A Cross-Sectional Survey of Foundation Phase Teachers' Beliefs About Response to Intervention

Melissa Gardner

December 2021

A cross-sectional survey of foundation phase teachers' beliefs about Response to Intervention

by

Melissa Gardner

Submitted in partial fulfilment of the requirements for the degree

MAGISTER EDUCATIONIS

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SUPERVISOR

Dr. Suzanne Bester

Dedication

For my beloved children,

“It is our choices that show what we truly are, far more than our abilities”.

JK Rowling

Acknowledgements

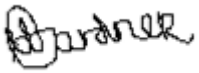
- To those who joined me on this scenic journey; Dr Suzanne Bester, Cameryn Gardner, Angela and Conrad Schoonbee, words alone do not suffice. I am incredibly thankful for your support, kindness, and unwavering patience.

- Soli Deo Gloria!

---oOo---

Declaration of Originality

I, Melissa Gardner (student number 28073984), declare that the dissertation, which I hereby submit for the degree Magister Educationis in Educational Psychology at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.



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Melissa Gardner

December 2021

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- Informed consent/assent,
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- Data storage requirements.

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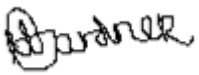
Ethics Statement

The author, whose name appears on the title page of this dissertation, has obtained, for the research described in this work, the applicable research approval. The author declares that she has observed the ethical requirements in terms of the University of Pretoria's *Code of ethics for researchers and the policy guidelines for responsible research*.



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Abstract

The purpose of this exploratory cross-sectional survey was to describe teachers' beliefs about the viability of Response to Intervention (RTI) in the South African classroom. This study was guided by the RTI framework. The sample consisted of 100 Foundation Phase teachers who had to respond to 27 statements on a 5-point Likert-type scale. The majority of respondents believed that mainstream classroom instruction is ineffective in supporting children with special needs and that classroom-based support should be the initial phase for supporting struggling learners. They also recognised the necessity for this support to be within an early intervention model. The majority of respondents believed that learners diagnosed with specific learning disorders required specialised interventions as early as possible and that additional support systems such as support staff and parent/guardian support in the intervention planning and intervention implementation process are vital for support interventions.

Key words:

- Response to intervention
- Foundation phase teachers
- Learner support
- Classroom intervention
- Beliefs
- Cross-sectional survey design

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Declaration Language Editor

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17 November 2021

To whom it may concern

This letter serves to inform you that I have done language editing, proofreading and formatting of references on the thesis

A survey of foundation phase teachers' beliefs about Response to Intervention

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List of Acronyms/Abbreviations and Editorial Notes

CAPS	Curriculum Assessment Policy Statements
ESL	English second language
GDE	Gauteng Department of Education
HPCSA	Health Professions Council of South Africa
IDEA	Individuals with Disabilities Education Improvement Act
LSEN	Learners with Special Educative Needs
NCLB	No Child Left Behind
NJCLD	National Joint Committee on Learning Disabilities
PIRLS	Progress in International Reading Literacy Study
ReSEP	Research on Socioeconomic Policy
RTI	Response to Intervention
SIAS	Screening, identification, assessment and support
SPSS	Statistical Package for the Social Sciences
TIMSS	Trends in International Mathematics and Science Study
USOE	United States Office of Education
ZPD	Zone of proximal development

Referencing style: American Psychological Association (APA) 7.

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CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION AND RATIONALE

In 1994, the World Conference on Special Needs Education confronted the emerging concept of inclusive education (Hick et al., 2009). It was an effort to protect education as a fundamental human right and a drive for educational policy to inclusively support all students, teachers, and families, including those experiencing barriers to learning (Swart & Pettipher, 2016). Exactly a decade later, the Individuals with Disabilities Education Improvement Act (IDEA) (United States Department of Education [USDE], 2004) was signed into American law. One of the most significant changes that the IDEA (2004) policy allowed was the provision of an alternative diagnostic measure to identify children with specific learning disorders (Fuchs & Fuchs, 2006). Before IDEA (2004) the diagnosis of specific learning disorders was primarily determined using a discrepancy approach, specifically the IQ-Achievement discrepancy model (Fuchs & Vaughn, 2003). However, the legislating of this policy formally recognised Response to Intervention (RTI) as an alternative assessment and diagnostic approach to both the diagnosis and treatment of specific learning disorders (Fuchs & Fuchs, 2006; USDE, 2004).

In South Africa, White Paper 6 (Department of Education [DoE], 2001) is the guiding educational policy that promotes an inclusive approach. It includes the definitions and legislation which addresses the identification and intervention for children with barriers to learning as well as those with diagnosed specific learning disorders. There is, however, a notable policy-to-practice gap in the realising of inclusive education. In a review by Donohue and Bornman (2014), one of the main challenges of realising inclusive education in South Africa has been the beliefs of relevant role players. These authors specifically highlight the beliefs and attitudes of parents and teachers who maintain that the needs associated with specific learning disorders cannot be met in the conventional classroom. Other authors similarly echo teacher resistance as the

main reason for the slow implementation of policy (Bouwer, 2016; Bridge, 2014; Donohue & Bornman, 2014; Harley et al., 2000).

Teachers' beliefs should, however, be considered in light of current policy. It stands to reason that if curriculum policies set measures for what learners are able to do, they should also set out what teachers are required to do (Harley et al., 2000). However, this is not the case (Donohue & Bornman, 2014). The lack of congruency in South African educational policy along with policy makers vague consideration of context and the agents of implementation may make the case that teachers are dismayed rather than resistant to change (Harley et al., 2000). Response to Intervention (RTI) however provides a potential solution. Internationally, it has been recognised as a practical framework for the identification of at-risk learners as well as providing educators and stakeholders with an approach to diagnosis and intervention (Fuchs & Fuchs, 2006). Response to Intervention (RTI) also helps to differentiate between learners whose difficulties can be addressed using classroom-level scientific-based instruction and learners who may have specific learning disabilities that require a further referral (Huguenin, 2012).

However, both nationally and internationally, RTI is still considered an emerging concept with less than two decades of research available (Castillo et al., 2018). Due to its novelty, most studies have focused primarily on RTI and its effects on a student's academic performance (Hughes & Dexter, 2018). Student results alone, however, are not sufficient to determine the viability of RTI (Greenfield et al., 2010; Hughes & Dexter, 2018). Research has strongly linked the success or failure of RTI to the agents of implementation (Castillo et.al., 2015; Hughes & Dexter, 2018). Research inquiries into this facet of RTI have only emerged in the past five years with several international survey studies available addressing the subject of teacher beliefs in relation to RTI (Castillo et al., 2018). Furthermore, at the time of this research, there were no studies of this nature published on South African data when investigated on Google Scholar, Research Gate and EBSCOhost.

The available international literature however indicated that the implementation of RTI relies on the change of teaching practices and professional duties (Knotek, 2007) but

as found by O'Conner and Freeman (2012), teaching practices are strongly determined by teachers' beliefs and attitudes. Failure to investigate these beliefs will result in a superficial attempt to close the research-to-practice gap (Harley et.al. 2000). This study, therefore, contends that teachers' beliefs towards new practices such as RTI are worth investigating, especially in a context like South Africa where resources are limited and roll-out is costly.

1.2 PURPOSE OF THE STUDY

The purpose of this cross-sectional survey study was to describe a preliminary sample of teachers' beliefs about the viability of RTI in the South African classroom. For the purpose of this study, RTI was generally defined as a multi-tiered framework intended for the early identification and intervention of at-risk learners (Gorski, 2018; Huguenin, 2012). This study specifically aimed to explore Foundation Phase teachers' views about intervention including their beliefs about the use of RTI in the South African classroom in the future.

1.3 RESEARCH QUESTIONS

1.3.1 PRIMARY RESEARCH QUESTION

What are Foundation Phase teachers' beliefs about the viability of RTI in the South African classroom?

1.3.2 SECONDARY RESEARCH QUESTIONS

The study also posed the following three sub-questions:

- What are Foundation Phase teachers' current perceptions on support for at-risk learners in the mainstream classroom?
- What are the perceived advantages of a model like Response to Intervention?
- What are teachers' perceived needs for the implementation of Response to Intervention?

1.4 HYPOTHESIS

A survey study is classified as quantitative research (Maree, 2007). Quantitative studies are not limited to hypotheses and objectives to create focus, rather quantitative research questions can also be used to shape a study (Creswell, 2014). They are often used in survey studies and social science research (Creswell, 2014). Therefore, in this section, the researcher will not make predictions (formulate a hypothesis) but rather refer to the research questions to focus the inquiry of this survey study.

1.5 CONCEPT CLARIFICATION

1.5.1 FOUNDATION PHASE TEACHERS

South Africa's national curriculum, Curriculum Assessment Policy Statements (CAPS) (Department of Basic Education [DBE], 2012), defines the Foundation Phase as tuition from Grade R to Grade three. Foundation Phase teachers are therefore the professionals that provide instruction in these grades to children ranging from approximately five to 10 years old. For the purpose of this study, Foundation Phase teachers refer to a selected sample of Foundation Phase teachers who are currently employed by the GDE (Gauteng Department of Education) and are currently teaching grades one, two or three.

1.5.2 BELIEFS

Beliefs can be defined as "a set of interrelated notions" about topics, people, and events (McAlpine et al., 1996, p. 292). Teachers' beliefs about RTI need to be understood as a substructure of a holistic belief system (McAlpine et al.,1996), a system that is dynamic in nature (Thompson, 1992). For the purpose of this study, beliefs are defined as a dynamic set of interrelated ideas or opinions that are influenced by individual contexts and experiences (McAlpine et al.,1996; Thompson, 1992).

1.5.3 RESPONSE TO INTERVENTION

Response to Intervention (RTI) is typically a multi-tiered approach to the identification and support of learners with academic and behavioural needs (Gorski, 2018). The RTI framework starts in the general education classroom where at-risk learners are

exposed to interventions at increasing levels of intensity (Huguenin, 2012). A learner's progress is continuously monitored at each level where further intervention decisions are then based on an individual's response to instruction (Gorski, 2018). In this study, RTI refers to a multi-tiered approach for the identification and support of at-risk learners (Huguenin, 2012).

1.5.4 SPECIFIC LEARNING DISORDERS

The Diagnostic and Statistical Manual, American Psychiatric Association (APA, 2013) defines a specific learning disorder as difficulty in either acquiring or applying taught academic skills. It is a clinical definition that refers to a learner who presents with one or more of the following symptoms: slow, incorrect, and effortful word reading; difficulty in understanding the meaning of content; problems in written expression; difficulties with numbers and calculations; and spelling difficulties (APA, 2013). Literature that is not written from a clinical perspective may still refer to specific learning disorders as either learning disabilities or learning disorders (Miciak & Fletcher, 2020). In this study, the term 'specific learning disorder' is used interchangeably with the term 'learning disorder/disability' to maintain the integrity of the literature reviewed but preferably refers to the clinical definition of academic difficulty in either reading, mathematics, or written language (APA, 2013).

1.6 INTRODUCING THE CONCEPTUAL FRAMEWORK OF THE STUDY

Construct from three main theories constitute the conceptual framework that underpins this study. They are Vygotsky's sociocultural theory (1978), constructs from the RTI framework, and Guskey's model for teacher change (2002).

Vygotsky's sociocultural theory (1978) advocates for the fundamental role that social interaction plays in learning. Response to Intervention (RTI) specifically makes use of Vygotsky's construct of the zone of proximal development (ZPD). The ZPD can be defined as the difference between what a learner can do by themselves and what they can do after receiving support. This learning is facilitated by a process known as mediation which forms an underlying premise for RTI and can be found at the core of its processes of differential instruction and dynamic assessment.

The tiered framework of RTI provides a strategy for identifying at-risk learners and proposes a support and intervention framework. The approach requires educators to adapt their teaching according to a differentiated instruction model which is based on an individual learner's RTI (Fuchs & Fuchs, 2006). Differentiated instruction requires an educator to use appropriate instructional techniques to support a learner in achieving their learning potential (Tomlinson, 2004).

Guskey's model for teacher change provides theoretical constructs for the consideration of teacher beliefs within initiatives like RTI. Guskey (2002) advocated that a teacher's experiences with initiatives like RTI have a notable effect on shaping their beliefs surrounding its viability and fidelity cyclically.

These theories relating to RTI and teacher beliefs are discussed in more detail in Chapter 2.

1.7 OVERVIEW OF THE RESEARCH METHODOLOGY, APPROACH, AND PROCESS

Table 1.1 provides an overview of the research approach and paradigm. It includes the adopted research process which provides a summary of the research questions, the research design, sampling methods, data collection and analysis, validity, and reliability measures as well as the ethical considerations underpinning the study.

The research methodology, approach and process are discussed in more detail in Chapter 3.

Table 1.1: Overview framework of the research process (adapted from Kuhn, 2016, p. 6 & Venter, 2013, p. 10)

<table>
<tr><td colspan="2">Chapter 2: Literature review</td></tr>
<tr><td colspan="2">Conceptual framework

Constructs from:

Vygotsky’s sociocultural theory
Constructs from the RTI framework
Guskey’s model for teacher change</td></tr>
<tr><td colspan="2">Research questions</td></tr>
<tr><td>Primary research question</td><td>Secondary research questions</td></tr>
<tr><td>What are Foundation Phase teachers’ beliefs about the viability of Response to Intervention in the South African classroom?</td><td>• What are Foundation Phase teachers’ current perceptions on support for at-risk learners in the mainstream classroom?
• What are the perceived advantages of a model like Response to Intervention?
• What are teachers perceived needs toward the implementation of Response to Intervention?</td></tr>
</table>

	Chapter 3: Research Methodology					
Research paradigm	**Research design**	**Sampling**	**Data collection**	**Data analysis**	**Quality criteria**	**Ethical considerations**
• Positivism • Quantitative research	• Cross-sectional survey design • Survey designed using existing survey	• Purposive sampling	• Online survey sent via email • SurveyPlanet used as the online survey platform	• Statistical Package for the Social Sciences (SPSS) • Descriptive statistics • Percentiles	• Content validity • Face validity • External validity • Reliability: use of existing survey • Reliability: Internal consistency	• Permission to conduct research • Informed consent and voluntary participation • Privacy, confidentiality, and anonymity • Honesty and truthfulness

1.8 SUMMARY

This chapter introduced the study by providing a rationale and purpose for the inquiry. This chapter also outlined the research questions and conceptual framework which underpinned and directed the study. Furthermore, key concepts were defined for the purpose of this research and an overview of the research methodology, approach, and process was provided. The following chapter, a literature review, explores the available research on RTI. It considers the background preceding the introduction of RTI in educational policy and provided an exploratory definition of what constitutes RTI. The literature review also provides an overview of the current studies available on RTI and explores the South African context which provided the contextual backdrop for the study. Chapter 2 finally outlines the conceptual framework that underpinned the study.

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CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

Chapter Two commences with an overview of RTI's historical context. This aims to provide the reader with insight into the context in which the need for RTI has emerged. Considering that most of RTI's history stems from international research, the section following will explore the South African context and the paralleled gaps that the international community has experienced with regards to inclusive practices. The various constructs of RTI are then discussed in detail which is followed by an exploratory summary of the current studies done on RTI, specifically highlighting the opportunity for further research initiatives. Teacher beliefs and professional development are then discussed under one heading to reflect their codependence in practice. Additionally, considered in this section, is the extent to which teacher beliefs contribute to the effective implementation of RTI. This chapter then finally concludes with a discussion of the study's conceptual framework which underlies and provides perspective to all aspects of this research enquiry. The first topic of the discussion below positions RTI within its historical context.

2.2 HISTORICAL CONTEXT OF RESPONSE TO INTERVENTION

RTI was integrated into educational policy in 2004 with the reauthorisation of the IDEA (USDE, 2004). However, the historical lineage of RTI originates from multiple fields of study (Preston et al., 2016). A significant field of influence was the contributions made from the study of learning disabilities which will be summarised and reviewed below (Bradley et al., 2007).

The idea of a learning disability was first conceptualised in 1962 (Kirk, 1962) as a term to understand learners with academic difficulties which could not be attributed to an intellectual disability (Hallahan et al., 2013). It was then later legally defined and recognised by the United States Office of Education (USOE) as a diagnosis eligible for special education services (Hallahan & Mercer, 2002; United States Office of

Education [USOE], 1977). This definition continues to be used in current policy today (USDE, 2004; USOE, 1977). In addition to defining what constituted a learning disability, the USOE also outlined the boundaries in which learners could qualify for such support services (Preston et al., 2016). It stated that learners were eligible for learning disability services if a child experienced a severe discrepancy between their achievement ability and their intellectual ability (USOE, 1977). The policy however failed to outline how a severe ability-achievement discrepancy was to be determined (Hallahan & Mercer, 2002).

The lack of clear regulations created an over-reliance by role players on summative assessment methods, particularly the IQ-discrepancy model (Fuchs & Fuchs, 2006). This model reduced learning ability to a product or outcome hinged on achievement rather than a cyclic process of learning potential (Benner et al., 2011; Bouwer, 2016). These summative premises underlying the IQ-discrepancy model also failed to consider the influence of environmental, cultural, and economic factors in academic achievement which created a contradiction between the definition of a learning disability and the identification thereof (Fuchs & Fuchs, 2006). These oversights created notable controversies in both the over and under-diagnosis of specific learning disorders (Hallahan & Mercer, 2002; Lyon, 1987; Willson, 1987). Authors like Heller et al. (1982) already began to address the issue of over-identification five years after the introduction of the learning disability policy (USOE, 1977). It was their original claim that a child's learning potential is not reflected in their initial performance but rather the extent of their improvement made in response to instruction (Heller et al., 1982). However, this initial premise of dynamic assessment models, like RTI, was only seriously considered decades later (e.g., Fuchs & Fuchs, 1998).

A letter addressed to the USOE, by the National Joint Committee on Learning Disabilities (NJCLD, 1997) further highlighted the ability-achievement discrepancy approach as the "wait to fail" model to diagnosing specific learning disorders. Researchers and practitioners (e.g., Fuchs & Fuchs,1998; NJCLD, 1997) argued that relying on an assessment like IQ-Achievement discrepancies for diagnosis would require a child to dramatically (and unnecessarily) fall behind before they become eligible for intervention. More recent authors like Huguenin (2012), built on this

argument by reasoning that waiting for academic gaps also means waiting to intervene. These late interventions often cause the "gaps in learning to become insurmountable obstacles for some to overcome" (Huguenin, 2012, p. 14) which additionally punted the need for early intervention models, like RTI.

Issues surrounding unclear diagnostic regulations as well as delayed interventions further rooted out the possibility of the summative ability-achievement model from being a culturally diverse approach to specific learning disorder assessment and diagnosis (Bradley et al., 2007; NJCLD, 1997). This can be globally observed in the overrepresentation of culturally and linguistically diverse students in special needs programmes (Artiles et al., 2004; Donovan & Cross, 2002; Heller, et al., 1982). The inclusion of formative and dynamic assessment approaches in educational policy therefore not only served as a political reaction to a fast-diversifying world but also proposed an economic solution to the high cost of special needs services (USDE, 2004; NJCLD, 1997).

The cost of teaching children with specific learning disorders is estimated to be two to three times higher than mainstream learning (Fuchs & Fuchs, 2006). With an unreliable and fluctuating global economy, educational departments and districts have felt the increased financial strain to cut costs but an increased pressure to provide services (Fuchs & Fuchs, 2006). As mentioned earlier, the inclusion of RTI in educational policy, therefore, also provides a more cost-effective angle to special needs education. While some researchers continue to argue that RTI, and its requirement of specialist services, is in fact very expensive, authors such as Huguenin (2012) maintained that because RTI focuses on early intervention, it becomes feasible when considering the long-term costs of late diagnosis and its typically prolonged interventions.

Although the United States has pioneered the reform of special needs education policy (USDE, 2004), issues like diversifying populations and strained economies are concerns facing governments across the world (Bharuthram, 2012; Donohue & Bornman, 2014). Researchers argue that RTI has the potential to provide solutions to

these issues across several contexts, which suggests that RTI is worth investigating in the South African context (Fuchs & Fuchs, 2006; Hahn, 2012).

2.3 THE SOUTH AFRICAN CONTEXT

Although international research, to an extent, accounts for teachers' current perceptions on RTI, South Africa's unique political past continues to have a profound impact on shaping its teachers' beliefs (Fuchs & Fuchs, 2006; Hahn, 2012). It is therefore important for this literature review to consider a model like RTI against the wider backdrop of the South African context.

2.3.1 STATUS OF LEARNER ACHIEVEMENT IN SOUTH AFRICA

International and national rankings have indicated that South Africa's education system is in a state of crisis (Bharuthram, 2012). Internationally, Progress in International Reading Literacy Study (PIRLS) in Howie et al. (2017) ranked South African students' reading abilities 46th out of 50 countries whereas the Trends in International Mathematics and Science Study (TIMSS) in Reddy et al. (2016) placed South Africa 38th out of 39 countries. South Africa's Annual National Assessment results further reported that the performance of many South African learners ranked considerably below international benchmarks (van der Berg, 2015).

There is no lack of evidence or excuses for the dismal state of reading in South Africa (e.g., Hoadley, 2016) which is important to consider when research reflects that about 80% of children diagnosed with a specific learning disorder have also been labelled as reading disabled (Fuchs & Fuchs, 2006). However, South African authors like Pretorius and Spaull (2016) argued that our feeble reading levels are a strong indicator that South African educators are unable to teach reading effectively. Klingner and Edwards (2006) argued that a specific learning disorder diagnosis cannot be made unless a child has had sufficient opportunity to learn, which in the light of Pretorius and Spaull's (2016) statement above raises questions on South Africa's special needs statistics. Although there are other diagnostic initiatives used in South Africa, RTI already goes one step further than merely identifying struggling learners (Huguenin, 2012). Response to Intervention (RTI) helps to differentiate between the learners whose difficulties can be addressed using classroom-level, scientific-based instruction

and the learners that may have a specific learning disorder (Huguenin, 2012). Response to Intervention (RTI) then aims to prevent the premature escalation of learners to special needs education. There are, however, several legislative initiatives in South Africa that attempt to address these issues as well as concerns of inequality.

2.3.2 LEGISLATIVE INITIATIVES

The inequities found in South Africa's education system were inherited from The Bantu Education Act (1953) brought about by the Apartheid regime. The post-1994 South African government was therefore very intentional about building an inclusive education system for all (Prinsloo, 2016). Three policies were specifically drafted to promote a more flexible and adaptable education system in order to accommodate learners with a variety of learning needs and abilities (Donohue & Bornman, 2014). These three policies were the White Paper 6: Special Needs Education (DoE, 2001), the draft policy on Screening, Identification, Assessment and Support (DBE, 2014), and the National Curriculum and Assessment Policy Statement Grade R-12 (DBE, 2011). Although all three policies endeavoured to change teachers' perceptions of student assessment (Bouwer, 2016), White Paper 6 (DoE, 2001) has emerged as the overarching legislation on inclusive practices in South Africa.

White Paper 6 outlines six broad strategies to guide the development of an inclusive education system (Donohue & Bornman, 2014). One of these strategies includes the briefing of mainstream personnel on the principles and practices of inclusive education particularly concerning the early identification of struggling learners (DoE, 2001). White Paper 6 (DoE, 2001) however fails to include any clarity or strategies on how this is to be achieved (Donohue & Bornman, 2014). A lack of clarity and congruency in this policy (DoBE, 2001), and across educational policy in general (DoBE, 2011; DoBE, 2014), has prevailed across the literature as one of the primary reasons for the poor realisation of inclusive education in South Africa (Donohue & Bornman, 2014).

A second reason for the absence of authentic inclusive practices can be attributed to the prevalent beliefs and perceptions of both South African teachers and parents. Research disclosed that many teachers and parents still believe the needs associated with specific learning disorders cannot be met in the conventional classroom (Donohue

& Bornman, 2014) which is a necessary principle that should underpin any successful support methodology (Castillo et al., 2016). Perhaps these outdated beliefs could be equated to the fact that the majority of South Africa's teaching workforce is over 50 years old (Donohue & Bornman, 2014). This strongly reduces the percentage of the educators who have been pre-trained under an inclusive methodology, perpetuating outdated beliefs and harbouring resistance to new practices (Donohue & Bornman, 2014). Other authors further echoed teachers' resistance as the main reason for slow implementation of policy (e.g., Bridge, 2014) but legislative ambiguity paired with policymakers' vague consideration of context and agents of implementation (teachers) may make the case that educators are dismayed rather than resistant to change (Harley et al., 2000).

Teachers' beliefs are nonetheless imperative to consider when considering the prospect of inclusive practices like RTI. This is because, unless educator belief systems are reformed, RTI and other intervention initiatives will remain superficial (Harley et al., 2000). In a diverse context like South Africa where language, culture, and class significantly impact learning (Prinsloo, 2016), systemic considerations of learning, as well as a positive outlook on learners, make dynamic assessment models like RTI worth investigating (Murphy & Maree, 2006). An exploration of the RTI framework will therefore be discussed next.

2.4 WHAT IS RESPONSE TO INTERVENTION?

Simply stated, RTI is a multi-tiered approach geared towards the early identification and support of at-risk learners (Fuchs & Fuchs, 2006). Although there is no single paradigm or model of RTI (Werts et al., 2014), its general framework can be described as a form of dynamic assessment (Fuchs & Fuchs, 2006) that is multi-tiered and is optimally focused on early intervention (National Center for Learning Disabilities, n.d.). These three core components will be discussed in more depth below.

Response to Intervention (RTI) is considered a form of dynamic assessment (Bouwer, 2016; Fuchs & Fuchs, 2006) as it is reliant on core concepts such as mediation, and instructional intervention, and is process-orientated by nature (Lin, 2010). Although dynamic assessment and RTI are more recent concepts in literature, their theoretical

roots can be found in research as early as Piaget, Vygotsky, and Feuerstein (Murphy, 2008).

Recent authors like Grigorenko (2009), eagerly contended that dynamic assessment is as much a learning support approach as it is a formative assessment method. This is because assessment and intervention are inseparable in practice (Grigorenko, 2009). Bouwer (2016) supported this claim by further punting that assessment should form the starting point of learning support which suggests that educational practitioners using dynamic assessment are at liberty to employ a wide range of qualitative and quantitative assessment techniques (Bouwer, 2016). This claim not only highlights dynamic assessment as a highly flexible approach to learner evaluation but a moldable approach to mediation (Huguenin, 2012). Although RTI shares the characteristics of a highly flexible methodology, it is more structured in terms of its approach to levelling support. This will be discussed next.

As mentioned above, RTI is typically a three-tiered approach to providing support and intervention to at-risk learners with support intensifying across tiers (Greenfield et al., 2010). It is important to note that varying models of structure and implementation exist within the wider RTI framework (Werts et al., 2014). Support across the varying levels of RTI is optimally multi-disciplinary, ranging from classroom practitioners to specialised support personnel (National Center for Learning Disabilities, n.d.). All personnel are expected to use the learner's individual feedback or "response" to adapt instruction to accelerate individual learning (Fuchs & Fuchs, 2006). A description of the three tiers is conceptualised below.

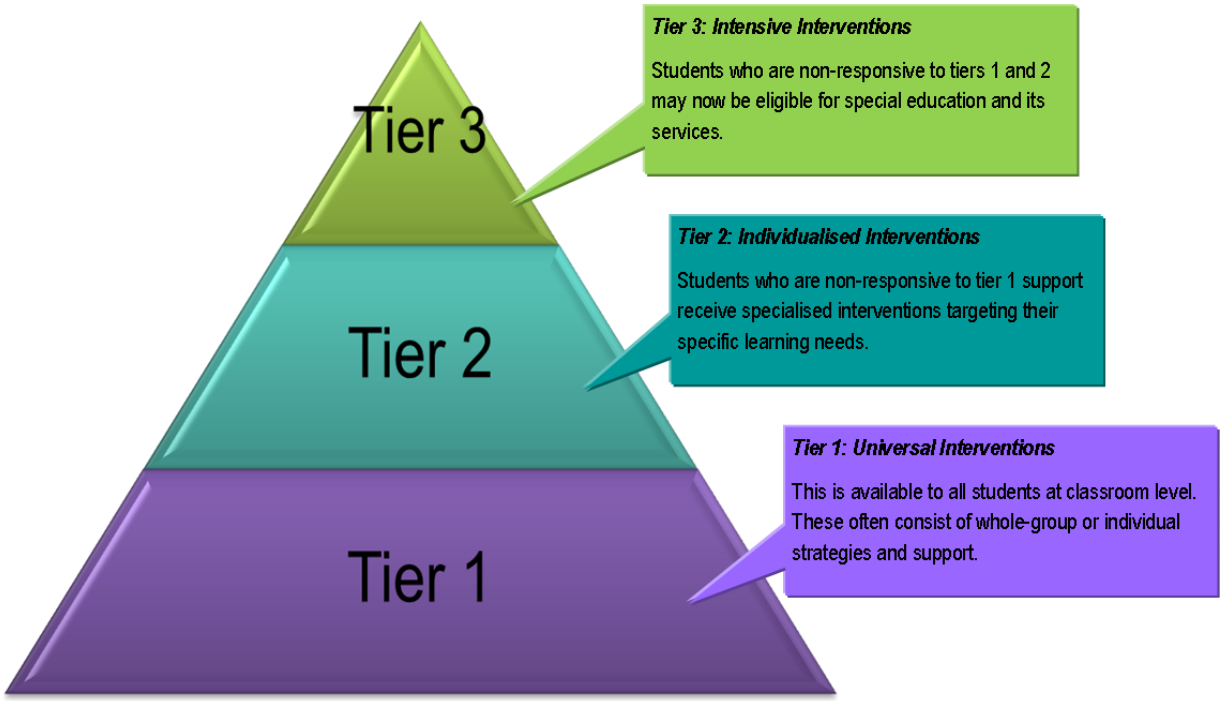

Figure 2.1: Multi-tiered approach of RTI

Source: Adapted from https://slideplayer.com/slide/6884032/

Tier 1 interventions can be defined broadly as universal interventions (National Center for Learning Disabilities, n.d.) used to provide high-quality instruction and screening (Huguenin, 2012). At tier 1, all students are intermittently subjected to universal screening processes which provide a set of baseline data against which their individual progress can be measured. Learners at this level who appear to be struggling are then offered supplemental or differential instruction in the classroom environment over a set period (usually eight weeks). These classroom-based initiatives are important to monitor to determine if support needs to intensify (National Center for Learning Disabilities, n.d.).

Tier 2 aims to build on the core curriculum practices of tier 1 by providing interventions that are flexible to an individual's response to support (Huguenin, 2012). If an individual learner does not respond to the interventions provided at tier 1, support is then intensified. Intensification of interventions can occur across adaptations to group size, instructional frequency, and time duration (National Center for Learning

Disabilities, n.d.). At this level, specialised support personnel like occupational therapists, psychologists, and medical doctors may also be consulted to enhance specialised interventions.

Tier 3 includes intensive one-on-one interventions aimed to address a particular skills deficit (National Center for Learning Disabilities, n.d.). It is then, only at this point, that a learner may be eligible for a referral to special needs education (Huguenin, 2012). Following this section on RTI and its constructs is the review of the current studies done on RTI which is discussed next.

2.5 AN OVERVIEW OF STUDIES DONE ON RTI

Existing research suggests that adopting the RTI approach notably improves the academic performance of at-risk learners (Fuchs & Fuchs, 2006; Hahn, 2012; Hughes & Dexter, 2018). In this section, a review of these studies will be discussed. To date, most studies done on RTI have focused on the effects it has on academic performance and not specifically on teacher beliefs surrounding RTI (Hughes & Dexter, 2018). Globally, there are very few survey studies about teacher beliefs in relation to RTI (Castillo et al., 2018) and there are currently no published studies of this nature, based on South African data.

In 2018, authors Hughes and Dexter presented a review of the studies published on RTI. A total of 16 studies were reviewed which included both problem-solving models and standard protocol models (Hughes & Dexter, 2018). Standard protocol approaches involved models of RTI where support interventions were preselected (Fuchs & Fuchs, 2006), whereas problem-solving models of RTI made use of individually tailored programmes.

Only two of the studies reviewed by Hughes and Dexter (2018) investigated RTI's effectiveness in mathematics (Ardoin et al., 2005; Duhon et al., 2009). However, both studies reported notable success with 91% of students sufficiently improving after tier 1 interventions (Duhon et al., 2009). Most studies conducted, however, measured reading outcomes in relation to RTI programmes (Bollman et al., 2007; Callender, 2007; Gettinger & Stoiber, 2007; Murray et al., 2010; O'Connor et al., 2005; Vaughn et al., 2003; Vellutino et al., 2008). Where most children in these programmes did

escalate to tier 2 support, tier 2 and tier 3 initiatives showed large gains in reading abilities, especially when students were exposed to support for a longer period (O'Conner et al., 2005). Furthermore, Vaughn et al. (2003) noted particular success with RTI and English second language (ESL) learners reflecting improved reading outcomes. Over 75% of ESL learners made sufficient improvements by 30 weeks of intervention with a mere 24% progressing to tier 3 support (Vaughn et al., 2003).

Other studies on RTI also included investigations on general academic performance and behaviour (Kovaleski et al., 1999; Marston et al., 2003) as well as retention, referral, and placement rates (Bollman et al., 2007). All studies mentioned above recorded notable academic improvements which their authors accredited to RTI initiatives.

Another finding that emerged across these studies (Hughes & Dexter, 2018) was the consideration of factors that sustained and promoted successful RTI initiatives. The importance of teacher buy-in, as well as teacher beliefs, became a noticeable trend that reoccurred across the literature (Hughes & Dexter, 2018).

As mentioned above, the majority of RTI studies focused on the investigation of its effectiveness as an assessment and intervention approach (Hughes & Dexter, 2018). This is because there are many contenders for its futility (O'Conner & Freeman, 2012). Authors like Castillo et al. (2015) however, argued that teachers' beliefs heavily impact the fidelity of RTI intervention. In a study conducted with 207 special education teachers in North Carolina, teachers were asked to respond to 573 statements pertaining to their perceived barriers to effective RTI implementation (Werts et al., 2014). These statements were then analysed and categorised into five overarching themes, namely burdensome processes, knowledge gaps, faculty attitudes, lack of resources, and others (Werts et al., 2014). Burdensome processes was the highest-ranked barrier recognised by 44,7% of respondents with 15,4% of respondents further noting that prevalent beliefs or faculty attitudes is another notable barrier to the effective implementation of RTI.

In another study done at the district-based level in Florida (O'Conner & Freeman, 2012), data revealed that many teachers implementing RTI still believed that not all

children could achieve specific learning targets, which research states as a necessary principle that should underpin any support methodology (Castillo et al., 2016). In a pioneering longitudinal analysis study that specifically targeted teachers' beliefs in relation to RTI implementation, the authors (Castillo et al., 2018) found that schools in Florida with higher levels of beliefs (measured using the data-driven decision-making subscale) had higher success with the RTI model and its results. O'Conner and Freeman (2012) further found that the prevalent culture and beliefs in schools were a concerningly overlooked factor when considering effective RTI implementation. It is for this reason that this research study aimed to gauge the climate of South African teachers' beliefs before RTI is considered for mainstream practice. The phenomena of teachers' beliefs will therefore be examined next.

2.6 TEACHERS' BELIEFS

Interventions that directly target teachers' beliefs are widely acknowledged as a core strategy when the goal is to initiate change in professional teaching practice (Brownell et al., 2006). A wide scope of literature, however, also suggests that professional development is a codependent construct when addressing these issues of change (Guskey, 2002). Both topics will therefore be addressed in this section.

2.6.1 BELIEFS

Literature contends that RTI implementation relies on the change of teaching practices and professional duties (Knotek, 2007). Teacher behaviour is however strongly determined by personal beliefs and attitudes (O'Conner & Freeman, 2012) and failure to investigate these systems will result in a superficial attempt to close the research-to-practice gap (Harley et al., 2000).

Beliefs can be defined as a set of interrelated notions about topics, people, and events (McAlpine et al., 1996) and attitudes to instructional practice should, therefore, be conceptualised as a reflection of a teacher's belief system as a whole (Castillo et al., 2015; McAlpine et al.,1996). This systemic assumption that underpins beliefs has made the development of a belief measurement scale a complex task (Castillo et al., 2015). This is because belief systems are dynamic, highly individualised, and influenced by several variables that "contribute to the unique context in which practices

are implemented" (Castillo et al., 2015. p. 3). Teachers' beliefs and perceptions are, however, a major source of data that facilitate the successful implementation of educational reform (Werts et al., 2014). Authors like Batsche et al. (2005) therefore researched and found five concepts that became apparent as foundational beliefs to the authentic implementation of RTI. These five underlying beliefs are the inherent belief that all children can learn, the belief that early intervention is imperative, the belief in evidence-based practices within a multi-tiered system of intervention, the belief in administering reliable and valid assessments to receive formative feedback, and the belief in using problem-solving approaches by using assessment as a means of tailoring student support (Batsche et al., 2005).

Batsche et al.'s (2005) five principles, discussed above, strongly coincide with O'Conner and Freeman's (2012) argument that RTI is not just another add-on educational programme. Rather, RTI is a process of reform that requires a systemic change at all levels of education (O'Conner & Freeman, 2012). In an interesting study that explored teacher change, Guskey (2002) attentively focused on the cyclical process involved in the change of teacher beliefs. Guskey (2002) argued that teachers' beliefs are strongly shaped by their classroom experiences and therefore, room for positive classroom encounters need to be included in any intervention programme invested in altering teachers' beliefs and attitudes. Therefore, professional development is a core component when examining belief systems. Guskey's Model of Teacher change is summarised and presented below.

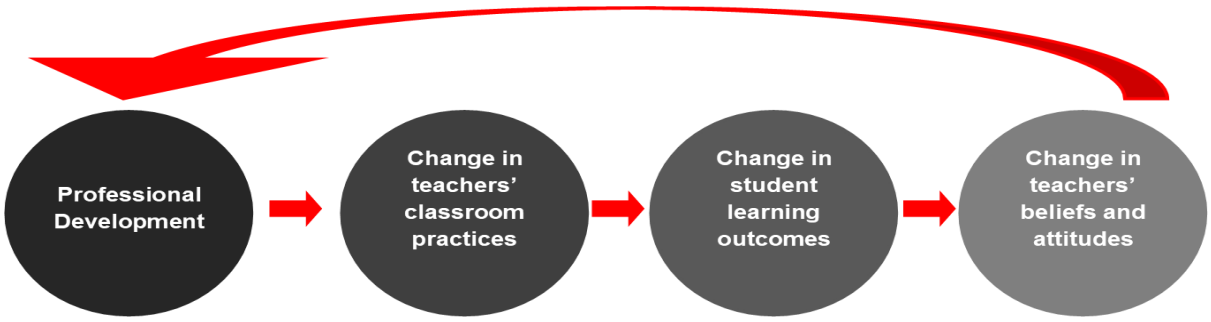

Figure 2.2: Guskey's Model of Teacher Change (2002, p. 383)

2.6.2 PROFESSIONAL DEVELOPMENT

Guskey (2002) proposed that at the core of every recent proposal for educational reform is the component of professional development and RTI studies give evidence that agrees with this claim (Castillo et al., 2016). In a study done by Castillo et al. (2016), the authors found that intensive professional development on RTI resulted in more positive beliefs, especially towards the assessment-mediation relationship. Fuchs and Vaughn (2012) further found that professional development is a prerequisite for genuine RTI implementation, which should be a prerequisite to assessing the effectiveness of RTI. Literature however suggests that RTI's effectiveness has largely been studied independently of teachers' professional development (Castillo et al., 2018; Hughes & Dexter, 2018).

Professional development on RTI is nonetheless important for two reasons. Firstly, professional development initiatives help develop teachers that can implement the logistics of RTI with increased fidelity (Castillo et al., 2016). Secondly, professional development programmes serve as a protective function. Increased understanding of RTI protects its constructs from being altered beyond recognition which improves its effectiveness for student outcomes (Guskey, 2002). Professional development programmes should, therefore, also be evidence-based and seriously consider the prevalent climate of teachers' existing beliefs to be deemed meaningful and relevant.

Joyce and Showers (2002) further argued that in addition to evidence-based training, professional development programmes should also include a rationale, expert modelling, and multiple opportunities for practice and reflection. Once-off training events have also conclusively proven themselves insufficient, with evidence strongly backing an ongoing and intensive approach to improving the fidelity of practice (Darling-Hammond et al., 2009). Killion (2010) goes further to support arguments that theoretical training alone is insufficient but punts that job-embedded practice is imperative for a change in beliefs and practice to occur. Guskey (2002), however, cautioned researchers that most professional development programmes do not fail because of the quality or quantity of instruction but rather the failure of developers to acknowledge the process of teacher change, and the failure to address teacher concerns thereof. Professional development programmes should, therefore, recognise

that change is often a strenuous process for teachers as it typically means an increased workload, more time in the workplace, and offers a challenge to their competencies and self-image (Guskey, 2002). Due to the risks stated above, teachers will need an extraordinary amount of support and follow up in the beginning phases and regular feedback, especially concerning their students' progress.

Lastly, failure to address teachers' concerns pending educational change, may result in reluctance or even resistance to the implementation of new initiatives (Werts et al., 2014). That is why this study is important. By investigating teachers' current beliefs, researchers will also be able to gauge where areas of concern may lie. This, consequently, has the potential to enrich future research and implementation initiatives of RTI. The conceptual framework used to underpin this study will be presented and discussed next.

2.7 CONCEPTUAL FRAMEWORK

This chapter concludes by presenting the conceptual framework that was used in this study. A conceptual framework identifies the underlying theories that a researcher uses to describe or explain what is happening (Athanasou et al., 2012). In quantitative research, these theories provide the researcher with a set of interrelated constructs in which the variables or relational statements can be viewed in a systematic way (Creswell, 2014). This study used a conceptual framework that incorporated concepts from Vygotsky's sociocultural theory (1978), constructs from the RTI framework, and Guskey's model for teacher change (2002).

Vygotsky's construct of the ZPD forms an underlying base for both the conceptualisation of RTI and teacher beliefs. Vygotsky's (1978) sociocultural theory primarily draws attention to the fundamental role that social interaction plays in learning. Vygotsky's (1978) construct of the ZPD specifically demonstrates how the practice of mediation can be useful in learning. The ZPD is simply known as the difference between what a learner can do and what they can do after receiving support, which is known in Vygotsky's work (1978) as 'scaffolding'. Feuerstein (1990), a cognitive psychologist, built on Vygotsky's constructs of ZPD and scaffolding by developing the theory of mediation and mediated learning experiences (Feuerstein et

al., 1979). Feuerstein's theory (1990) argued that intelligence is not a fixed trait but is rather modifiable with the use of "instrumental enrichment programs" that are administered by skilled individuals (Feuerstein et al., 1979). These concepts discussed above can be found at the core of RTI's process of differential instruction and dynamic assessment. This substantiates the use of the RTI framework as the second framework component for this study.

The RTI framework provides a means of assessing and identifying at-risk learners and delivers a multi-tiered framework for support and intervention (Fuchs & Fuchs, 2006). The RTI framework requires educators to adapt teaching instruction based on the individual learner's response to instruction (Gorski, 2018). It is important to note that concepts from both the sociocultural theory and RTI framework included in this study, highlight the role of teachers as a priority (Popwell, 2014). How teachers view their role in the classroom is strongly linked to their beliefs (Apple, 1982), which is why this framework incorporates Guskey's model (2002) for teacher change as its final theoretical underpinning.

Guskey's model for teacher change was founded on the premise that professional development is an inseparable component when considering the implementation of initiatives such as RTI. Where most professional development programmes endeavour to target the change of teachers' belief systems, many of them fail because their developers do not consider the cyclical nature of teacher change (Guskey, 2002). Guskey (2002) convincingly argued that teachers' attitudes and beliefs are largely shaped by classroom experiences and therefore, opportunities for success in practice are imperative when the goal is to initiate an authentic shift in teacher beliefs. Guskey (2002) was not alone when making these claims. Authors like Killion (2010), as well as Joyce and Showers (2002), also maintained that theoretical attempts alone were not sufficient for change and argued that job-embedded practice was a key component to develop fidelity. As a result, for the purpose of this conceptual framework, the cyclical process of learning intervention and the cyclical process of teacher beliefs need to be considered as an inseparable and simultaneous process as conceptualised by Figure 2.3 below.

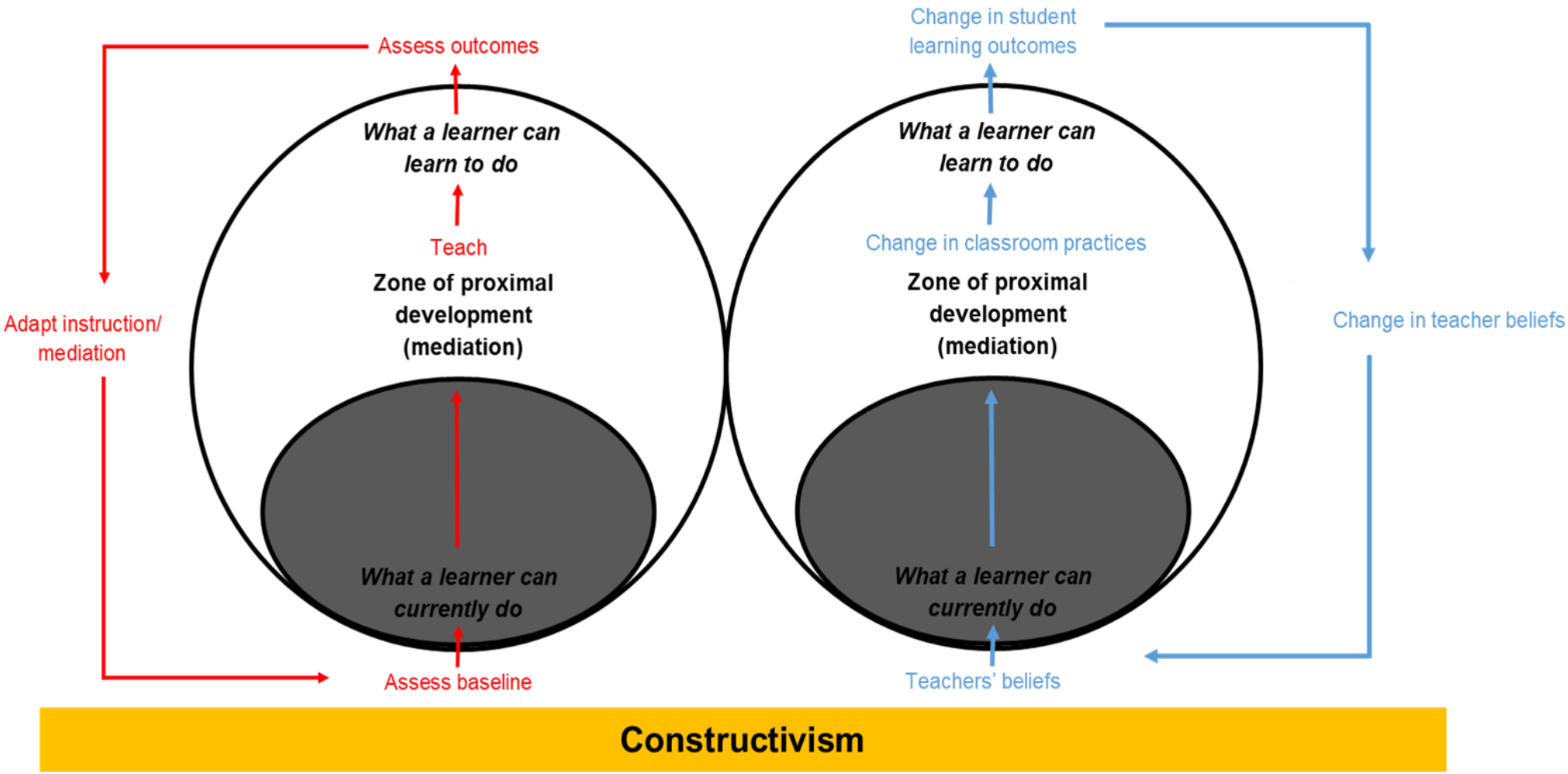

Figure 2.3: Conceptual Framework (Dewey, 1938; Fuchs & Fuchs, 2006; Guskey, 2002; Piaget, 1962; Vygotsky, 1978)

2.8 CONCLUSION

The inclusion and need for RTI in current policy can be better understood when considering the history of the study of learning disabilities. However, most of this history and subsequent research is embedded in outdated studies within the international context. A review of inclusive education in South African highlights both the novel and paralleled concerns that RTI has the potential to address. However, apart from understanding the various individual constructs and models of RTI, research has found that teachers beliefs are foundational to the effective and authentic implementation of any educational reform- including RTI. Teachers' beliefs concerning RTI, are, however, an underreported subject in literature and argues the need for research inquiries such as this one.

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CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter addresses the meta-theoretical and methodological paradigms that underpinned this research inquiry. A detailed explanation of the research design, sampling methods, and the survey design process are also discussed. Furthermore, the process including survey distribution, data collection, and analysis are also outlined. Finally considered are the quality criteria and ethical considerations which guided the entirety of this study.

3.2 PARADIGMATIC PERSPECTIVE AND METHODOLOGICAL PARADIGMS

The next section discusses both the meta-theoretical and methodological paradigms which were used to underpin this study. The researcher made use of a quantitative approach embedded in a positivist meta-theoretical paradigm. Below, these paradigms are discussed in terms of applicability to the study along with the advantages, disadvantages, and justification for the selected approach.

3.2.1 META-THEORETICAL PARADIGM

Positivism was the meta-theoretical paradigm chosen to underpin this study. Creswell (2014) defined positivism as “a way of looking at the world through a lens of careful observation and measurement” (p. 203). Positivism has been further described as an objective approach to research and is often used interchangeably with the term scientific method (Babbie, 2008; Creswell, 2014). This is because positivist research asserts that knowledge should be attainable through scientific observation and the senses (Babbie, 2008; Morgan & Sklar, 2012). Babbie (2008) built on this claim by stating that knowledge within a positivist paradigm is considered factual and trustworthy because it is observable and measurable. The following section, therefore, considers the positivist paradigm’s ontological and epistemological assumptions as well as the advantages and disadvantages it held for this research inquiry.

Ontology simply refers to “how we look at reality” (Morgan & Sklar, 2012, p. 71). Although positivism is realistic in nature, it is important to note that modern positivist researchers do not ‘prove’ hypotheses or statements but rather enter a process of refining or discarding claims (Creswell, 2014). Maintaining an objective point of view is therefore essential to positivist research. This can be fostered by reducing the researcher’s involvement in the data collection process which helps to limit the impact the researcher has on the phenomena being studied (Nieuwenhuis, 2010; Weber, 2004).

The epistemology of a study is concerned with the way a researcher makes sense of the data (Ferreira, 2012). It refers to “how something can be known” (Morgan & Sklar, 2012, p. 71) or simply, how we get knowledge. A positivist researcher adopts an etic approach to data interpretation (Creswell, 2014). An etic account of data aims to be neutral, limiting any bias from the researcher. This again requires the researcher to be objective throughout the data analysis process to maintain an outside view of the situation (Morgan & Sklar, 2012).

An advantage of adopting a positivist paradigm is that it allows the researcher to “build in protections against bias” through objectivity (Creswell, 2014. p. 201). Positivist research designs also allow for the timeous collection of data that can be represented in a way that is simple and comparable (Morgan & Sklar, 2012). These advantages typically enable researchers to collect larger amounts of data which can be used to statistically reflect information on the studied phenomenon (Morgan & Sklar, 2012).

However, a shortcoming of using a positivist paradigm is that data can be seen as inflexible and absent of the individual’s voice as data is often reported numerically or statistically (Cohen et al., 2007). However, limiting the individual’s emotions was however advantageous in this study. This is because the study aimed to increase generalisability to understand the wider context of RTI implementation.

3.2.2 METHODOLOGICAL PARADIGM

This study adopted a quantitative methodological paradigm which is often affiliated with the positivist approach (Neuman, 2011). This is because a quantitative paradigm

is similarly characterised by its formal, systematic, objective, and nomothetic approach to research (Maree 2007; Morgan & Sklar, 2012). Quantitative research relies on numerical data from a selected sample of the population for the findings to be generalised (Creswell, 2014). Maree (2007) simplified the above and summarised that quantitative research is defined by three core elements: objectivity, numerical data, and generalisability.

This study specifically aimed to describe the beliefs of teachers. The challenge was to generalise a phenomenon as interpretable as beliefs which meant that objectivity was paramount for this study to be deemed reliable. Therefore, through the adoption of a quantitative methodological approach, the researcher was able to reduce bias and to increase the level of generalisability to the wider population (Morgan & Sklar, 2012). Another advantage of adopting a quantitative methodological paradigm is that it allows for the collection of projectable data (Morgan & Sklar, 2012). Although the study's main focus was to describe teacher beliefs, it also aimed to add to the body of knowledge by providing a foothold for further inquiry. Quality, projectable data would therefore add to the future value of this study.

Critics of this paradigm argue that a quantitative approach falls short in relaying the complexity of a situation (Creswell, 2014). Beliefs are especially complex phenomena, and it can be argued that this study had the potential to oversimplify the individual. It should, however, be noted that this study did not aim to understand the development of individuals' beliefs. Rather, it aimed to gauge the prevailing climate in which the premises of RTI would be accepted or not.

3.2.3 JUSTIFICATION FOR THE POSITIVIST/QUANTITATIVE PARADIGM

The purpose of this study was to provide insight into the South African teaching context in which RTI could be implemented. Where there are several international studies on this phenomenon, there are currently no published studies of this nature in South Africa. This study, therefore, holds the potential to provide a useful backdrop by providing context for future RTI research. A research approach to increase the scope of data collection was, therefore, an important consideration in designing this study.

Due to the social restrictions of the COVID-19 pandemic, time and financial restrictions, a survey research design was deemed the most suitable for this study.

The chosen positivist/quantitative paradigms proposed numerous advantages and disadvantages for this study. It was, however, the most suitable as the researcher was able to distribute the survey to a wide scope of teachers with little financial consequence and no social contact (social distancing). This added both to the generalisability of the data set and further reduced the researcher's involvement in the research process which preserved the study's theoretical and objective aims.

3.3 RESEARCH DESIGN

A cross-sectional survey was the research design adopted for this study. This research design was chosen following the study's methodological paradigm as surveys provide the researcher with quantitative, numerical data (Creswell, 2014). Survey designs are nonexperimental and are commonly used in social science research for descriptive purposes (Babbie, 2008). They are especially effective for a researcher who needs to collect original data to describe a larger population (Babbie, 2008). It is a systematic method of collecting information to construct quantitative descriptors (Neuman, 2011). By doing this, surveys use predetermined, instrument-based methods for a researcher's observations to become measurable (Creswell, 2014; Dalenius & Hodges, 1959).

Due to the time restrictions impacting this study, the researcher decided to make use of a cross-sectional survey. Studies using cross-sectional surveys make use of observations "representing a single point in time" (Babbie, 2008. P. 111). Therefore, in this study, a cross-sectional survey collected and recorded data from a sample of respondents on a single occasion**.** With the era of the internet and the development of online surveys, a "single occasion" of data collection was able to reach a wider population which was able to increase this study's perspective and generalisability (Joye et al., 2016). This aligned with the studies overarching meta-theoretical and methodological frameworks.

The use of a cross-sectional survey proposes several advantages and disadvantages. One major advantage of using cross-sectional surveys is that they are economical, both in cost and time (Babbie, 2008; Seabi, 2012). This study used an online platform to distribute the survey which allowed the researcher to dually distribute and collect data relatively quickly (Seabi, 2012). There were also minimal costs incurred for both the researcher and respondents as the distribution and collection were electronic. Electronic distribution further helped the researcher adhere to social distancing measures brought on by the global COVID-19 pandemic as no personal contact was required.

Another advantage of using online surveys is that the researcher's involvement is naturally limited (Maree & Pietersen, 2010). This involvement (or lack thereof) promoted objectivity in both the data collection and data analysis process fostering an outside-looking-in perspective. The lack of the researcher's involvement, however, also had the potential to become a disadvantage. The researcher's absence may have left respondents with unanswered questions which may have resulted in incomplete or unreturned surveys, reducing the study's sample size (van Vuuren & Maree, 1999). Therefore, to minimise this known risk the researcher and supervisor's contact details were provided to each respondent at the onset of the survey completion and a two-phase administration process followed (Kuhn, 2016).

3.4 SAMPLING

A core concept of quantitative research is generalisability (Maree & Pietersen, 2010). It is, however, not usually feasible to include all members of a population in a survey study. Sampling, therefore, becomes a very important part of a research project (Morgan & Sklar, 2012). To promote the generalisability of a study, the research sample should be an accurate representation of the population subject to inquiry (Maree & Pietersen, 2010). Therefore, in this study, the researcher originally intended to make use of purposive sampling but due to the COVID-19 pandemic, eventually progressed to snowball sampling which is a non-probability sampling technique.

Non-probability sampling is especially useful when studying a sub-group of a population (Maree & Pietersen, 2010) and allowed the researcher to predetermine a

set of selection criteria. These predetermined criteria can then be used to select a useful and representative sample for the study in question (Babbie, 2008). In this study, the respondents were selected according to the following selection criteria: Teachers who are currently teaching in the Foundation Phase (Grades R, 1, 2, and 3).

One advantage of snowball sampling is that it is a cost and time-effective sampling method (Creswell, 2014). However, because of the predetermined selection criteria, it is often left to the researcher's own discretion which can be prone to bias (Babbie, 2008). Following this study's epistemological paradigm, objectivity is paramount. After an in-depth literature review, the researcher consulted with the study's supervisor in order to promote neutrality in the criteria selection process.

The survey in this study was initially sent out to five schools with a total number of 200 Foundation Phase teachers. However, at the end of the intended three-week data collection cycle, only 35 responses were recorded. The survey was then made available on platforms like Facebook groups which met the selection criteria above. This, however, made it difficult for the researcher to determine the total scope of reach that the survey had. However, at the end of a further two-week cycle, 100 responses were recorded.

3.5 DESIGNING THE SURVEY

The next section discusses the process which the researcher followed to design and distribute the survey as well as the means used to collect and capture the data.

3.5.1 SELECTION OF ITEMS

As discussed in Chapter One, the survey used in this study was designed according to an existing beliefs survey (Florida Problem-Solving/Response to Intervention Project, 2008). This survey was then adapted to suit the South African context and to correspond with the aims of this study. In line with the ethical considerations that guided this study, the researcher obtained permission from the original authors which has been attached (see Appendix C) along with the original survey (see Appendix B). The final questions that were selected for this survey were moderated by the study's supervisor and a resident statistics expert at the University of Pretoria.

The survey consisted of 27 questions. The first five questions were biographical and were included to provide background and context. The remaining 22 questions pertained to various aspects of beliefs associated with RTI. The respondents were able to answer on a Likert scale which consisted of five response options. The researcher chose to keep the original survey's design of a Likert scale response as it ideally represents abstract constructs like beliefs in a numerical way (Maree & Pietersen, 2010). The survey was only distributed in English using the online platform SurveyPlanet.

Table 3.1 on the following page, outlines the questions that appeared in the survey. It provides details of the questioning sequence, response options, each question's objective, which questions were contextualised as well as the sources which informed these adaptations.

Table 3.1: Selection of items for the survey

Question number	Question asked	Response options	Question objective	Contextualisation of question	Source
1	Select your current job description.	• Post level 1 (Classroom educator). • Post level 2 (Departmental head). • Post level 3 (Deputy principal). • Post level 4 (Principal). • Other (please specify).	Biographical - To provide background and context from which the teacher answered.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
2	Select your total number of years of experience in teaching (All grades).	• Less than 1 year. • 1-4 years. • 5-9 years. • 10-14 years. • 15-19 years.		Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response to Intervention Project (2008).

		• 20 or more years.			
3	Select your total number of years teaching in the Foundation Phase (Grade 1-3).	• Less than 1 year. • 1-4 years. • 5-9 years. • 10-14 years. • 15-19 years. • 20 or more years.		Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response to Intervention Project (2008).
4	Select the total number of years teaching your current grade (consecutive).	• Less than 1 year. • 1-4 years. • 5-9 years. • 10-14 years. • 15-19 years. • 20 or more years.		Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response to Intervention Project (2008).

5	Select your highest qualification earned.	• Bachelor's degree and/or Post Graduate Certificate in Education. • Honours degree. • Master's degree. • PHD. • Other, please specify.		No.	Florida Problem-Solving/Response to Intervention Project (2008).
6	I believe in the underlying principles of Education White Paper 6, even if I disagree with some of the requirements.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in principles of inclusive education set out by South African legislation.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).
7	Classroom instruction should be effective enough to result in 80% of learners achieving CAPS stipulated benchmarks in reading and mathematics.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N).	The purpose of this question was to determine the extent to which a teacher believes in the wide applicability of mainstream curriculum.	Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response to Intervention Project (2008).

		4- Agree (A). 5-Strongly agree (SA).			
8	The primary function of classroom-based support is to ensure that learners meet grade-level (CAPS stipulated) benchmarks in reading and mathematics.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the role that classroom-based support plays in academic achievement.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).
9	The majority of learners with diagnosed learning disabilities achieve grade-level benchmarks set out by CAPS in reading and mathematics.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the academic performance potential of learners with diagnosed learning disabilities.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).
10	The majority of learners with behavioural challenges achieve grade-level benchmarks set out	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N).	The purpose of this question was to determine the extent to which a teacher believes in the academic performance	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).

	by CAPS in reading and mathematics.	4- Agree (A). 5-Strongly agree (SA).	potential of learners with behavioural challenges.		
11	Learners with mild disabilities who are receiving special needs education services are capable of achieving grade-level benchmarks (i.e., mainstream education standards) in reading and mathematics.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the value and success of special needs services on learners' learning.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).
12	Mainstream education teachers should implement more differentiated and flexible instructional practices to address the needs of a more diverse learner body.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in their responsibility to implement differential instruction.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).
13	Mainstream education teachers would be able to implement more differentiated and flexible	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N).	The purpose of this question was to determine the extent to which a teacher feels capable and supported in order to	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).

	interventions if they had additional staff support.	4- Agree (A). 5-Strongly agree (SA).	implement differential instruction practices.		
14	The use of additional interventions in the mainstream education classroom would result in success for more learners.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the value of differential instruction.	Yes, Department of Education (2001) and Department of Basic Education (2014).	Florida Problem-Solving/Response to Intervention Project (2008).
15	Prevention activities and early intervention strategies in schools would result in fewer referrals and placements to LSEN (Learners with Special Educative Needs) schools.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the value of early intervention.	Yes, Department of Education (2001) and Department of Basic Education (2014).	Florida Problem-Solving/Response to Intervention Project (2008).
16	The “severity” of a learner’s academic difficulty is determined not by how far behind the learner is in terms of his/her academic performance	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N).	The purpose of this question was to determine how a teacher measures the extent	No.	Florida Problem-Solving/Response to Intervention Project (2008).

	but by how quickly the learner responds to intervention.	4- Agree (A). 5-Strongly agree (SA).	of a learner's academic challenge.		
17	The "severity" of a learner's behavioural challenges is determined not by how inappropriate a learner is in terms of his/her behavioural performance but by how quickly the learner responds to intervention.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine how a teacher measures the extent of a learner's behavioural challenge.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
18	The results of IQ and achievement testing can be used to identify effective interventions for learners with learning difficulties and behavioural challenges.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the support and intervention value of formative achievement testing.	Yes, Department of Basic Education (2014).	Florida Problem-Solving/Response to Intervention Project (2008).
19	Many learners currently diagnosed with a specific learning disability/learning disability do not have a disability – rather they came to school	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N).	The purpose of this question was to determine whether a teacher considers current rates of learning disability diagnoses as the best	Yes, American Psychiatric Association (2013).	Florida Problem-Solving/Response to Intervention Project (2008).

	"not ready" to learn or fell too far behind academically for the available interventions to close the gap sufficiently.	4- Agree (A). 5-Strongly agree (SA).	justification for learners' academic challenges.		
20	Using learner-based data to determine intervention effectiveness is more accurate than using only a teacher's judgement.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher esteems RTI as a valid reflection of learner achievement.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
21	Evaluating a learner's response to interventions is a more effective way of determining what a learner is capable of achieving than using scores from assessments (e.g., IQ/Achievement test).	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher esteems RTI (learning potential) as a more accurate reflection of learner achievement.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
22	Additional time and resources should be allocated first to learners who are not reaching benchmarks (as outlined in	1- Strongly disagree (SD). 2- Disagree (D).	The purpose of this question was to determine the extent to which a teacher considers the value of allocating additional	Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response

	CAPS) before significant time and resources are directed to learners who are at or above benchmarks.	3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	resources to struggling learners.		to Intervention Project (2008).
23	Graphing learner data makes it easier for one to make decisions about learner performance and needed interventions.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher considers the informant value of graphing learner data.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
24	A learner's parents (guardian) should be involved in the problem-solving process as soon as a teacher has a concern about the learner.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher values early parental involvement in support/intervention planning.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
25	Learners respond better to interventions when their parent (guardian) is involved in the	1- Strongly disagree (SD). 2- Disagree (D).	The purpose of this question was to determine the extent to which a teacher links parental	No.	Florida Problem-Solving/Response

	development and implementation of those interventions.	3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	involvement with the success of support interventions.		to Intervention Project (2008).
26	All learners can achieve grade-level benchmarks (as outlined in CAPS) if they have sufficient support.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher considers the role of support in academic success.	Yes, Department of Education (2001) and Department of Basic Education (2014).	Florida Problem-Solving/Response to Intervention Project (2008).
27	The goal of assessment is to generate and measure the effectiveness of instruction/intervention.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5-Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher links the purpose of assessment to intervention.	No.	Florida Problem-Solving/Response to Intervention Project (2008).

3.5.2 CONTEXTUALISATION OF ITEMS

The researcher's decision to use and contextualise an existing survey was three-fold. The use of an existing survey tool (see Appendix B) enhanced the reliability of the adapted survey instrument (Fink, 2017). This is because it has already been researched and applied to other research studies (Castillo et al., 2008). The contextualisation of the survey's language, i.e., using South African terminology, enhanced the survey's face validity as well as the understandability for the South African teacher (Babbie, 2012) and finally, contextualisation promoted the survey's content validity which aided the researcher to answer the primary research question which specifies the South African context for which this study is designed (Maree & Pietersen, 2017).

3.5.3 PILOTING THE SURVEY

As mentioned above, the questions that were selected for this survey were moderated by both the study's supervisor and a resident statistics expert at the University of Pretoria. This was a measure put in place to detect any structural or logistical problems with the survey questions. In addition to this measure, a pre-test of the survey instrument was also conducted. This was done by piloting the survey to a small sample of respondents before the main distribution (Creswell, 2014). This process aimed to identify and address any problems experienced by the respondents or the researcher (Fink, 2017). It also increased the reliability of the survey (Fink, 2017).

Convenience sampling was used to select the pre-test respondents. The study's supervisor and five Foundation Phase teachers were asked to give feedback on the structure, completion time, and language aspects of the survey (Creswell, 2014). Based on the feedback from the pilot test, the researcher found it important to include two definitions before respondents were to begin the survey. These definitions pertained to *interventions* as well as *specific learning disorders*. These were founded on overly academic and clinical terms that required clarification so that teachers could have a uniform understanding of what was being asked. Questions seven through 11 were also restructured to present the question as a single inquiry as opposed to two separate sub-questions.

3.5.4 DISTRIBUTING THE SURVEY

On the 1st of May 2021, 200 respondents who matched the research criteria as outlined above were contacted via email. The email opened with an invitation to participate in the study along with a link that directed the respondent to the informed consent form. Upon agreeing to the contents and assurances of the consent form (see Appendix E), the survey began.

Initially, the time of distribution to the closing date was estimated to take three weeks. During this time, the researcher adopted a two-phase administration to promote a higher response rate (Kuhn, 2016). This two-phase administration was an adaptation of Salant and Dillman's (1994) approach to data collection using postal surveys (Creswell, 2014) and is illustrated below:

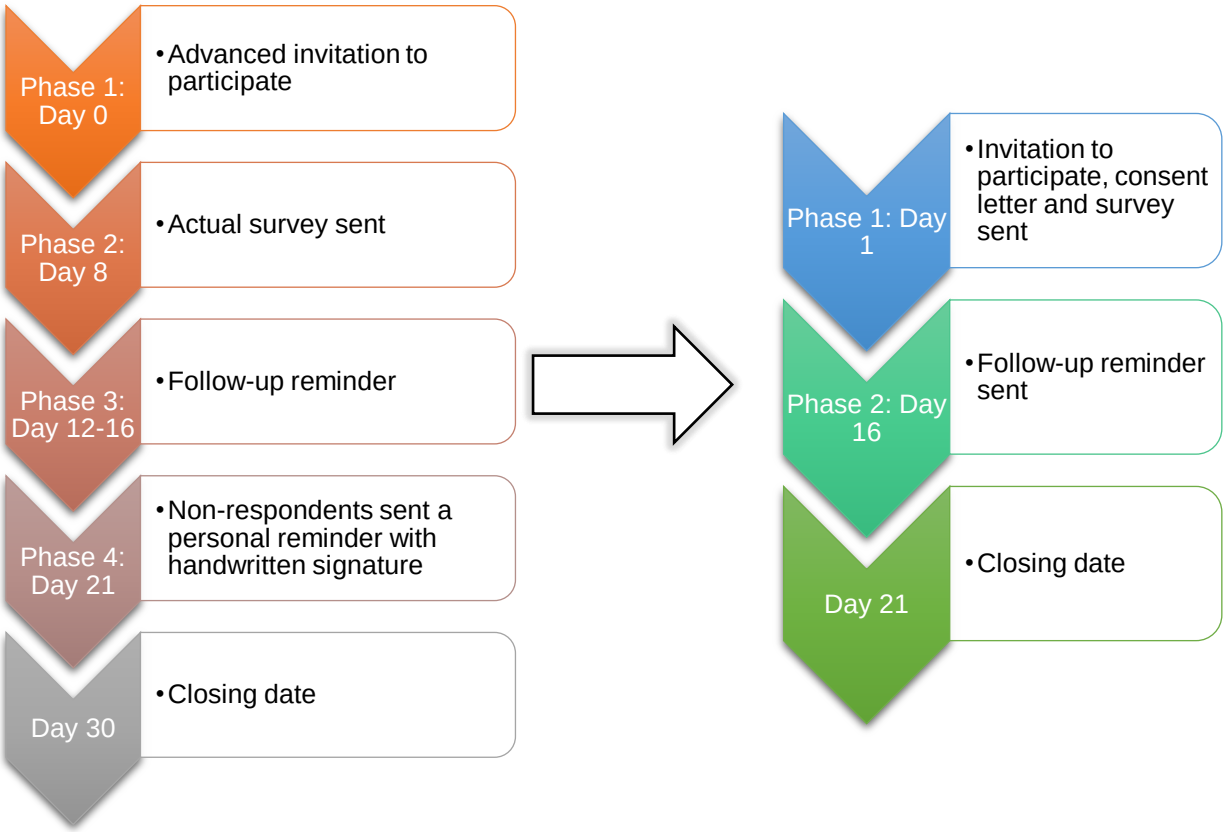

Figure 3.1: Four-phase and two-phase administration (Kuhn, 2016; Salant & Dillman, 1994)

However as mentioned above, at the end of the intended three-week cycle only 35 responses had been recorded. An additional two weeks were then used to change strategy and employ a snowball sampling method to increase responses and consequently increase the validity of the data.

3.5.5 CAPTURING OF DATA

The raw data from the survey was automatically collected by the platform SurveyPlanet. The researcher could then export the data to an Excel spreadsheet for descriptive analysis.

3.6 DATA ANALYSIS

Data collected from this study were analysed using descriptive statistics. Descriptive statistics are often used in studies when a researcher is looking for prevailing trends in data, making this statistical strategy especially useful when considering the study's primary research question (Chambliss & Schutt, 2013).

Chambliss and Schutt (2013) further described four types of measurement that can be used to order quantitative data namely, nominal, ordinal, ratio, and interval data. This study made use of two types, nominal, and ordinal data. Nominal data were used to collect and order information collected by the biographical section of the survey and ordinal data were used to order the information collected by the scaling section of the survey.

SurveyPlanet then automatically captured the respondents' responses and reflected this data on a spreadsheet. The researcher then used SPSS to convert the data into frequencies, means, and percentages. Reporting the data in descriptive percentile ranks were chosen to enhance the meaningfulness of this study. This is because percentile ranks create a data set that is easily comparable to other populations and other studies (Creswell, 2014).

3.7 QUALITY CRITERIA

Quantitative research concerns itself with the measurement of different variables (di Fabio & Maree, 2012). Where some constructs are easily observable, constructs like

beliefs are often more difficult to measure due to their unobservable and multifaceted nature (Bailey, 1994). It is therefore important to ensure that a quantitative research instrument, like a survey, is both valid and reliable.

3.7.1 RELIABILITY

The reliability of a research instrument is determined by the similarity of results when administered to the same person more than once (Maree & Pietersen, 2010). Simply stated, the research instrument should elicit the same results, from the same person, over time (di Fabio & Maree, 2012). This was challenging to promote because the data collected in this study were the results of a cross-sectional survey (Seabi, 2012). There were, however, two measures used by the researcher to promote the reliability of this study.

The first method was the use of an existing survey. Using an existing survey that had already undergone scholarly and field review promoted the reliability of the adapted survey used in this study (Fink, 2017). The second method used to ensure reliability was calculating the internal consistency using Cronbach's alpha. The generally agreed-upon lower limit for Cronbach alpha is 0.70, although some researchers advocate that a value as low as 0.60 is acceptable in general (Daud et al., 2018; Hancock & Mueller, 2013; Nunnally & Bernstein, 1994; Van Griethuijsen et al., 2015; Zhan et al., 2021), in exploratory research (Hair et al., 2019; Robinson et al., 1991) and social sciences (Ghazali, 2008; Widaman, 1993). Constructs were created using theory and are presented in Table 3.3 along with the corresponding Cronbach's alpha coefficients.

Table 3.2: Cronbach's alpha coefficients for establishing reliability

Construct number and name		Survey items to establish reliability		Cronbach's alpha
1	Belief in core educational philosophies relating to RTI (Castillo et al., 2008; DoE, 2001).	Q6	I believe in the underlying principles of White Paper 6, even if I disagree with some of the requirements.	0.230
		Q19	Many learners currently diagnosed with a specific learning disability/learning disability do not have a disability – rather they came to school "not ready" to learn or fell too far behind academically for the available interventions to close the gap sufficiently.	
2	Belief in the adequacy of teaching mainstream curriculum (DoE, 2001; Huguenin, 2012).	Q7	Classroom instruction should be effective enough to result in 80% of learners achieving CAPS stipulated benchmarks in: a. reading b. mathematics	0.376 *0.769 when Q7 removed
		Q9	The majority of learners diagnosed with learning disabilities achieve grade-level benchmarks set out by CAPS in: a. reading b. mathematics	
		Q10	The majority of learners with behavioural challenges achieve grade-level benchmarks set out by CAPS in: a. reading b. mathematics	
3	Belief in support initiatives	Q8	The primary function of classroom-based support is to ensure that learners meet grade-level (CAPS stipulated) benchmarks in:	0.582

	provided by mainstream educators (DoE, 2001).		a. reading b. mathematics	*0.631 when Q26 removed
		Q11	Learners with mild disabilities receiving special needs services are capable of achieving grade-level benchmarks (i.e.: mainstream education standards) in: a. reading b. mathematics	
		Q14	The use of additional interventions in the mainstream education classroom would result in success for more learners.	
		Q15	Prevention activities and early intervention strategies in schools would result in fewer referrals and placements to LSEN schools.	
		Q22	Additional time and resources should be allocated first to learners who are not reaching benchmarks (as outlined in CAPS) before significant time and resources are directed to learners who are at or above benchmarks.	
		Q26	All learners can achieve grade-level benchmarks (as set out by CAPS) if they have sufficient support.	
4	Belief that involving other systems is vital for support interventions (Donohue & Bornman, 2014).	Q13	Mainstream education teachers would be able to implement more differentiated and flexible interventions if they have additional staff support.	0.741
		Q24	A learner's parents (guardian) should be involved in the problem-solving process as soon as a teacher has a concern about the learner.	
		Q25	Learners respond better to interventions when their parent (guardian) is involved in the development and implementation of those interventions.	

5	Belief in the underlying premises of RTI (Fuchs & Fuchs, 2006; Grigorenko, 2009; Lin, 2010).	Q12	Mainstream education teachers should implement more differentiated and flexible instructional practices to address the needs of a more diverse learner body.	0.709 *0.758 when Q18 removed
		Q16	The "severity" of a learner's academic difficulty is determined not by how far behind the learner is in terms of his/her academic performance but by how quickly the learner responds to intervention.	
		Q17	The "severity" of a learner's behavioural challenges is determined not by how inappropriate a learner is in terms of his/her behavioural performance but by how quickly the learner responds to intervention.	
		Q18	The results of IQ and achievement testing can be used to identify effective interventions for learners with learning difficulties and behavioural challenges.	
		Q20	Using learner-based data to determine intervention effectiveness is more accurate than using only a teacher's judgement.	
		Q21	Evaluating a learner's response to interventions is a more effective way of determining what a learner is capable of achieving than using scores from assessments (e.g., IQ/Achievement test).	
		Q23	Graphing learner data makes it easier for one to make decisions about learner performance and need interventions.	
		Q27	The goal of assessment is to generate and measure effectiveness of instruction/intervention.	

From Table 1, it can be seen that the first construct, "belief in core education philosophies relating to RTI", has an unacceptable Cronbach's alpha value of 0.230. Furthermore, no items could be deleted to improve the Cronbach's alpha value, as the

construct consisted of only 2 items. Following the recommendation of Briggs and Cheek (1986) for assessing the internal consistency when a construct has few items, the inter-item correlation between Q6 and Q19 was computed. Their recommendation is that homogeneity occurs when the correlation is between 0.2 and 0.4, and for correlations lower than 0.1, it is unlikely that a single total score adequately represents the complexity of the items, and a score higher than 0.5 indicates overly redundant items. Since the correlation equals 0.172, which is above 0.1 but not within the ideal range of 0.2 to 0.4, this construct was not considered any further in this study. One recommendation for future studies is to add items to this construct, as it is well-known that the more items there is per construct, the higher the Cronbach's alpha. This recommendation is made since the correlation is above the absolute lower limit (0.1) of Briggs and Cheek (1986), showing promise in further developing this construct in future studies.

The second construct, "belief in the adequacy of teaching mainstream curriculum", also measured unacceptable; however, with the removal of Q7 the Cronbach's alpha jumps from 0.376 to 0.769. This removal suggests that Q7 does not support the construct, and future researchers should consider removing this item when this instrument is used within a South African context. For Construct 3, the "belief in support initiatives provided by mainstream educators", the Cronbach's alpha coefficient equals 0.582 jumps to 0.631 when Q26 is removed. Again, researchers wishing to use this instrument within a similar context to the current study should consider removing Q26. Both Construct 4, "belief that involving other systems is vital for support interventions", and Construct 5, "belief in the underlying premises of RTI", have acceptable Cronbach's alpha values of 0.741 and 0.709, respectively. It should be noted, however, that, for Construct 5, the Cronbach's alpha value increases from 0.709 to 0.758 when Q18 is removed. This is pointed out because, in the next section, where validity is considered, for the model fit of the CFA to be acceptable, Q18 had to be removed from the model.

3.7.2 VALIDITY

A research instrument is considered valid when it measures what it intends to measure (Di Fabio & Maree, 2012). Creswell (2014) further listed various types of validity including content, face, and external validity which are discussed in relevance to this study on the following page in Table 3.2.

Table 3.3: Overview of validity constructs applied in this study

Validity	Brief description of validity	Application to this study
Content validity	Content validity refers to the extent to which an instrument measures all aspects of the construct in question (Creswell, 2014).	• Maree and van der Westhuizen (2009) suggested that submitting the research instrument to relevant experts for moderation enhances content validity. The survey used in this study was moderated by both the study's supervisor and an expert statistician for review. • This study made use of an existing survey that had already undergone both scholarly and field review (Florida Problem-Solving/Response to Intervention Project, 2008).
Face validity	Face validity is a simple and subjective assessment of whether an instrument, at face value, appears to measure what it aims to measure (Babbie, 2012).	• The original survey in this study was contextualised for the South African respondent. This included the adaptation of language and terminology to ensure that the survey was easy to understand (Babbie, 2012). • The adapted survey instrument underwent a piloting phase (Fink, 2017). The feedback was then applied to promote the instrument's clarity and face value.
External validity	External validity is an important aspect of positivist research as it looks to measure the extent to which the study's results can be generalised (Maree & Pietersen, 2017).	• To promote external validity in this study the researcher set clear criteria for the sample group to accurately represent the target population (Maree & Pietersen, 2010). • Measures were adopted to obtain a higher response rate which resulted in a wider sample and a richer data set (Creswell, 2014). • Due to the nature of this study's research design (a cross-sectional survey) shortcomings resulting from a

		once-off data set were acknowledged and explored (Seabi, 2012).

Reliability was considered before validity, as a test measure can be reliable but not valid. However, a measure cannot be valid unless it's reliable. From the reliability analysis, some questions were dropped and using the remaining questions, a CFA was conducted, and the model fit is summarised in Table 2. The model fit summary is presented in Table 2. In the past, to access goodness-of-fit (GOF), the Chi-square statistic and the Goodness-of-Fit Index (GFI) were used. However, the Chi-square statistic is very sensitive to sample size and is no longer relied upon as a basis for acceptance or rejection (Hooper et al., 2008; Schermelleh-Engel et al., 2003; Vandenberg, 2006) and given the sensitivity of the GFI, it has become less popular (Hooper et al., 2008) and it has even been recommended that it not be used (Sharma et al., 2005). Some remaining GOF measures are the Root Mean-Square Error of Approximations (RMSEA), the Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI), and they are considered here. For RMSEA, less than 0.05 is considered to indicate a very good fit, with values between 0.05 and 0.08 indicating a reasonable fit between model and data (Browne & Cudeck, 1993). For CFI some recommendations are CFI > 0.95 (Hu & Bentler, 1999; Van Laar & Braeken, 2021). Different recommendations for are TLI > 0.90 (Bentler & Bonett, 1980) and TLI > 0.95 (Hu & Bentler, 1999).

Table 3.4: GOF measures for CFA

Construct number and name		Survey items remaining after reliability analysis	GOF measures when all 18 items are used	GOF with Q18 removed
2	Belief in the adequacy of teaching mainstream curriculum	Q9, Q10	RMSEA=0.059 TLI=0.907 CFI=0.928	RMSEA=0.049 TLI=0.940 CFI=0.955
3	Belief in support initiatives provided by mainstream educators	Q8, Q11, Q14, Q15, Q22		
4	Belief that involving other systems is vital for support interventions	Q13, Q24, Q25		
5	Belief in the underlying premises of RTI	Q12, Q16, Q17, Q18, Q20, Q21, Q23, Q27		

The CFA was first run with Q18 included, as the Cronbach's alpha value for Construct 5 was acceptable with all items in the construct. However, although the RMSEA and the TLI were acceptable, the CFI was not. Upon investigating the parameter estimates, it was found that Q18 was the only non-significant item (p-value>0.05) with a regression weight of 0.178 and a p-value of 0.483. After removing Q18, all the GOF measures are acceptable; also, recall that the Cronbach's alpha coefficient increased from 0.709 to 0.758 when Q18 was removed.

3.8 ETHICAL CONSIDERATIONS

Abiding by ethical principles is an important part of upholding the purpose of research (Elias & Theron, 2012). In addition to protecting an academic body of knowledge,

ethical guidelines also protect the human lives involved in generating the data and information (Creswell, 2014). This study ascribed to the ethical guidelines set out by the University of Pretoria as well as the Health Professions Council of South Africa (HPCSA). Table 3.5 outlines the ethical principles of beneficence, respect, and integrity and how they were applied to this research inquiry.

Table 3.5: Description of ethical principles applied to this study

Ethical principle	Ethical application	Brief description	Research procedure
Beneficence.	Permission to conduct research.	• A researcher needs to submit their research plans to a recognised, institutional committee to ensure that both ethical principles and practice have been included throughout the research process (Creswell, 2014). • Researchers must additionally obtain permission from the overseeing authorities of the planned research site (Creswell, 2014).	• Before this study, a detailed research plan was submitted to the Ethics Committee at the University of Pretoria for ethical clearance (see Appendix F). • An application was submitted to the GDE to obtain permission to conduct research in GDE schools (see Appendix E).
	Informed consent and voluntary participation.	• Informed consent means that the research respondent will be advised of all the necessary information before they decide to participate or not (Elias & Theron, 2012). • Each respondent's autonomy and basic human rights need to be respected (HPCSA, 2008).	• Before the start of the survey, each respondent was given a detailed informed consent letter. This letter was submitted and approved by the University of Pretoria's ethics committee. • The opening letter provided details of the study's purpose, estimated time for survey completion, possible risks, remuneration, last date for submission, a confidentiality pledge as well as the contact details of the researcher and the supervisor. • Based on the contents of this letter the respondent was asked to indicate their willingness

			to participate in the study by pushing the “start survey” button. • The survey could be discontinued at any point.
Respect.	Privacy, confidentiality, and anonymity.	• The Protection of Personal Information Act (2013) in South Africa beckons the protection of personal information acquired by both public and private bodies.	• The opening letter of the survey assured respondents that all answers would be kept anonymous. • The survey used in this study did not require the respondents to provide any identifying information. • The researcher only had access to the respondents’ email addresses which were kept confidential. • Responses were automatically captured on a spreadsheet that did not attribute any identifying information to a respondent’s answers. • The data platform used to distribute the survey provided the survey with SSL security. This encrypted all the data without capturing an IP address. • Since the researcher did not request any identifying information if data was breached, only information about RTI would be leaked.

Integrity.	Honesty and truthfulness.	• The principle of integrity is upheld when the researcher commits to being honest and truthful throughout the research process (Chambliss & Schutt, 2013). • All respondents have the right to being treated equally and fairly, especially when considering biographical variances and differences in opinions (HPCSA, 2008).	• To ensure honesty and transparency in this study, the researcher was accountable to an experienced supervisor as well as the ethics committee at the University of Pretoria. • No completed survey was excluded from the data set based on biographical or opinionated responses. • Using another person's work as your own is dishonest and in breach of the University's plagiarism policy. The researcher, therefore, requested permission from the relevant parties as the survey used in this study was adapted from an existing source. • The researcher also acknowledged and referenced other people's work and ideas per departmental requirements.

3.9 CONCLUSION

This chapter reviewed the paradigmatic perspectives that provided the theoretical foundations for this research inquiry. It additionally outlined the planned research design and described the processes that facilitated the design process of the data collection instrument, data collection process, and data analysis phases. Finally, the quality criteria and ethical considerations which guided all aspects of this research inquiry were discussed in both definition and application.

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CHAPTER FOUR: RESEARCH RESULTS AND FINDINGS

4.1 INTRODUCTION

This chapter provides the results and the findings of the survey conducted by this study. The results are divided into six sections that align with the core constructs which are outlined in Chapter 3. It also includes a biographical information section. The table below provides an overview of these six sections.

Table 4.1: Overview of presented results

	Sections of report based on core constructs	Question number/s	Questions
Section 1	Biographical information.	1-5	• Select your current job description. • Select your total number of years of experience in teaching (all grades). • Select your total number of years teaching in the Foundation Phase (Grade 1-3). • Select the total number of years teaching your current grade (consecutive). • Select your highest qualification earned.
Section 2	Belief in core education philosophies.	6 19	• I believe in the underlying principles of Education White Paper 6, even if I disagree with some of the requirements. • Many learners currently diagnosed with a specific learning disability/ learning disability do not have a disability – rather they came to school “not ready” to learn or fell too far behind academically for the available interventions to close the gap sufficiently.

Section 3	Belief in the adequacy of teaching mainstream curriculum.	7 9 10	• Classroom instruction should be effective enough to result in 80% of learners achieving CAPS stipulated benchmarks in reading and mathematics. • The majority of learners diagnosed with learning disabilities achieve grade-level benchmarks set out by CAPS in reading and mathematics. • The majority of learners with behavioural challenges achieve grade-level benchmarks set out by CAPS in reading and mathematics.
Section 4	Belief in support initiatives steaming from mainstream educators.	8 11 14 15 22 26	• The primary function of classroom-based support is to ensure that learners meet grade-level (CAPS stipulated) benchmarks in reading and mathematics. • Learners with mild disabilities receiving special needs services are capable of achieving grade-level benchmarks (ie: mainstream education standards) in reading and mathematics. • The use of additional interventions in the mainstream education classroom would result in success for more learners. • Prevention activities and early intervention strategies in schools would result in fewer referrals and placements to LSEN schools. • Additional time and resources should be allocated first to learners who are not reaching benchmarks (as outlined in CAPS) before significant time and resources are directed to learners who are at or above benchmarks. • All learners can achieve grade-level benchmarks (as set out by CAPS) if they have sufficient support.
Section 5	Belief in involving other systems is vital for support interventions.	13 24 25	• Mainstream education teachers would be able to implement more differentiated and flexible interventions if they have additional staff support. • A learner's parents (guardian) should be involved in the problem-solving process as soon as a teacher has a concern about the learner. • Learners respond better to interventions when their parent (guardian) is involved in the development and implementation of those interventions.

Section 6	Belief in the underlying premises of RTI.	12 16 17 18 20 21 23 27	• Mainstream education teachers should implement more differentiated and flexible instructional practices to address the needs of a more diverse learner body. • The "severity" of a learner's academic difficulty is determined not by how far behind the learner is in terms of his/her academic performance but by how quickly the learner responds to intervention. • The "severity" of a learner's behavioural challenges is determined not by how inappropriate a learner is in terms of his/her behavioural performance but by how quickly the learner responds to intervention. • The results of IQ and achievement testing can be used to identify effective interventions for learners with learning difficulties and behavioural challenges. • Using learner-based data to determine intervention effectiveness is more accurate than using only a teacher's judgement. • Evaluating a learner's response to interventions is a more effective way of determining what a learner is capable of achieving than using scores from assessments (e.g., IQ/Achievement test). • Graphing learner data makes it easier for one to make decisions about learner performance and need interventions. • The goal of assessment is to generate and measure effectiveness of instruction/intervention.

As discussed in Chapter 3, this survey was initially distributed to 200 respondents across four schools. At the end of the survey's initial three-week cycle, only 35 responses were recorded. The researcher then adopted a snowball sampling approach. An additional 65 responses were recorded, which brought the total number of respondents to 100 (n = 100).

4.2 RESULTS

The section reports on the data collected by the survey in the relevant sections as discussed above. The first section analysed was the biographical data of the 100 respondents.

4.2.1 RESULTS FOR SECTION 1: BIOGRAPHICAL INFORMATION

Table 4.2 below reflects the biographical information that was collected from the respondents. This information included details about the respondent's job description, the various numbers of years of teaching experience and the respondent's highest qualification earned. A biographical section was included in the survey as it provided valuable information regarding the profile of the current teaching population in South Africa. This, in turn, informed the backdrop to the questions from the beliefs survey that were answered. The results are discussed next.

Most respondents (83%) were post level one teachers, responsible for a Foundation Phase mainstream class/es. The total number of years of teaching ranged between one month and 20 plus years. Most respondents (29%) have been teaching in the Foundation Phase between one to four years with the minority of educators teaching under 12 months. Sixty-two per cent (62%) of the respondents hold a Bachelor of Education degree or another degree accompanied with a post-graduate certificate in education putting this group in the majority. A further 22% of respondents hold an honours degree and the minority of respondents have attained a master's or doctoral degree (2% respectively). Table 4.2 on the following page shows the frequency counts for the raw data.

Table 4.2: Frequency counts for biographical data variables (n=100)

Variable	Available responses	Raw data	Per cent %
Job description.	• Post level 1 (Classroom educator).	83	83%
	• Post level 2 (Departmental head).	9	9%
	• Post level 3 (Deputy principal).	1	1%
	• Post level 4 (Principal).	4	4%
	• Other, please specify).	3	3%
Total number of years teaching experience (All grades).	• Less than 1 year.	4	4%
	• 1-4 years.	22	22%
	• 5-9 years.	20	20%
	• 10-14 years.	18	18%
	• 15-19 years.	10	10%
	• 20 or more years.	26	26%
Total number of years teaching experience (Grade 1-3).	• Less than 1 year.	6	6%
	• 1-4 years.	29	29%
	• 5-9 years.	19	19%
	• 10-14 years.	15	15%
	• 15-19 years.	13	13%
	• 20 or more years.	18	18%
Total number of years teaching current grade (consecutive).	• Less than 1 year.	12	12%
	• 1-4 years.	45	45%
	• 5-9 years.	18	18%
	• 10-4 years.	12	12%
	• 15-19 years.	5	5%

	• 20 or more years.	8	8%
Highest qualification earned.	• In progress • Bachelor's degree and/or Post Graduate Certificate in Education. • Honours degree. • Master's degree. • PHD. • Other, please specify.	6 62 22 2 2 6	6% 62% 22% 2% 2% 6%

The five biographical questions were followed by 22 scaling questions. These 22 questions were further grouped into six sections which are discussed in detail below.

4.2.2 STATISTICAL ANALYSIS OF THE CONSTRUCTS IN THE SURVEY

For each construct, first, the statistics at item-level is provided, followed by a histogram representing the entire construct. If the mean of the histogram is above 3, the respondents were more in agreement with the items than disagreement; histogram skewed left. On the other hand, if the mean of the histogram is less than 3, the respondents were in more disagreement with the items that agreement; histogram skewed right.

Construct 2, "belief in the adequacy of teaching mainstream curriculum", is considered first. Table 4.3 shows the item-level statistics per item.

Table 4.3: Percentages at item-level for Construct 2

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q9: The majority of learners with diagnosed learning disabilities achieve grade-level benchmarks set out by CAPS in: reading (and) mathematics	7.0	61.0	19.0	12.0	1.0
Q10: The majority of learners with behavioural challenges achieve grade-level benchmarks set out by CAPS in: reading (and) mathematics	4.0	50.0	18.0	26.0	2.0

From Table 4.3, it is evident that respondents do not believe that the majority of learners diagnosed with learning disabilities can achieve grade-level benchmarks set out by CAPS in reading and mathematics, as the majority of respondents disagreed (68.0%) with Q9. The same belief is held for learners with behavioural challenges, as more than half of the respondents disagreed (54.0%) with Q10, although this percentage is lower than that of Q9, indicating a more positive outlook for learners with behavioural challenges. From the histogram below, it is evident that the responses tend to the disagreement side of the rating-scale for Construct 2, as the histogram is skewed to the right and the mean is below the midpoint of 3.

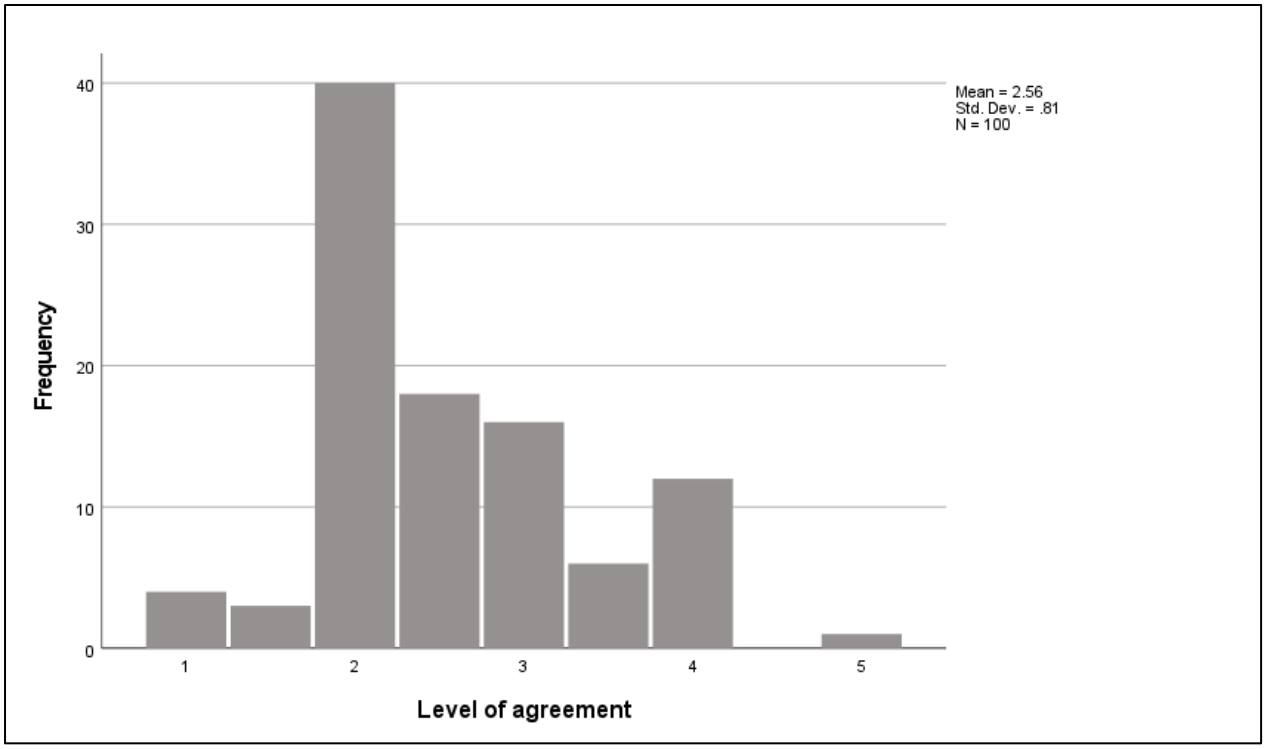

Figure 4.1: Histogram for Construct 2

Construct 3, "belief in support initiatives provided by mainstream educators", is considered next. Table 4.4 shows the item-level statistics per item.

Table 4.4: Percentages at item-level for Construct 3

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q8: The primary function of classroom-based support is to ensure that learners meet grade-level (CAPS stipulated) benchmarks in: reading (and) mathematics	5.0	10.0	9.0	62.0	14.0
Q11: Learners with mild disabilities who are receiving special-needs education services are capable of achieving grade-level benchmarks (i.e.,	5.0	19.0	18.0	55.0	3.0

mainstream education standards) in: reading (and) mathematics.					
Q14: The use of additional interventions in the mainstream education classroom would result in success for more learners	3.0	3.0	6.0	38.0	50.0
Q15: Prevention activities and early intervention strategies in schools would result in fewer referrals and placements to LSEN schools	3.0	10.0	9.0	42.0	36.0
Q22: Additional time and resources should be allocated first to learners who are not reaching benchmarks (as outlined in CAPS) before significant time and resources are directed to learners who are at or above benchmarks	10.0	18.0	14.0	46.0	12.0

The majority (76.0%) agreed that the primary function of classroom-based support is to ensure that all learners meet grade-level benchmarks in reading and mathematics. More than half (58.0%) of respondents agreed that learners with mild disabilities could achieve grade-level benchmarks in reading and mathematics upon receiving special needs services and that additional time and resources should be allocated first to learners who are not reaching benchmarks (as outlined in CAPS) before significant time and resources are directed to learners who are at or above benchmarks. The majority of respondents (88.0%) agreed that the use of additional interventions would result in success for more learners. Just over three-quarters (78.0%) of respondents agreed that prevention activities and early intervention strategies in schools would result in fewer referrals and placements to LSEN. From the histogram (see Figure 4.2), it is evident that the responses tend to the agreement side of the rating-scale for

Construct 3, as the histogram is skewed to the left and the mean is greater than the midpoint of 3.

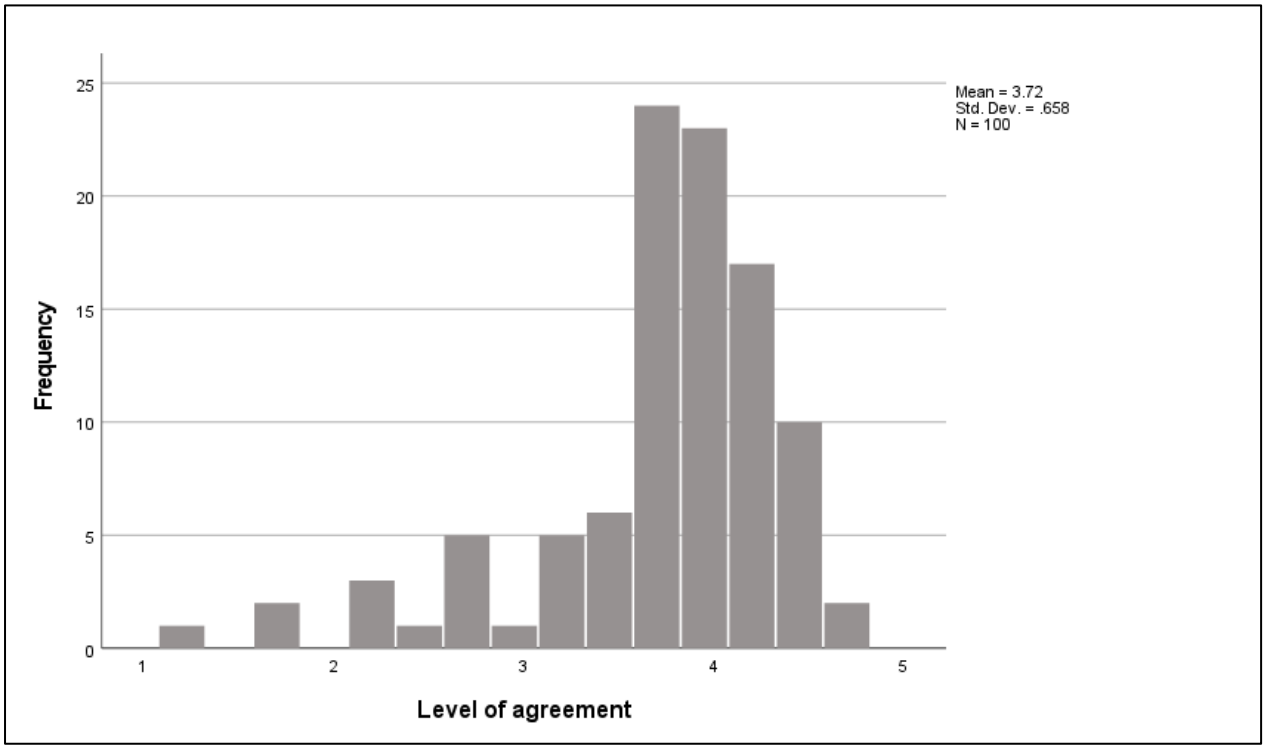

Figure 4.2: Histogram for Construct 3

Construct 4, "belief that involving other systems is vital for support interventions", is considered next. Table 4 shows the item-level statistics per item.

Table 4.5: Percentages at item-level for Construct 4

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q13: Mainstream education teachers would be able to implement more differentiated and flexible interventions if they had additional staff support	3.0	1.0	0.0	35.0	61.0
Q24: A learner's parents (guardian) should be involved in the problem-	1.0	2.0	15.0	82.0	1.0

solving process as soon as a teacher has a concern about the learner.					
Q25: Learners respond better to interventions when their parent (guardian) is involved in the development and implementation of those interventions	2.0	1.0	3.0	17.0	77.0

From Table 4 it can be seen that there were strong levels of agreement with the fact that mainstream education teachers would be able to implement more differentiated and flexible interventions if they had additional staff support (96.0%), a learner's parents (guardian) should be involved in the problem-solving process as soon as a teacher has a concern about the learner (83.0%) and learners respond better to interventions when their parent (guardian) is involved in the development and implementation of those interventions (94.0%). From the histogram (see Figure 4.3), it is evident that the responses tend to the agreement side of the rating-scale for Construct 4, as the histogram is skewed to the left and the mean is greater than the midpoint of 3.

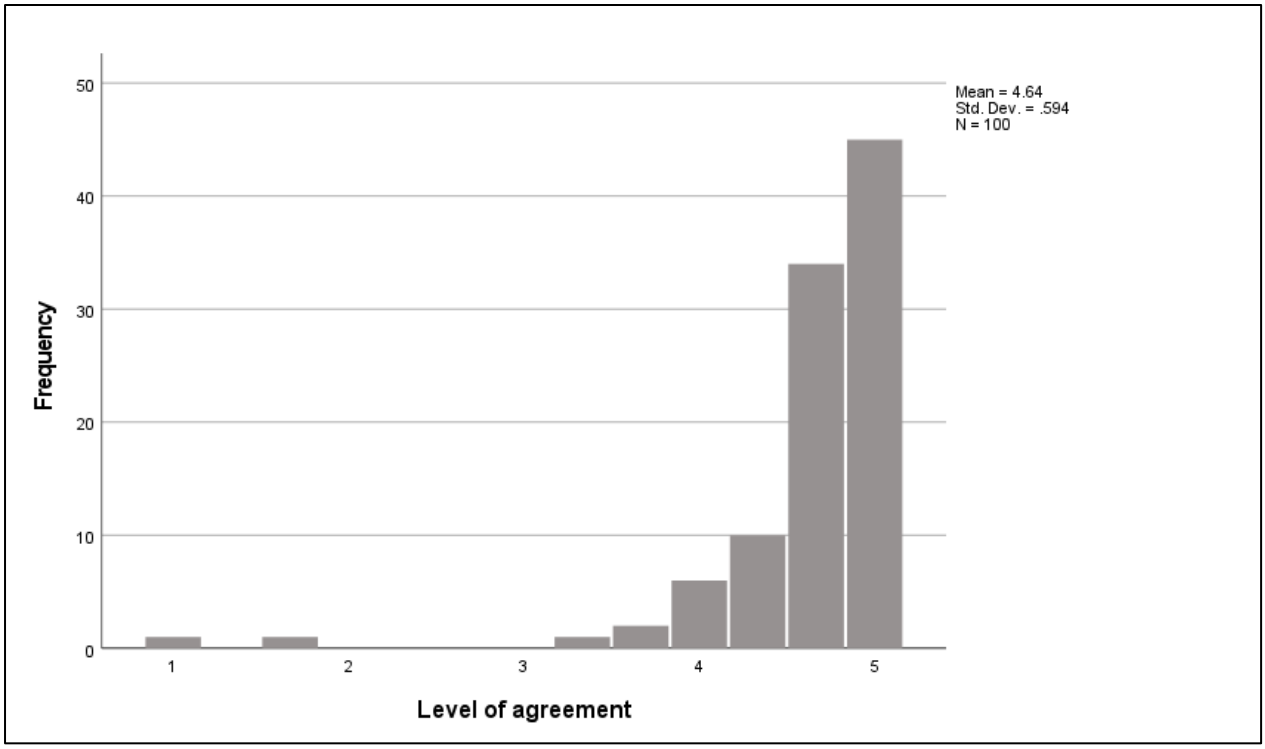

Figure 4.3: Histogram for Construct 4

Construct 5, “belief in involving other systems is vital for support interventions”, is considered next. Table 5 shows the item-level statistics per item.

Table 4.6: Percentages at item-level for Construct 5

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q12: Mainstream education teachers should implement more differentiated and flexible instructional practices to address the needs of a more diverse learner body.	4.0	6.0	7.0	44.0	39.0
Q16: The “severity” of a learner’s academic difficulty is determined not by how far behind the learner is in terms of his/her academic performance but by	5.0	11.0	21.0	54.0	9.0

how quickly the learner responds to intervention					
Q17: The “severity” of a learner’s behavioural challenges is determined not by how inappropriate a learner is in terms of his/her behavioural performance but by how quickly the learner responds to intervention	5.0	16.0	20.0	50.0	9.0
Q18: The results of IQ and achievement testing can be used to identify effective interventions for learners with learning difficulties and behaviour challenges	4.0	20.0	23.0	36.0	17.0
Q20: Using learner-based data to determine intervention effectiveness is more accurate than using only a teacher’s judgment	3.0	13.0	19.0	47.0	18.0
Q21: Evaluating a learner’s response to interventions is a more effective way of determining what a learner is capable of achieving than using scores from assessments (e.g., IQ/Achievement test)	1.0	7.0	18.0	57.0	17.0
Q23: Graphing learner data makes it easier for one to make decisions about learner performance and needed interventions	1.0	10.0	17.0	57.0	15.0
Q27: The goal of assessment is to generate and measure effectiveness of instruction/intervention	4.0	7.0	11.0	63.0	15.0

From table above, it can be seen that, for all the statements above relating to the belief in involving other systems is vital for support interventions, the respondents were in strong agreement, as the percentage of agreement outweighs the percentage of disagreement and neutrality for all statements. From the histogram (see Figure 4.4), it is evident that the responses tend to the agreement side of the rating-scale for Construct 5, as the histogram is skewed to the left and the mean is greater than the midpoint of 3.

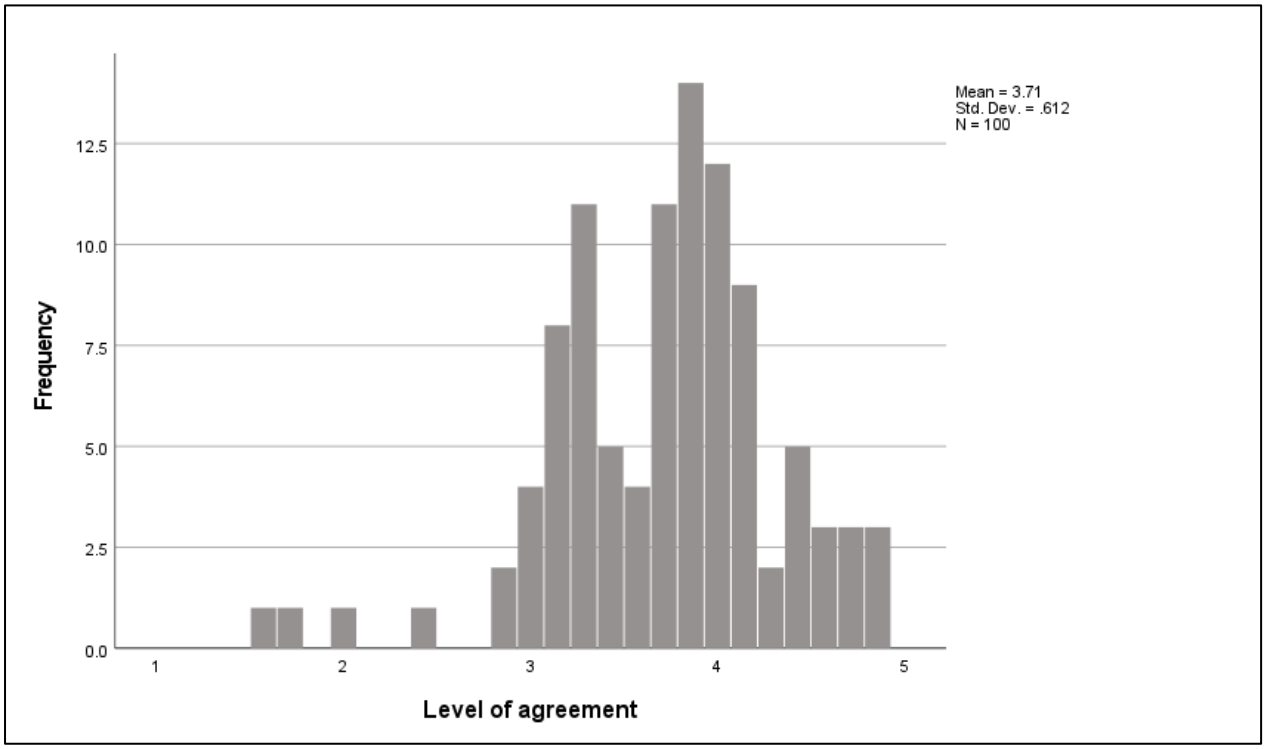

Figure 4.4: Histogram for Construct 5

4.3 DISCUSSION OF THE FINDINGS OF THE STUDY IN THE CONTEXT OF RELEVANT LITERATURE

The purpose of this study, as identified in Chapter 1, was to explore and describe teachers' beliefs about the viability of RTI in the South African classroom. This chapter has outlined five core themes that arose from the analysed data collected from the survey. These themes or constructs are listed below:

- Belief in core educational philosophies relating to RTI (Castillo et al., 2008; DoE, 2001)
- Belief in the adequacy of teaching mainstream curriculum (DoE, 2001; Huguenin, 2012)
- Belief in support initiatives steaming from mainstream educators (DoE, 2001)
- Belief in involving other systems as vital for support interventions (Donohue & Bornman, 2014)
- Belief in the underlying premises of RTI (Fuchs & Fuchs, 2006; Grigorenko, 2009; Lin, 2010)

The findings discussed in this section consider the results reflected in this chapter according to the core themes listed above within the context of relevant literature.

Results from the present study suggested that although the majority of respondents agreed with educational philosophies about inclusive education (52%), many respondents still did not indicate a strong enough belief in inclusive policies like White Paper 6 (DoE, 2001) to consider the financial buy-in that an initiative like RTI would require. Although data showed mediocre beliefs towards current policy, more respondents showed hospitable beliefs with regards to philosophies with a more practical approach – specifically the tiered approach to specific learning disorder diagnosis. The literature further contends that teacher beliefs are a strong indicator of classroom practices (Harley et al., 2000, Knotek, 2007, O'Conner & Freeman, 2012). It could be suggested that policies with a more practical outlook would generate larger teacher buy-in. This, however, would need further study.

The present study also showed that the majority of respondents disagreed with the premise that mainstream classroom instruction is effective enough for children with specific learning disorders and/or behavioural problems. This echoed the findings of a study done by Donohue and Bornman (2014), who found that many teachers still believed that the needs associated with specific learning disorders cannot be met in the mainstream classroom. However, the present study indicated that respondents believed that current classroom instruction is effective enough to result in 80% of learners achieving the CAPS stipulated benchmarks. This potentially highlights a mismatch between curriculum policy and inclusive policy in South Africa, which supports Harley et al.'s (2000) findings that the lack of a singular policy/approach with a practical outlay may make educators dismayed rather than resistant to change.

The present study reflected that most respondents showed agreeable beliefs in classroom-based support being the initial phase for struggling learners. They also recognised the necessity for this support to be within an early intervention model. It, however, needs to be noted that the current data also reflected a need for specialised support at the classroom level. Eighty-eight per cent (88%) of respondents believed that learners diagnosed with specific learning disorders required specialised interventions as early as possible. This data coincides with Batsche et al.'s (2005) findings that belief in early intervention within a multi-tiered system of intervention is imperative for implementing an approach like RTI.

In this survey, respondents beliefs about learners' additional support systems as vital for support interventions elicited the strongest agreeable responses. The present study investigated beliefs about three support categories which included: additional support staff available to the mainstream classroom, parent/guardian support in the intervention planning process, and parent/guardian support in the intervention implementation process. Strongly agreeable responses of 96%, 97%, and 94% were expressed, respectively. This indicates respondents' preference for a systemic response to at-risk learners.

As explained in Chapter 2, there is no single paradigm or model of RTI (Werts et al., 2014). This study however recognises a general framework that describes RTI as a

form of dynamic assessment (Fuchs & Fuchs, 2006) that is multi-tiered and optimally focused on early intervention (National Center for Learning Disabilities, n.d.). The data from the present study investigated respondents' beliefs which underlie the framework above. Respondents showed agreeable beliefs towards the use of differentiated instruction at the mainstream classroom level. They also reported agreement with the alternate assessment model that RTI provides, not only for the diagnosis of specific learning disorders and behavioural challenges but as a tool for evidence-based student data. Provision beyond formative assessment is, however, not clearly outlined in the National Curriculum and Assessment Policy Statement Grade R-12 (DoBE, 2011).

4.4 INTERNAL CONSISTENCY AS MEASURED BY CRONBACH'S ALPHA

As outlined in Chapter 3, the reliability of this study was determined using Cronbach's alpha in order to establish internal consistency. It is generally agreed that a Cronbach's alpha coefficient of 0.7 or higher is acceptable (Field, 2018). Ghazali (2008), however, argued that a Cronbach's alpha value of 0.6 or higher is sufficient when analysing data from the social sciences. Below in Table 4.4 is the SPSS analysis of the five constructs used in this study, followed by a commentary thereof.

Table 4.7: Internal consistency as measured by Cronbach's alpha

Belief in core education philosophies.

Cronbach's Alpha	N of Items
0.230	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q6: I believe in the underlying principles of Education White Paper 6, even if I disagree with some of the requirements	3.62	1.288	0.137	
Q19: Many students currently diagnosed with a specific learning disability/ learning disability do not have a disability- rather they came to school "not ready" to learn or fell too far behind academically for the available interventions to close the gap	3.62	0.662	0.137	

Belief in the adequacy of teaching mainstream curriculum.

Cronbach's Alpha	N of Items
0.376	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q7: Classroom instruction should be effective for 80% of students to achieve CAPS stipulated benchmarks in: reading (and) mathematics	5.11	2.624	-0.002	0.769
Q9: The majority of students with diagnosed learning disabilities achieve grade-level benchmarks set out by CAPS in: reading (and) mathematics	6.30	2.434	0.339	0.104
Q10: The majority of students with behavioural challenges achieve grade-level benchmarks set out by CAPS in: reading (and) mathematics	5.97	1.928	0.423	-.139

Belief in support initiatives steaming from mainstream educators.

Cronbach's Alpha	N of Items
0.582	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q8: The primary function of classroom-based support is to ensure that students meet grade-level (CAPS stipulated) benchmarks in: reading (and) mathematics	18.53	10.497	0.285	0.551

Q11: Students with mild disabilities who are receiving special-needs education services are capable of achieving grade-level benchmarks (i.e., mainstream education standards) in: reading (and) mathematics.	18.88	10.536	0.289	0.549
Q14: The use of additional interventions in the mainstream education classroom would result in success for more students	17.92	9.749	0.460	0.483
Q15: Prevention activities and early intervention strategies in schools would result in fewer referrals and placements to LSEN (Learners with Special Educative Needs) schools	18.24	8.961	0.509	0.450
Q22: Additional time and resources should be allocated first to students who are not reaching benchmarks (as outlined in CAPS) before significant time and resources are directed to students who are at or above benchmarks	18.91	9.573	0.318	0.539
Q26: All students can achieve grade-level benchmarks (as outlined in CAPS) if they have sufficient support.	18.59	10.878	0.121	0.631

Belief in involving other systems as vital for support interventions

Cronbach's Alpha	N of Items
0.741	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted

Q13: Mainstream education teachers would be able to implement more differentiated and flexible interventions if they had additional staff support	9.43	1.581	0.444	0.822
Q24: A student's parents (guardian) should be involved in the problem-solving process as soon as a teacher has a concern about the student.	9.16	1.772	0.685	0.570
Q25: Students respond better to interventions when their parent (guardian) is involved in the development and implementation of those interventions	9.27	1.431	0.628	0.579

Belief in the underlying premises of RTI.

Cronbach's Alpha	N of Items
0.709	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q12: Mainstream education teachers should implement more differentiated and flexible instructional practices to address the needs of a more diverse student body.	25.34	15.338	0.468	0.665
Q16: The "severity" of a student's academic difficulty is determined not by how far behind the student is in terms of his/her academic performance but by how quickly the student responds to intervention	25.91	15.214	0.525	0.653

Q17: The "severity" of a student's behavioural challenges is determined not by how inappropriate a student is in terms of his/her behavioural performance but by how quickly the student responds to intervention	26.00	14.828	0.544	0.647
Q18: The results of IQ and achievement testing can be used to identify effective interventions for students with learning difficulties and behaviour challenges	26.00	18.343	0.064	0.758
Q20: Using student-based data to determine intervention effectiveness is more accurate than using only a teacher's judgment	25.78	16.072	0.376	0.686
Q21: Evaluating a student's response to interventions is a more effective way of determining what a student is capable of achieving than using scores from assessments (e.g., IQ/Achievement test)	25.60	16.162	0.497	0.664
Q23: Graphing student data makes it easier for one to make decisions about student performance and needed interventions	25.67	16.466	0.420	0.677
Q27: The goal of assessment is to generate and measure effectiveness of instruction/intervention.	25.64	16.354	0.396	0.681

As can be seen above, the first construct of *belief in core education philosophies* measured unacceptable with an analysis of 0.230. Furthermore, no items could be deleted in order to promote the reliability of the construct as only 2 items were listed. Therefore, it is recommended that future researchers should add items to this construct, as it is argued that the more items there is per construct, the higher the Cronbach's alpha (Field, 2018). The second construct, namely the *belief in the adequacy of teaching mainstream curriculum,* also measured unacceptable. However, with the removal of item 7 the Cronbach's alpha jumps from a measurement of 0.376 to 0.769. This suggests that item 7 does not support this construct and future researchers should consider removing this item when this instrument is used within a South African context. Alternatively, this item can be submitted to an expert panel who will be able to align the wording of the item with the context and construct of future studies. Construct 3, the *belief in support initiatives steaming from mainstream educators*, also initially measured 0.582, which was unacceptable. However, with the removal of item 26, a measurement of 0.631 is obtained, which is then considered acceptable (Ghazali, 2008). This suggests that researchers wishing to use this instrument within a similar context to my study should consider removing this item. Both construct 4, belief in involving other systems as vital for support interventions and 5, belief in the underlying premises of RTI obtained a measurement of 0.761 and 0.709, respectively. These two constructs were therefore considered acceptable without any adaptions to the item list.

4.5 CONCLUSION

This chapter reported on the results generated by this survey and the findings thereof. The data were both discussed and represented graphically according to the sections outlined. The results were then briefly analysed considering the current literature available on RTI in South Africa. Chapter 5, which follows, will address the conclusions and implications drawn from this study, and considering the current research climate (COVID-19 pandemic), the limitations and further study recommendations will be made.

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CHAPTER FIVE: SUMMARY, FINDINGS AND RECOMMENDATIONS

5.1 INTRODUCTION

This research study set out to describe teachers' beliefs about the viability of RTI in the South African classroom. This included an investigation into the underlying principles of RTI as well as teachers' belief systems about learner support. In chapter 2, a review of current literature showed the use of RTI as both a diagnostic measure and intervention strategy, fast gaining popularity for its cultural inclusiveness. However, the investigation of teacher beliefs necessary for the viable implementation of an approach like RTI showed itself limited to international studies, highlighting a gap for South African inquiry.

In this final chapter, the primary research question is addressed based on the data which emerged from the cross-sectional survey. The researcher also responds to secondary questions which are considered in the light of Chapter 4's findings. Finally, the researcher also attends to the limitations of the study, the potential contributions of the study as well as recommendations for future research.

5.2 ANSWERING THE RESEARCH QUESTIONS

A primary question, as well as three secondary questions, were posed at the start of this research inquiry. To answer the primary research question, "What are Foundation Phase teachers' beliefs about the viability of RTI in the South African classroom?", the secondary questions are first explored in the section below.

5.2.1 ANSWERING THE SECONDARY RESEARCH QUESTIONS

5.2.1.1 What are Foundation Phase teachers' current perceptions on support for at-risk learners in the mainstream classroom?

The data produced by the survey showed that just over half (52%) of the respondents agreed with the contents of South Africa's inclusive education policy, White Paper 6

(DoE, 2001). The data also showed that although most teachers widely believe in the effectiveness of the current curriculum, the CAPS alone is not sufficient to address the needs of at-risk students. These findings concur with what was stated in the precursory literature review which pointed to the need for policy to provide a working model, like RTI, to guide classroom support practices.

5.2.1.2 What are the perceived advantages of a model like Response to Intervention?

Respondents of this survey highlighted three main advantages of a successful intervention model like RTI. Firstly, there would be fewer referrals and placements to LSEN schools. This not only reduces the premature escalation of at-risk students but also significantly reduces the administrative process for teachers and schools. It further reduces the current overload on LSEN waiting lists for student placement and ensures that learners' needs are still attended to during the 'waiting placement' process. Survey respondents also highlighted that early intervention models, like RTI, are beneficial in reducing the number of specific learning disorder diagnoses (which are often a requirement for LSEN placement). Finally, respondents showed that successful intervention models are beneficial in learners experiencing classroom success.

5.2.1.3 What are teachers perceived needs toward the implementation of RTI?

The respondents who partook in this survey almost unanimously agreed on the need for the involvement of support systems beyond the mainstream classroom. The respondents indicated the need for parent/guardian support in both the problem-solving and intervention implementation process. They also indicated that additional staffing was a necessity for more flexible and differential classroom instruction. This need was supported by teachers both in the government and private sector classrooms which shows that varying class size may not be a determining factor when considering additional support staff. Respondents also indicated that additional time and resources are an important allocation when considering at-risk learners in the mainstream classroom. It would therefore be important for future research to explore the specific time and resource needs when considering what a South African "Tier 1" RTI model should entail.

5.2.2 ANSWERING THE PRIMARY RESEARCH QUESTION: WHAT ARE FOUNDATION PHASE TEACHERS' BELIEFS ABOUT THE VIABILITY OF RTI IN THE SOUTH AFRICAN CLASSROOM?

The findings of this cross-sectional survey showed that 68% of the Foundation Phase teachers in this study believed that RTI is a viable option in the classroom. This was indicated by data that investigated respondents' beliefs in the underlying premises which underpin RTI. The respondents showed that additional support was needed in the mainstream classroom for more learners to experience classroom success. They also indicated that the use of formative assessment practices should ideally be used to guide differential instruction in the classroom as well as determine the course of intervention for at-risk learners. This is vastly different to the current practice of using assessment as a means of determining a learner's academic ability. The respondents also showed optimistic beliefs regarding the potential of mainstream classroom practices for struggling learners. The data indicated a willingness of respondents to address support in the classroom rather than immediately seeking additional interventions and diagnoses.

5.3 LIMITATIONS OF THE STUDY

The biggest challenge the researcher encountered during this study was the consequences of the COVID-19 global pandemic. COVID-19, and its far-reaching effects, specifically affected the study's sample size as well as caused delays in the data collection process.

Delays in the data collection process were largely caused by the National Lockdown called by President Cyril Ramaphosa in response to the Coronavirus outbreak in South Africa. Initially, the 21-day 'hard' lockdown, which included the closure of all schools, was to run from the 26th of March 2020 until the 16th of April 2020. It was further extended by 14 days, but schools remained closed until varying dates in June. The logistics surrounding data collection, particularly contacting teaching and management personnel, was further influenced by the fluctuating COVID-19 alert levels dictated by the declared state of emergency. These factors included the closure of departmental offices, curriculum adaptations across the country as well as the changing of school attendance allowances and protocols – as a result, the time frame for data collection was postponed until the 2021 academic year, 10 months later than intended.

The second major limitation to impact the study was the limited number of survey responses. Poor response rates may be due to COVID-fatigue and teachers experiencing high levels of burnout. COVID-fatigue may have also impacted teachers' responses to the survey questions considering the current schooling climate. However, this would require further investigation. Despite the modification of selection criteria which was adjusted to include private school personnel and the inclusion of various data collection platforms like Facebook forums, only 100 teachers completed the survey which dramatically limited the generalisability of the results.

The lack of previous studies completed, and the researcher's scope of discussions also posed limitations to the study which need to be considered. As mentioned in the precursory literature review, there is limited international research and no current national studies on teachers' beliefs about RTI. This limited the researcher's scope of understanding the research problem from a literary perspective. This study, however, aimed to produce a set of preliminary data for the perusal of future research.

The final limitation addressed is the scope of discussions. It is important to note that the researcher of the current study has limited experience in completing research studies. Although under the supervision of an experienced supervisor, the depth of discussions on the research findings therefore may be limited in comparison to other more experienced scholars.

5.4 POTENTIAL CONTRIBUTIONS OF THE STUDY

This study provides initial insight into the beliefs of Foundation Phase teachers on the viability of RTI in the South African classroom. It is the first quantitative study on this subject in South Africa which provides a starting point for future research on RTI's viability within the South African context. This study also provides stakeholders with a preliminary risk assessment when considering the expensive roll-out of a large-scale RTI model. As discussed in Chapter 2, RTI heavily relies on the change of teaching practices which are strongly determined by teachers' beliefs and attitudes. The data collected by this study offers education role players hope that RTI is a viable solution, especially considering the identification and support of specific learning disorders in our diverse context.

Despite the limited scope of this study, findings from this study suggested that RTI potentially offers viable solutions to South Africa's classroom support strategies and addresses the poor implementation of inclusive education. The findings of this study are also unique in that they are the first to reflect teachers' perspectives on RTI policy within the context of a global pandemic.

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

To ascertain the potential viability of implementing a model like RTI in the South African context, the following recommendations are made for future research.

- The study's sample limited the results to urban schools based in Gauteng. It would, therefore, be beneficial to do a national survey that would provide data from a wider range of contexts.

- The present study's findings could be expanded using qualitative research studies. Qualitative data has the potential to provide more personalised, in-depth data which is important when considering subjective concepts like belief systems.

- Additional quantitative and qualitative research on teachers' understanding of RTI would provide valuable information highlighting professional development needs involved in the potential roll-out of an RTI approach.

- A proposed pilot study that implements a model of RTI in a few select South African schools over a prolonged period could be undertaken. Such a study can be used to evaluate the effectiveness of RTI across the various schooling contexts found in South Africa and findings from such a study could be used to guide further research into the type of RTI model and approach most viable in the South African context.

- For the construct *belief in core education philosophies,* internal consistency could not be established. This being said, it only consisted of two items which is not ideal, because it is well-known that the more items a construct has, typically, the higher the Cronbach's alpha value. In addition, when having only two items, one cannot investigate the possibility of removing an item in order to

improve the Cronbach's alpha value. A recommendation is that items be added to the construct to overcome these limitations. For each of the constructs, *belief in the adequacy of teaching mainstream curriculum* and *belief in support initiatives steaming from mainstream educators*, internal consistency was only established after the removal of one item per construct. Future researchers can consider investigating why these two items did not work within a South African context. Thus, items 7 and 26 should be scrutinised in terms of their wording and grammar. Future researchers could either change the wording or drop these items all together.

5.6 CONCLUDING REMARKS

The purpose of this cross-sectional survey study was to investigate and describe teachers' beliefs about the viability of RTI in the South African classroom. Although this study's scope was limited by its sample size, it provided preliminary quantitative data on RTI in a post-global pandemic context. This is valuable, as these initial findings can be used to guide various other research endeavours which will contribute to our understanding of RTI's viability in the South African context. The current study provided insight into the current beliefs held by teachers when addressing at-risk learners in the mainstream classroom. Additionally, it highlighted teachers need for the involvement of various support systems when using a model like RTI to address at-risk learners in the mainstream classroom. As such, these findings can be regarded as valuable for further RTI research in South Africa.

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APPENDICES

Appendix A: Adapted survey

Selection of items for the survey

Question number	Original question (for Supervisor)	Question asked	Response options	Question objective	Contextualisation and/or customisation of question	Source
1	Job Description:	Select your current job description.	• Post level 1 (Classroom educator). • Post level 2 (Departmental head). • Post level 3 (Deputy principal). • Post level 4 (Principal). • Other, please specify).	Biographical- To provide background and context from which the teacher answered.	No.	Florida Problem-Solving/Response to Intervention Project (2008).

2	Years of Experience in Education:	Select your total number of years of experience in teaching (All grades).	• Less than 1 year. • 1 – 4 years. • 5-9 years. • 10 – 14 years. • 15-19 years. • 20 or more years.		Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response to Intervention Project (2008).
3	Number of Years in your Current Position:	Select your total number of years teaching in the Foundation Phase (Grade R-3).	• Less than 1 year. • 1 – 4 years. • 5-9 years. • 10 – 14 years. • 15-19 years. • 20 or more years.		Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response to Intervention Project (2008).
4	Number of Years in your Current Position:	Select the total number of years teaching your current grade (consecutive).	• Less than 1 year. • 1 – 4 years. • 5-9 years.		Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response to Intervention Project (2008).

			• 10 – 14 years. • 15-19 years. • 20 or more years.			
5	Highest Degree Earned:	Select your highest qualification earned.	• In progress. • Bachelor's degree and/or Post Graduate Certificate in Education. • Honours degree. • Master's degree. • PHD. • Other, please specify.		No.	Florida Problem-Solving/Response to Intervention Project (2008).
6	I believe in the philosophy of No Child Left Behind (NCLB) even if I disagree with some of the requirements.	I believe in the underlying principles of Education White Paper 6, even if I disagree with some of the requirements.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in principles of inclusive education set out by South African legislation.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).

7	Core instruction should be effective enough to result in 80% of the students achieving benchmarks in: a. reading b. maths	Classroom instruction should be effective for 80% of students to achieve CAPS stipulated benchmarks in: a. reading (and) b. mathematics	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the wide applicability of mainstream curriculum.	Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response to Intervention Project (2008).
8	The primary function of supplemental instruction is to ensure that students meet grade-level benchmarks in: a. reading b. maths	The primary function of classroom-based support is to ensure that students meet grade-level (CAPS stipulated) benchmarks in: a. reading (and) b. mathematics	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the role that classroom-based support plays in academic achievement.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).
9	The majority of students with learning disabilities achieve grade-level benchmarks in: a. reading b. maths	The majority of students with diagnosed learning disabilities achieve grade-level benchmarks set out by CAPS in: a. reading (and) b. mathematics	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the academic performance potential of students with diagnosed learning disabilities.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).

10	The majority of students with behavioural problems (EH/SED or EBD) achieve grade-level benchmarks in: a. reading b. maths	The majority of students with behavioural challenges achieve grade-level benchmarks set out by CAPS in: a. reading (and) b. mathematics	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the academic performance potential of students with behavioural challenges.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).
11	Students with high-incidence disabilities (e.g. specific learning disorder, EBD) who are receiving special education services are capable of achieving grade-level benchmarks (i.e., general education standards) in: a. reading b. maths	Students with mild disabilities who are receiving special needs education services are capable of achieving grade-level benchmarks (i.e., mainstream education standards) in: a. reading (and) b. mathematics	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the value and success of special needs services on students learning.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).
12	General education classroom teachers should implement more differentiated and flexible instructional practices	Mainstream education teachers should implement more differentiated and flexible instructional practices	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N).	The purpose of this question was to determine the extent to which a teacher believes in their responsibility to implement differential instruction.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).

	to address the needs of a more diverse student body.	to address the needs of a more diverse student body.	4- Agree (A). 5 Strongly agree (SA).			
13	General education classroom teachers would be able to implement more differentiated and flexible interventions if they had additional staff support.	Mainstream education teachers would be able to implement more differentiated and flexible interventions if they had additional staff support.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher feels capable and supported in order to implement differential instruction practices.	Yes, Department of Education (2001).	Florida Problem-Solving/Response to Intervention Project (2008).
14	The use of additional interventions in the general education classroom would result in success for more students.	The use of additional interventions in the mainstream education classroom would result in success for more students.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher believes in the value of differential instruction.	Yes, Department of Education (2001) and Department of Basic Education (2014).	Florida Problem-Solving/Response to Intervention Project (2008).
15	Prevention activities and early intervention strategies in schools would result in fewer referrals to problem-solving teams and placements in special education.	Prevention activities and early intervention strategies in schools would result in fewer referrals and placements to LSEN schools.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N).	The purpose of this question was to determine the extent to which a teacher believes in the value of early intervention.	Yes, Department of Education (2001) and Department of Basic Education (2014).	Florida Problem-Solving/Response to Intervention Project (2008).

			4- Agree (A). 5 Strongly agree (SA).			
16	The "severity" of a student's academic problem is determined not by how far behind the student is in terms of his/her academic performance but by how quickly the student responds to intervention.	The "severity" of a student's academic difficulty is determined not by how far behind the student is in terms of his/her academic performance but by how quickly the student responds to intervention.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine how a teacher measures the extent of a student's academic challenge.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
17	The "severity" of a student's behavioural problem is determined not by how inappropriate a student is in terms of his/her behavioural performance but by how quickly the student responds to intervention.	The "severity" of a student's behavioural challenges is determined not by how inappropriate a student is in terms of his/her behavioural performance but by how quickly the student responds to intervention.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine how a teacher measures the extent of a student's behavioural challenge.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
18	The results of IQ and achievement testing can be used to identify effective interventions for students with	The results of IQ and achievement testing can be used to identify effective interventions for students with	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N).	The purpose of this question was to determine the extent to which a teacher believes in the support and intervention value of formative achievement testing.	Yes, Department of Basic Education (2014).	Florida Problem-Solving/Response to Intervention Project (2008).

	learning and behaviour problems.	learning difficulties and behaviour challenges.	4- Agree (A). 5 Strongly agree (SA).			
19	Many students currently identified as "LD" do not have a disability, rather they came to school "not ready" to learn or fell too far behind academically for the available interventions to close the gap sufficiently.	Many students currently diagnosed with a specific learning disability/ learning disability do not have a disability-rather they came to school "not ready" to learn or fell too far behind academically for the available interventions to close the gap sufficiently.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine whether a teacher considers current rates of learning disability diagnoses as the best justification for student's academic challenges.	Yes, American Psychiatric Association (2013).	Florida Problem-Solving/Response to Intervention Project (2008).
20	Using student-based data to determine intervention effectiveness is more accurate than using only "teacher judgement."	Using student-based data to determine intervention effectiveness is more accurate than using only a teacher's judgement.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher esteems response to intervention as a valid reflection of student achievement.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
21	Evaluating a student's response to interventions is a more effective way of determining what a student is capable of achieving than	Evaluating a student's response to interventions is a more effective way of determining what a student is capable of achieving than	1- Strongly disagree (SD). 2- Disagree (D).	The purpose of this question was to determine the extent to which a teacher esteems response to intervention (learning potential) as	No.	Florida Problem-Solving/Response to Intervention Project (2008).

	using scores from "tests" (e.g., IQ/Achievement test).	using scores from assessments (e.g., IQ/Achievement test).	3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	a more accurate reflection of student achievement.		
22	Additional time and resources should be allocated first to students who are not reaching benchmarks (i.e., general education standards) before significant time and resources are directed to students who are at or above benchmarks.	Additional time and resources should be allocated first to students who are not reaching benchmarks (as outlined in CAPS) before significant time and resources are directed to students who are at or above benchmarks.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher considers the value of allocating additional resources to struggling students.	Yes, Department of Basic Education (2011).	Florida Problem-Solving/Response to Intervention Project (2008).
23	Graphing student data makes it easier for one to make decisions about student performance and needed interventions.	Graphing student data makes it easier for one to make decisions about student performance and needed interventions.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher considers the informant value of graphing student data.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
24	A student's parents (guardian) should be involved in the problem-solving process as	A student's parents (guardian) should be involved in the problem-solving process as	1- Strongly disagree (SD). 2- Disagree (D).	The purpose of this question was to determine the extent to which a teacher values early parental	No.	Florida Problem-Solving/Response to

	soon as a teacher has a concern about the student.	soon as a teacher has a concern about the student.	3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	involvement in support/intervention planning.		Intervention Project (2008).
25	Students respond better to interventions when their parent (guardian) is involved in the development and implementation of those interventions.	Students respond better to interventions when their parent (guardian) is involved in the development and implementation of those interventions.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher links parental involvement with the success of support interventions.	No.	Florida Problem-Solving/Response to Intervention Project (2008).
26	All students can achieve grade-level benchmarks if they have sufficient support.	All students can achieve grade-level benchmarks (as outlined in CAPS) if they have sufficient support.	1- Strongly disagree (SD). 2- Disagree (D). 3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).	The purpose of this question was to determine the extent to which a teacher considers the role of support in academic success.	Yes, Department of Education (2001) and Department of Basic Education (2014).	Florida Problem-Solving/Response to Intervention Project (2008).
27	The goal of assessment is to generate and measure effectiveness of instruction/intervention.	The goal of assessment is to generate and measure effectiveness of instruction/intervention.	1- Strongly disagree (SD). 2- Disagree (D).	The purpose of this question was to determine the extent to which a teacher links the purpose of assessment to intervention.	No.	Florida Problem-Solving/Response to Intervention Project (2008).

			3- Neutral (N). 4- Agree (A). 5 Strongly agree (SA).			

Appendix B: Original Survey

Beliefs Survey

***Directions**: For items 1-4 below, please shade in the circle next to the response option that best represents your answer.*

1. Job Description:

 PS/RtI Coach Teacher-General Education Teacher-Special Education

 School Counselor School Psychologist School Social Worker

 Principal Assistant Principal

 Other (Please specify): _____

2. Years of Experience in Education:

 Less than 1 year 1 – 4 years 5-9 years

 10 – 14 years 15-19 years 20-24 years

 25 or more years Not applicable

3. Number of Years in your Current Position:

 Less than 1 year 1 – 4 years 5-9 years

 10 – 14 years 15-19 years 20 or more years

4. Highest Degree Earned:

 B.A./B.S. M.A./M.S. Ed.S. Ph.D./Ed.D.

 Other (Please specify): _____

Directions: *Using the scale below, please indicate your level of agreement or disagreement with each of the following statements by shading in the circle that best represents your response*.

= Strongly Disagree (SD)
= Disagree (D)
= Neutral (N)

= Agree (A)

= Strongly Agree (SA)

	SD	D	N	A	SA
5. I believe in the philosophy of No Child Left Behind (NCLB) even if I disagree with some of the requirements.					
6. Core instruction should be effective enough to result in 80% of the students achieving benchmarks in					
6.a. reading					
6.b. math					
7. The primary function of supplemental instruction is to ensure that students meet grade-level benchmarks in					
7.a. reading					
7.b. math					
8. The majority of students with learning disabilities achieve grade-level benchmarks in					
8.a. reading					
8.b. math					
9. The majority of students with behavioral problems (EH/SED or EBD) achieve grade-level benchmarks in					
9.a. reading					
9.b. math					
10. Students with high-incidence disabilities (e.g. SLD, EBD) who are receiving special education services are capable of achieving grade-level benchmarks (i.e., general education standards) in					
10.a. reading					
10.b. math					
11. General education classroom teachers should implement more differentiated and flexible instructional practices to address the needs of					

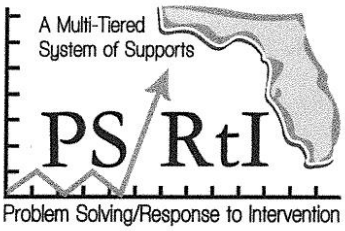
a more diverse student body.

	SD	D	N	A	SA
12. General education classroom teachers would be able to implement more differentiated and flexible interventions if they had additional staff support.					
13. The use of additional interventions in the general education classroom would result in					
14. Prevention activities and early intervention strategies in schools would result in fewer referrals to problem-solving teams and placements in special education.					
15. The "severity" of a student's academic problem is determined not by how far behind the student is in terms of his/her academic performance but by how quickly the student responds to intervention.					
16. The "severity" of a student's behavioral problem is determined not by how inappropriate a student is in terms of his/her behavioral performance but by how quickly the student responds to intervention.					
17. The results of IQ and achievement testing can be used to identify effective interventions for students with learning and behavior problems.					
18. Many students currently identified as "LD" do not have a disability, rather they came to school "not ready" to learn or fell too far behind academically for the available interventions to close the gap sufficiently.					
19. Using student-based data to determine intervention effectiveness is more accurate than using only "teacher judgement."					
20. Evaluating a student's response to interventions is a more effective way of determining what a student is capable of achieving than using scores from "tests" (e.g., IQ/Achievement test).					
21. Additional time and resources should be allocated first to students who are not reaching benchmarks. i.e. general education standards against benchmarks.					

	SD	D	N	A	SA
22. Graphing student data makes it easier for one to make decisions about student performance and needed interventions.					
23. A student's parents (guardian) should be involved in the problem-solving process as soon as a teacher has a concern about the student.					
24. Students respond better to interventions when their parent (guardian) is involved in the development and implementation of those interventions.					
25. All students can achieve grade-level benchmarks if they have sufficient support.					
26. The goal of assessment is to generate and measure effectiveness of instruction/intervention.					

THANK YOU!

Appendix C: Permission request to authors to use survey



Materials/Content Request Form

Please print clearly and either fax to 813-974-7647 or scan and email to judihyde@usf.edu.

Date: 05 June 2018

Name: Melissa Gardner

Phone: 082-589-7024 (South Africa) +27

Fax: ✓

Email: m.gardner.edpsych@gmail.com

Title of material to be duplicated/used:
Beliefs Survey (with cultural discourse adaptions)
Attached

Web address/location of material: www.rtinetwork.org/checklists

Intended use of material (including time period or duration if copying on an on-going basis is desired): Intended use: A survey study for a Masters dissertation.
Time period request: 6 months (June 2018 - December 2018)

Number of copies to be made (if applicable):

I agree to not sell this content for commercial purposes. (Yes) No

Additional comments (optional): Supervisor: Dr S. Bester
At the University of Pretoria
suzanne.bester@up.ac.za

Directions: *Using the scale below, please indicate your level of agreement or disagreement with each of the following statements by shading in the circle that best represents your response.*

① = **Strongly Disagree (SD)**
② = **Disagree (D)**
③ = **Neutral (N)**
④ = **Agree (A)**
⑤ = **Strongly Agree (SA)**

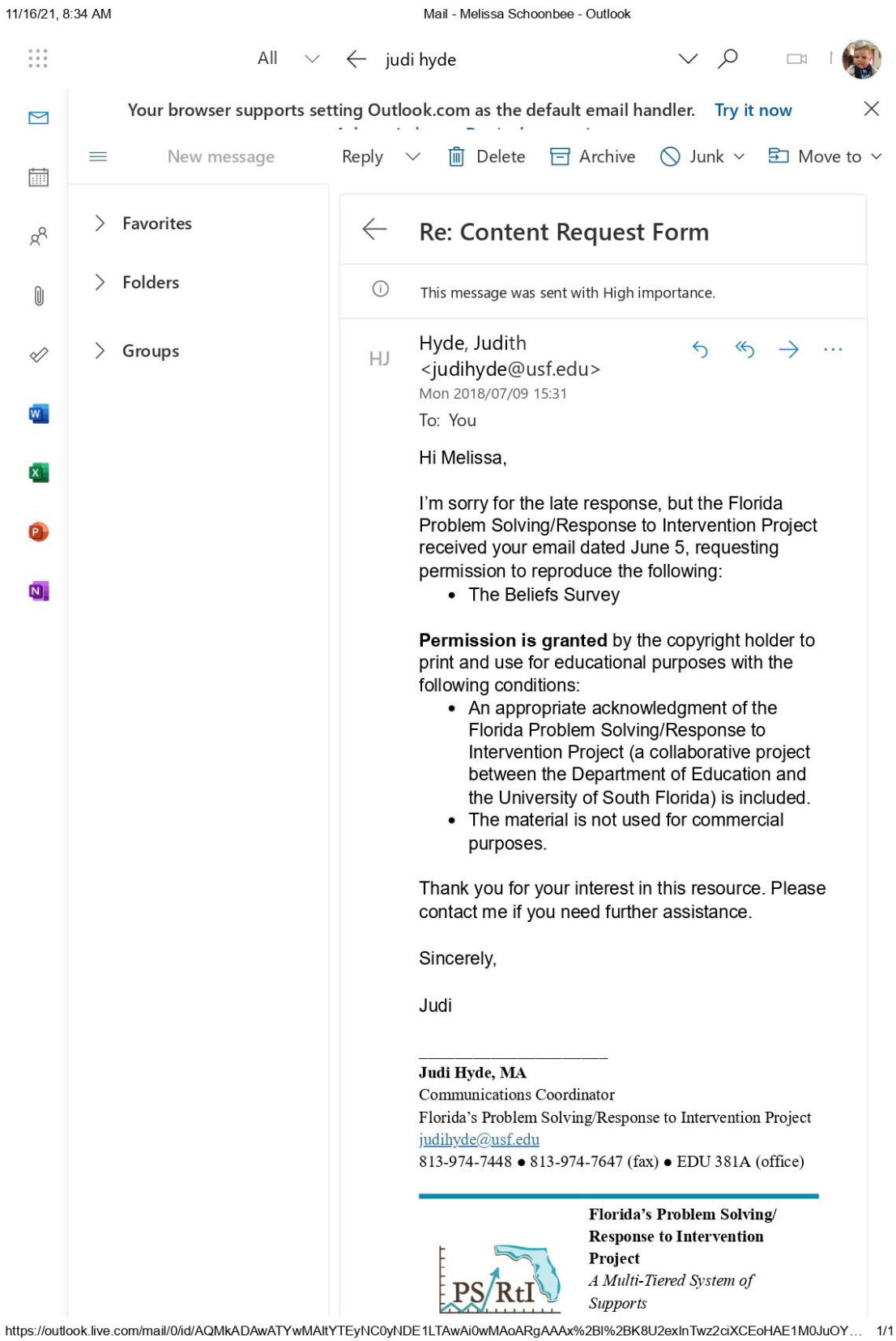
	SD	D	N	A	SA
5. I believe in the philosophy of No Child Left Behind (NCLB) even if I disagree with some of the requirements.	①	②	③	④	⑤
6. Core instruction should be effective enough to result in 80% of the students achieving benchmarks in					
6.a. reading	①	②	③	④	⑤
6.b. math	①	②	③	④	⑤
7. The primary function of supplemental instruction is to ensure that students meet grade-level benchmarks in					
7.a. reading	①	②	③	④	⑤
7.b. math	①	②	③	④	⑤
8. The majority of students with learning disabilities achieve grade-level benchmarks in					
8.a. reading	①	②	③	④	⑤
8.b. math	①	②	③	④	⑤
9. The majority of students with behavioral problems (EH/SED or EBD) achieve grade-level benchmarks in					
9.a. reading	①	②	③	④	⑤
9.b. math	①	②	③	④	⑤
10. Students with high-incidence disabilities (e.g. SLD, EBD) who are receiving special education services are capable of achieving grade-level benchmarks (i.e., general education standards) in					
10.a. reading	①	②	③	④	⑤
10.b. math	①	②	③	④	⑤
11. General education classroom teachers should implement more differentiated and flexible instructional practices to address the needs of a more diverse student body.	①	②	③	④	⑤

	SD	D	N	A	SA
12. General education classroom teachers would be able to implement more differentiated and flexible interventions if they had additional staff support.	①	②	③	④	⑤
13. The use of additional interventions in the general education classroom would result in success for more students.	①	②	③	④	⑤
14. Prevention activities and early intervention strategies in schools would result in fewer referrals to problem-solving teams and placements in special education.	①	②	③	④	⑤
15. The "severity" of a student's academic problem is determined not by how far behind the student is in terms of his/her academic performance but by how quickly the student responds to intervention.	①	②	③	④	⑤
16. The "severity" of a student's behavioral problem is determined not by how inappropriate a student is in terms of his/her behavioral performance but by how quickly the student responds to intervention.	①	②	③	④	⑤
17. The results of IQ and achievement testing can be used to identify effective interventions for students with learning and behavior problems.	①	②	③	④	⑤
18. Many students currently identified as "LD" do not have a disability, rather they came to school "not ready" to learn or fell too far behind academically for the available interventions to close the gap sufficiently.	①	②	③	④	⑤
19. Using student-based data to determine intervention effectiveness is more accurate than using only "teacher judgment."	①	②	③	④	⑤
20. Evaluating a student's response to interventions is a more effective way of determining what a student is capable of achieving than using scores from "tests" (e.g., IQ/Achievement test).	①	②	③	④	⑤
21. Additional time and resources should be allocated first to students who are not reaching benchmarks (i.e., general education standards) before significant time and resources are directed to students who are at or above benchmarks.	①	②	③	④	⑤
22. Graphing student data makes it easier for one to make decisions about student performance and needed interventions.	①	②	③	④	⑤
23. A student's parents (guardian) should be involved in the problem-solving process as soon as a teacher has a concern about the student.	①	②	③	④	⑤
24. Students respond better to interventions when their parent (guardian) is involved in the development and implementation of those interventions.	①	②	③	④	⑤

	SD	D	N	A	SA
25. All students can achieve grade-level benchmarks if they have sufficient support.	①	②	③	④	⑤
26. The goal of assessment is to generate and measure effectiveness of instruction/intervention.	①	②	③	④	⑤

THANK YOU!

Appendix D: Permission received from authors to use survey



11/16/21, 8:34 AM Mail - Melissa Schoonbee - Outlook

All judi hyde

Your browser supports setting Outlook.com as the default email handler. Try it now

New message Reply Delete Archive Junk Move to

Favorites

Folders

Groups

Re: Content Request Form

This message was sent with High importance.

HJ

Hyde, Judith
<judihyde@usf.edu>
Mon 2018/07/09 15:31
To: You

Hi Melissa,

I'm sorry for the late response, but the Florida Problem Solving/Response to Intervention Project received your email dated June 5, requesting permission to reproduce the following:

- The Beliefs Survey

Permission is granted by the copyright holder to print and use for educational purposes with the following conditions:

- An appropriate acknowledgment of the Florida Problem Solving/Response to Intervention Project (a collaborative project between the Department of Education and the University of South Florida) is included.
- The material is not used for commercial purposes.

Thank you for your interest in this resource. Please contact me if you need further assistance.

Sincerely,

Judi

Judi Hyde, MA
Communications Coordinator
Florida's Problem Solving/Response to Intervention Project
judihyde@usf.edu
813-974-7448 ● 813-974-7647 (fax) ● EDU 381A (office)

PS/RtI

Florida's Problem Solving/ Response to Intervention Project
A Multi-Tiered System of Supports

https://outlook.live.com/mail/0/id/AQMkADAwATYwMAItYTEyNC0yNDE1LTAwAi0wMAoARgAAAx%2BI%2BK8U2exInTwz2ciXCEoHAE1M0JuOY… 1/1

Appendix E: Invitation email

Dear Foundation Phase educator,

RE: Beliefs about Response to Intervention Survey

My name is Melissa Gardner and I am an educational psychology student at the University of Pretoria. I am inviting you to participate in this research study by completing the following survey. The purpose of this research is to investigate what you, as a foundation phase teacher in South African classroom, believe about the viability of Response to Intervention. Please read the follow information carefully before you decide whether or not you would like to participate or not.

Requirements:	You will be required to complete this electronic questionnaire, which should take 15 minutes of your time.
Confidentiality and anonymity:	You will not be required to provide any identifying information during the survey. Your responses will remain confidential and you will not be identified.
Possibility of harm/risk/discomfort:	There are no foreseeable discomforts or dangers to you in this study.
Remuneration:	There will be no payment for completing the survey.
Voluntary participation:	Your participation in this study is voluntary, and there are no negative consequences if you choose to decline or withdraw your participation at any point during the study.
Closing date:	Kindly complete this survey by no later than 31 May 2021.
Approved by the Faculty of Education Research Ethics committee:	EP18/08/01

If you agree to participate in this study, completion of this questionnaire will be considered as voluntary participation.

If you have any questions about the research please contact the researcher Melissa Gardner (m.gardner.edpsych@gmail.com), under the supervision of Dr. Suzanne Bester (suzanne.bester@up.ac.za).

To participate in the study please click “Begin” at the bottom.

Yours sincerely,

Mrs. Melissa Gardner

To begin please click “Begin”.

Appendix F: Research approval letter

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	04 April 2019
Validity of Research Approval:	04 February 2019 – 30 September 2019 2018/449
Name of Researcher:	Gardner M
Address of Researcher:	Unit 8, Hathersage Close
	13A Oxford Road
	Bedford Garderns, 2007
Telephone Number:	082 589 7024
Email address:	melly_schoonbee@hotmail.com
Research Topic:	A survey of foundation phase teacher' beliefs about Response to Intervention
Type of qualification	Masters
Number and type of schools:	All GDE Primary Schools
District/s/HO	All Districts

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

05/04/2019

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Making education a societal priority

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*
4. *A letter / document that outline the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

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Mrs Faith Tshabalala
Acting Director: Education Research and Knowledge Management

DATE: 05/04/2019

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