, when and how to teach must be informed by the **evidence** that comes out of the assessments, both school-based and ANA assessments (p. 11-18).

School Management Teams (SMT) are responsible for the overall school improvement plan, based on evidence. The test scores provide the key **evidence** that SMTs need to monitor if learning in the school remains unchanged, improves or declines.

- What is the baseline performance of our school in literacy?
- What kind of support needs to be given to teachers in the underperforming grades?
- How will the collected evidence be used to improve learner performance?
- What are you going to do differently to achieve your targets?

District level

The circuit manager will:

- Analyse performance of all the schools in his/her circuit. This will entail looking at the average score per school, per subject, per grade, together with the acceptable level of performance of each school, per subject, per grade.
- Develop a circuit intervention plan based on plans submitted by the schools in the circuit with clearly defined targets.

The subject specialist must take responsibility for addressing all the subject related issues which may include:

- Development of an assessment programme.
- Development of assessment tasks that are of appropriate standard.
- Marking of assessment tasks.
- Train the teachers in conducting item analysis.

Provincial level

- Must use the ANA results to inform the Academic Performance Improvement Plan (APIP).

National level

The Department of Basic Education (DBE) must:

- Monitor the national progress on learner achievement in mathematics and languages against set targets.
- Use the ANA results as a systemic tool for the development of policy, review and support (p. 11-18).

DIBELS data can be used as one piece of data in conjunction with for example, the South African Annual National Assessment, to make the following educational decisions:

- Accurately identify need for support early.
- Provide meaningful and important instructional goals.
- Evaluate progress toward those goals.
- Modify instruction as needed for learners to make adequate progress.
- Review outcomes during each school term (Kaminski, Cummings, Powell-Smith, & Good, 2008, p. 2).

At a systems level, through use of DIBELS data collection across a school year, administrators have access to data on all learners in the system. The data can be used to identify the percentage of learners who are on track, making adequate progress or are at risk. Aggregation of DIBELS data at the systems level provides information that may be used to examine the effectiveness of the instructional supports within a classroom, school, or district to help determine when changes should be made.

The following research questions are formulated for this study:

Primary research question

What should a comprehensive and dynamic progress monitoring assessment system for the foundation phase consist of, and how should it be structured for implementation at district, school and classroom levels?

Secondary research questions

District Level

- How do districts set “benchmarks” (i.e., goals or targets) for literacy within the district?
- On what evidence (i.e., data) are instructional and support decisions based?
- What assessment documentation is provided to districts by schools?
- How are assessment results submitted by schools recorded?
- What do districts currently expect from schools and teachers in terms of learners’ progress monitoring?

School level

- On what evidence does the school base its assessment targets?
- What will you do differently in order to achieve your targets?
- What progress monitoring guidelines are set for the foundation phase?
- How will the collected evidence (i.e., assessment data) be used to improve learner performance?
- Does the school make use of assessment data to recommend instructional changes to specific grades/classes?
- What kind of support is given to teachers in the underperforming grades/classes?

Classroom level

- What types of assessment do you use in your foundation phase classrooms?

- How do you monitor your learners' literacy progress in your classrooms?
- What core foundational literacy skills do you assess and monitor?
- How do you record learners' assessment results?
- What do you use the assessment results for?
- Do you make instructional adjustments based on the collected assessment data? If so, what and how are adjustments made?
- What type of support do you provide to your learners struggling with literacy skills?

1.4 Central theoretical statement

The following central theoretical statement has been formulated for the study:

There is a complete absence of a systematic, dynamic and effective progress monitoring assessment system addressing the early literacy skills of foundation phase learners at district, school and classroom level and which informs instructional decision making.

1.5 Purpose of the study

The purpose of the study is to determine:

Primary research purpose

What a comprehensive and dynamic progress monitoring assessment system for the foundation phase should consist of, and how it should be structured for implementation at district, school and classroom levels³.

³ The performance of learners on the DIBELS was not the primary focus but how teachers and stakeholders at various levels could use the results from DIBELS data to support children individually, class, school and district level.

Secondary research purpose

District Level

- How districts set “benchmarks” (goals) for literacy within the district.
- On what evidence (i.e., data) instructional and support decisions are based.
- What assessment documentation is provided to districts by schools.
- How assessment results, submitted by schools, are recorded.
- What districts currently expect from schools and teachers in terms of learners’ progress monitoring.

School level

- On what evidence the school bases its assessment targets.
- What schools will do differently in order to achieve their targets.
- What progress monitoring guidelines are set for the foundation phase.
- How the collected evidence (i.e., assessment data) will be used to improve learner performance.
- Whether the school makes use of assessment data to recommend instructional changes to specific grades/classes.
- What kind of support is given to teachers in the underperforming grades/classes.

Classroom level

- What types of assessment teachers use in their foundation phase classrooms.
- How teachers monitor the learners’ literacy progress in their classrooms.
- What core foundational literacy skills teachers assess and monitor.
- How teachers record learners’ assessment results.
- What teachers use the assessment results for.

- Whether teachers make instructional adjustments based on the collected assessment data. And, if they do make adjustments, what and how adjustments are made.
- What type of support teachers provide to learners struggling with literacy skills.

1.6 Methodology

1.6.1 Literature Review

To trace relevant and recent sources for purposes of the literature review, the data reference bases EBSCOHost, RSAT, SABINET, NEXUS were utilised to search for the following key terms: reading assessment, conceptual framework, school wide outcomes based model, progress monitoring, developmental framework, early literacy skills, comprehensive assessment system, school wide reading system, beginning reading, instructional decision making, literacy levels, intervention system, and South African assessment.

The literature reviewed indicated the following aspects relevant to the research problem under investigation.

The South African Department of Basic Education and the Department of Higher Education and Training's commitment to addressing the reading difficulties experienced by children in the foundation phase, as evidence by the *European Union funded Primary Education Sector Policy Support Programme: Strengthening Foundation Phase Teacher Education*, is the result, in the opinion of the researcher, of at least three well-established considerations:

- Approximately 42% of grade 1 learners, 45% of grade 2 learners, and 50% of grade 3 learners are experiencing problems with literacy, based on the 2012 ANA results (DBE, 2012);
- Reading trajectories are established early in kindergarten/grade R to grade 3 and are difficult to change once established (Good et al., 2001); and
- A substantial and persuasive body of scientifically based reading research (Adams, 1990; National Research Panel, 2000) is available to inform

practitioners on how to improve reading instruction in complex school settings (Simmons et al., 2002).

These considerations have shaped a programme of research designed to intervene early, systematically, differentially, and intensively (Nel & Adam, 2012a; 2012b) to decrease the incidence (i.e., number of new cases) and prevalence (i.e., number of existing cases) of children who experience reading difficulties. The investment in the prevention of reading difficulties in the early grades is based on the principle that reading in an alphabetic writing system, although complex cognitively and linguistically, is learned and can therefore be taught directly and systematically (Kame'enui, 1998; Wolf & Katzir-Cohen, 2001). In addition, the research seems to indicate that the prevention of reading difficulties also depends on a multilevel assessment infrastructure and system that provides usable information on the nature (i.e., type, severity, and prevalence) of problems. In beginning reading, research on reading assessment enables us to identify and monitor reading problems early in a child's reading growth and development. The foundation of this work is data-based decision making (Deno & Mirkin, 1977). This research investigated the role of progress monitoring and formative evaluation in educational decision making (e.g., Deno, 1986). In a landmark meta-analysis on the impact of progress monitoring on reading outcomes, Fuchs and Fuchs (1986) found that formative evaluation based on systematically monitoring student progress produced an effect size of +0.90 when it incorporated graphing of progress toward an ambitious goal and decision rules teachers could use to make changes in their teaching.

1.6.2 Empirical investigation

1.6.2.1 Research paradigm

This study was conceptualised within the interpretive paradigm. Interpretivists are concerned with understanding the meanings which people give to objects, social settings, events and the behaviours of others, and how these understandings in turn define the settings. In order to retain the integrity of the phenomena under study, interpretivists approach research differently from positivists. First, they study people in their natural surroundings (Connole, Smith, & Wiseman, 1995). Second, they use methods of data collection that allow the meanings behind the actions of the people under study to be revealed. Commonly used methods in interpretivist studies are

interviewing, observations, and analysis of documents of all kinds (Gephart, 1999). In addition to these, other methods of investigation may be integrated into the study such as focus group interviews. With regard to the analysis of data, interpretivists carry out the task in tandem with data collection. The data collected are not in support of a hypothesis.

Potgieter (2008) sees the interpretative paradigm as being important because social contexts, conventions, norms and standards are of essence regarding a specific person or community if one wishes to understand human conduct. Maree (2009) points out that interpretivism aims at giving a perspective on a specific situation; to analyse this situation and give insight into the manner in which certain people, or a group of people, attach meaning to the situation. In this manner a deeper meaning can be exploited – the situation can be understood – after which recommendations can be made. In this study, the aim is to collaborate with school management teams (school level), teachers (classroom level), circuit managers and subject specialists (district level) in order to obtain an in depth understanding of assessment practices in general, and specifically progress monitoring assessment as well as the assessment support needs of teachers and learners. The collaborative aim is to establish a school-wide progress monitoring assessment system that will not only enhance the assessment practices of teachers, but also the system-wide decisions that need to take place so that effective instructional decisions can be made at all levels, and most importantly at the classroom level. Responses from all stakeholders will be analysed and interpreted within the context of a participatory action research design.

1.6.2.2 Research approach

There are several considerations when deciding to adopt a qualitative research methodology. Strauss and Corbin (1990) claim that qualitative methods can be used to better understand any phenomenon about which little is yet known. They can also be used to gain new perspectives on things about which much is already known, or to gain more in-depth information that may be difficult to convey quantitatively. For example, in the present study little is known about the progress monitoring assessment practices of teachers as well as their use of assessment data to make instructional decisions. In addition, little is known about the assessment requirements at a district level. The ability of qualitative data to more fully describe a phenomenon is an important consideration not only from the researcher's perspective, but from the reader's perspective as well. "If

you want people to understand better than they otherwise might, provide them information in the form in which they usually experience it" (Lincoln & Guba, 1985, p. 120). Qualitative research reports, typically rich with detail and insights into participants' experiences of the world, "may be epistemologically in harmony with the reader's experience" (Stake, 1978, p. 5) and thus more meaningful.

The particular design of a qualitative study depends on the purpose of the inquiry, what information will be most useful, and what information will have the most credibility. There are no strict criteria for sample size (Patton, 1990). "Qualitative studies typically employ multiple forms of evidence....[and] there is no statistical test of significance to determine if results 'count'" (Eisner, 1991, p. 39). Judgments about usefulness and credibility are left to the researcher and the reader.

By using qualitative research, a situation is investigated in a natural environment in which it occurs (Mayan, 2001). Generalisation must not take place; the deeper meaning that comes to the fore needs to be searched for (Mayan, 2001). The qualitative research approach is an approach by means of which an attempt is made to obtain, analyse and understand rich descriptive data pertaining to a specific subject or context. The idea is to understand individuals or groups in the social and cultural context they live in. Flick (2009) points out that qualitative research is applied to understand and describe a social phenomenon and to attempt to explain it; this study describes the phenomenon of formative assessment, specifically progress monitoring assessment, and how it is implemented in contexts such as a district, school and classrooms. An attempt is made to analyse the experiences of individuals, through the interaction between the individual and the specific phenomenon, namely progress monitoring assessment.

1.6.2.3 Research design

According to Babbie and Mouton (2001) and Neuman (2006), a research design is a plan, a protocol or a structured framework of how the researcher intends to conduct the research process so as to solve the research problem(s) or question(s). The research design therefore describes the nature and the pattern that the research intends to follow (Creswell, 1998).

Participatory action research was chosen as design for this study. Action research has been described as a "small-scale intervention in the functioning of the real world and a close examination of the effects of such an intervention" (Cohen & Manion, 1995, p.

186). Action research in education seeks to blur the boundary between the researcher and the subject. It is conducted either by or with insiders to the institution or community being studied – teachers, parents, learners, administrators, etc. Similarly, action research seeks to bridge the gap that sometimes arises between research and practice by designing research that is explicitly centered around action, and aimed at changes in the institutions studied, and/or in the researchers themselves (Herr & Anderson, 2005). Action research might be conducted by an individual teacher seeking to analyze and further develop her practice, or by a whole team of stakeholders including learners, teachers and administrators, using their research to design district-wide changes. Knowledge creation and action take place in a cyclical, iterative process, akin to Freire's (1970) concept of praxis. Action research can include almost any method of data collection or analysis, and can be conducted based on diverse paradigms. At the same time, it is founded on some basic epistemological assumptions. First of all, action research privileges the use of insider knowledge of institutions and social systems, challenging ideas of the “expert” and the need to observe from an “objective” distance. Secondly, it privileges the production of localized knowledge; although action research can create knowledge that is transferable to other locations, it is first and foremost interested in site-specific knowledge that can be used in the location in which the research takes place (Herr & Anderson, 2005) (e.g., insider knowledge of formative assessment practices, specifically progress monitoring assessment, and its use in a specific district, school and classrooms).

1.6.2.4 Sampling

Non-probability sampling is used in qualitative research, where the researcher purposively seeks out participants that are deemed to be the best sources of information required. According to Schurink, Schurink and Poggenpoel (1998), the selection of participants, or sampling, depends on the goals of the study. Purposive sampling is based on the judgment of the researcher, who selects subjects who are most characteristic of the population or most likely to be exposed to or have had experience of the phenomenon in question; in this case, the Department of Education officials in the Cloudy District responsible for monitoring and overseeing teaching, learning, and assessment in the foundation phase as well as foundation phase teachers at Happy Valley School responsible for implementing assessment in their classrooms (see chapter 4 for more detail). The focus of this study was on the

implementation of a comprehensive and dynamic progress monitoring assessment system which would ensure effective and systematic instructional decision making using DIBELS data, at district, school and classroom levels.

1.6.2.5 Data collection methods

The nature of the data and the phenomena to be researched dictate the choice of research methods. In this study the following methods were used:

- **Semi-Structured Interviews**

This technique is used to collect qualitative data by setting up a situation (the interview) that allows a respondent the time and scope to talk about his/her opinions on a particular subject. The focus of the interview is decided by the researcher and there may be areas the researcher is interested in exploring. The objective is to understand the respondent's point of view rather than make generalisations about behaviour. It uses open-ended questions, some suggested by the researcher (“Tell me about...”) and some arise naturally during the interview (“You said a moment ago...can you tell me more?”). The researcher tries to build a rapport with the respondent and the interview is like a conversation. Questions are asked when the interviewer feels it is appropriate to ask them. They may be prepared questions or questions that occur to the researcher during the interview. The wording of questions will not necessarily be the same for all respondents.

Interviews yield a great deal of useful information and are good ways of accessing people’s perceptions, meanings, definitions of situations, and constructions of reality (Leedy & Omrod, 2001). An interview is a verbal face-to-face interchange in which a researcher tries to elicit information from another person or participant (Burns, 2000). It is a two-person conversation initiated by the interviewer for the specific purpose of obtaining relevant information and for the researcher to focus on content specified by research objectives of systematic description, prediction or explanation (Cohen, Manion, & Morrison, 2000).

In this study recorded semi-structured interviews were conducted with Mrs Perfect, the Head of Department of the Foundation phase, also a grade 1 teacher, and with Mrs Detail the Coordinator of the General Education and Training Band within the Cloudy District in order to gain information and insight into setting of benchmarks, the

assessment documentation used, the recording of assessment results, decision making related to assessment results, etc. (cf. sections 5.3.1, 5.3.2, and 5.3.3). The semi-structured interviews allowed for flexibility and freedom, because there were no strict one-answer questions (Lofland & Lofland, 1995).

- **Focus group interviews**

From writings and research studies on the topic (Barbour & Kitzinger, 1999; Litosseliti, 2003; Krueger & Casey, 2000; Morgan, 1997) it is possible to establish a working definition of what constitutes a focus group as a group interview without the alternate question-answer sequence found in typical interview sessions. The hallmark of focus group interviews is the explicit use of group interaction as data to explore insights that would otherwise remain hidden. Typically, groups of between five and ten people gather together to voice their opinions and perceptions about a study topic in a non-threatening and comfortable environment. Interaction is based on a carefully planned series of discussion topics set up by the researcher who also acts as a moderator during the group interaction (Green & Hart, 1999; Litosseliti, 2003). Participants are encouraged to talk to one another, ask questions, exchange anecdotes and comment on one another's experiences and points of view. Although the researcher as moderator initiates the topics for discussion and thus exercises a certain control over what is to be discussed, s/he does not offer any viewpoints during the talk-in-process session.

Focus group interviews in this study were conducted with the Happy Valley School Management Team, the foundation phase teachers at Happy Valley, and the subject advisors/specialists for languages/literacy (i.e., Home Language and First Additional Language) in the Cloudy District in order to gain information about the setting of progress monitoring targets, how progress is monitored, the types of assessments used, how assessment is recorded, and communicated to parents, and whether assessment data is used to make instructional decisions and provide support to learners (cf. sections 5.3.1, 5.3.2, and 5.3.3).

- **Document analysis**

Document analysis is a systematic procedure for reviewing or evaluating documents, both printed and electronic (computer-based and Internet-transmitted) material. Like other analytical methods in qualitative research, document analysis requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop

empirical knowledge (Corbin & Strauss, 2008). Atkinson and Coffey (1997) refer to documents as 'social facts', which are produced, shared and used in socially organized ways (p. 47). Analyzing documents incorporates coding content into themes similar to how focus group or interview transcripts are analyzed. The following documents were collected for analysis in this study:

School Level

- The Curriculum and Assessment Policy Statement (CAPS): English Home Language for Grade R to Grade 3 (Foundation Phase) (cf. Appendix B);
- Records of teachers' assessment planning (cf. Appendix L);
- Records of teachers' assessment recording (cf. Appendix P);
- Records of assessment tasks (cf. Appendix K); and
- Records of learner report cards (cf. Appendix Q).

District Level

- The National Assessment Protocol (cf. Appendix A);
- Action Plan to 2014: Towards the Realisation of Schooling 2025 (cf. Appendix D); and
- Records of assessment analysis procedures (cf. Appendix J).

1.6.2.6 Data collection procedure

In this study I chose to conduct a 16 month action research project in one primary school (i.e., the Happy Valley School) in one specific district (i.e., the Cloudy District) in the North West Province. The time and dates of site visits were scheduled according to the participants' convenience, the school schedule, and my own time availability. Within this time period, semi-structured interviews, and focus group interviews were conducted and document analyses were done (cf. chapter 4 for more detail, and Figure 4.2 for a data collection procedure timeline).

1.6.2.7 Data analysis

Analysis in qualitative research is an inductive process, meaning that patterns and themes emerge from the data collected rather than the data being used to prove a pre-determined theory or hypothesis (McMillan & Schumacher, 1993). This implies that in qualitative research, analysis commences with data collection. In the case of data collection through interviews, this means that once the first interview is completed, the

data is analyzed. This analysis influences the next interview in terms of the question asked and the focus during analysis. In fact, the “analysis drives the data collection” (Strauss & Corbin, 1998, p. 42), and this results in the researcher and the research becoming intertwined and mutually shaping each other. This demands that great sensitivity should be shown to the participants and the issues by the researcher in order to be able to pick up nuances and unstated knowledge (Rodwell, 1998).

The data collected in this study by means of semi-structured interviews, focus group interviews, and documentation were analysed according to themes that were identified from the data. Wood (2012) says data analysis is an inductive process by means of which patterns and themes can be identified from the data.

The data was coded according to themes identified in the data arising from the collection thereof. Coding is a process by means of which large quantities of data are broken up into smaller segments. The data is categorised to bring about a framework of thematic ideas (Bailey, 2007; Flick, 2007). Corresponding statements of the participants are grouped under one code, and the aspects that are out of the ordinary also come to the fore in the process. Strauss (1987) explains that qualitative research does not intend to count items, but to break up data and reorganise it into categories that show up similarities and differences so that data can be used to support and investigate theoretical concepts.

Mayan (2001) defines coding as a process by means of which words, sentences, themes or concepts that repeatedly appear in the data are highlighted. Based on this repetitive data, underlying patterns can be identified and analysed.

The process by means of which the data is coded, leads to the data being organised according to themes and being analysed accordingly. Participants’ experiences and knowledge can be compared with one another, after which a conclusion can be drawn. Maree (2009) points out that content analysis is a systematic approach to qualitative data.

1.7 The role of the researcher

In qualitative research, the researcher stands central to the data collected (Wood, 2012). The researcher collected the data by means of semi-structured interviews, focus group interviews, and the analysis of relevant documents.

Newby (2010) emphasizes that the qualitative researcher should be aware of the fact that her relationship to the participants can evolve into a more social one with resultant influences on their behaviour and on the interpretation of the data. Because of the assumption that the researcher is inevitably an active participant in the study who perceives, experiences and understands the world around her from a particular position, her perceptions of and reactions to the participants will become part of the data for the study. Henning, Van Rensburg and Smith (2004) describe this type of researcher as a “co-creator of meaning” (p. 19).

1.8 Reliability and validity

Wood (2012) points out that four aspects need to be looked into when investigating the reliability and validity of a qualitative study, namely trustworthiness, transferability, reliability and confirmability. The research can be considered to be trustworthy, since it is an in-depth discussion with the participants. Data concerning specific situations can be investigated with rich descriptions. The audio recordings of the semi-structured interviews and focus group interviews support the trustworthiness, because referral can always be made to it.

The information that was collected is transferrable, seeing that the action research can reveal the assessment planning procedures used by teachers, and whether data-based decision making is used to inform instructional practice. A dense description was given of all aspects of the data collection so that the research can be repeated under similar circumstances, if necessary.

Wood (2012) deems it important that the research be confirmable. The extent to which the research can be supported by other persons contributes to establishing whether the research is reliable. In the case of this study, the confirmation of findings is supported by the recordings of the semi-structured interviews, focus group interviews, and the documents that were collected for analysis purposes.

1.9 Ethical aspects

Before commencing the study, the researcher received ethical clearance from the North-West University (Potchefstroom Campus). Basic ethical principles were adhered to in this study (cf. Chapter 4 for detailed information):

- The aim of this study was not to expose, stress or humiliate the district officials, the school management team, and teachers who participated in the study.
- Consent from the North West Department of Education, the Cloudy district, the Happy Valley School and foundation phase teachers was obtained.
- The necessary permission was also obtained from the learners and parents of the learners involved in this study (the assessments completed by the learners during the “action based on data” step of the action research cycle were not additional assessments, but part of the DIBELS-CAPS aligning process) (cf. chapter 3 and chapter 5).
- The right to privacy was obtained by protecting the identity of the district, district officials, school, teachers and learners by using pseudowords.

1.10 Chapter division

This study is organized into seven chapters. Chapter one included the context, purpose, problem statement and a review of the literature relating to a progress monitoring assessment system. A theoretical framework, an in-depth discussion about formative assessment, the assessment situation in South Africa and progress monitoring, specifically, is presented in Chapter two. Chapter three explains the rationale of Dynamic Indicators of Basic Early Literacy Skills (DIBELS) as progress monitoring assessments, the link between DIBELS and basic early literacy skills, an overview of DIBELS Next measures, and a learner scoring booklet is analysed to show the importance of linking assessment and instructional decision making. Chapter four outlines the research methodology and design of the study including the research paradigm, the research approach and design, participants, data collection methods and procedures, data analysis procedures and trustworthiness of the procedures. The results of the study as well as the “action”, namely the implementation of the school-wide progress monitoring assessment system for early literacy skills, is presented and discussed in Chapter five. Chapter six provides a summary, conclusions, implications and recommendations for further research.

1.11 Summary

Assessment is an essential element of education used to inform teaching and learning. Research has revealed the importance of assessing the beginning reading skills of

young children in hopes of promoting reading success in their futures. The assessment and intervention of reading literacy skills in young children is a crucial step for the prevention of early reading failure and essential for the creation of a strong reading foundation. This chapter emphasised the research problem and purpose of this study. A brief overview of the research methodology was given to contextualise the empirical component of the research.