



UNIVERSITY of the
WESTERN CAPE

Faculty of Community and Health Sciences

Department of Psychology

Title: Establishing reliability and construct validity for the revised Emotional Social Screening Tool for School Readiness (teacher's form)

Student name: Lauren Carley Koopman

Student No: 3626944

Degree: M.A. Psychology (full thesis)

Supervisor: Dr Erica Munnik

Department: Psychology

Date: 27 June 2022

Keywords: Emotional Social Screening Tool for School Readiness (E3SR), construct validity, emotional competence, preschoolers, reliability, social competence, school readiness, South Africa, teacher's form.

DECLARATION

I declare that the study “**Establishing reliability and construct validity for the revised Emotional Social Screening Tool for School Readiness (teacher’s form)**” is my own work, that all the sources I have used or quoted have been indicated and acknowledged by means of complete references, and that this work has not been submitted previously in its entirety, or in any part, at any other higher education institution for degree purposes.



Lauren Koopman

June 2022



ABSTRACT

School readiness assessments in South Africa are still predominantly focused on the assessment of cognitive skills, to the detriment of socio-emotional skills. In an attempt to bridge this gap, the Emotional Social Screening Tool for School Readiness (E3SR) was developed, the psychometric properties of the E3SR were established and ongoing research is currently being done to revise the instrument. The aim of this study was to establish the reliability and construct validity of the revised E3SR teacher's form. The study used a cross-sectional survey design to gather data. Nine preschools within the Cape Town metropolitan area were selected to partake in the study. The respondent group comprised 24 preschool teachers, and 394 Grade R learner protocols constituted the target group. The completed 394 E3SR protocols were subjected to analysis via the IBM SPSS version 26 and the IBM SPSS Amos version 28 statistical programmes. The data analysis aimed to fulfil four functions, namely: a) summation of sample characteristics of the respondent group (teachers) and the target group (children); b) testing the data set for assumptions; c) establishing reliability estimates; and d) data reduction procedures to establish if the sample data fits the theoretical model. The study adhered to the basic ethics requirements as stipulated by the Humanities and Social Science Research Ethics Committee (HSSREC) at the University of the Western Cape, and these requirements were strictly upheld throughout the study. The assumption of normality was not met, but this was theoretically supported. Sample adequacy was met with a Kaiser-Meyer-Olkin (KMO) value of 0.964 and a sample of 324 for the 36-item scale. The subscales showed excellent reliability, with Cronbach's alphas ranging between .941 and .972. Confirmatory factor analysis results demonstrated a good model fit. The revised E3SR (teacher's form) is a reliable and valid screening instrument to use to supplement formative assessments, and it can be used to enhance communication between role-players to build children's emotional and social skills.

ACKNOWLEDGEMENTS

This thesis would not have been possible without the guidance and support of my amazing supervisor, Dr Erica Munnik. I would like to thank Dr Munnik for taking me on this academic journey, teaching me, and doing everything to help and guide me. I would like to thank Emma Wagener for assisting me on this project as a statistician. I am grateful to have learnt from you during this process. I would also like to acknowledge Professor Mario Smith for consulting on my thesis. Your time and input are immensely appreciated. I would like to extend a thank you to the principals of the various schools for allowing me to conduct research at the schools. I extend a heartfelt thank you to the teachers for using their free time to complete the protocols in aid of my study. I would not have been able to contribute to research without your help. This study was generously funded by the DVC at the University of the Western Cape, as well as the Ada and Bertie Levenstein Masters Bursary. I am extremely grateful for the funding I received. It provided me with the opportunity to study full time for the past two years. I would like to extend a huge thank you to my parents and my partner. It is impossible to thank you enough for your unwavering support throughout this journey. Thank you to my sisters, extended family, and my friends for the support and words of encouragement throughout my journey. I have come this far only through the grace of God, and I am thankful He has carried me through.

Table of Contents

Chapter 1	1
Introduction.....	1
Background.....	1
Problem Statement.....	3
Rationale	4
Aims and Objectives	4
Theoretical Framework.....	5
Thesis Layout.....	6
Technical Requirements.....	7
Chapter 2.....	8
Literature Review.....	8
Introduction.....	8
School Readiness Contextualised	8
Defining School Readiness and Its Impact on School Performance.....	8
The Importance of Early Stimulation and Detection of Difficulties in Preschoolers	9
Legislation in South Africa as a Frame for School Readiness.....	12
The Importance of Being Cognitively, Emotionally and Socially Ready for School.....	13
Assessment of School Readiness	15
Sources of Information	15
School Readiness Assessments in South Africa	16
The Emotional Social Screening Tool for School Readiness (E3SR)	17
Summary	22
Chapter 3.....	23
Methodology	23
Introduction.....	23
Aim	23
Objectives	23
Research Questions.....	23
Research Design.....	24
Research Setting.....	24
Respondent Population	25
Impact of the Covid-19 Pandemic on Data Collection	25
Sample.....	26

Recruitment Procedure.....	27
Time Schedule	27
Data Collection and Process	28
Instrument	29
Analysis.....	32
Data Capturing, Cleaning and Editing	32
Data Analysis	33
Summation of Sample Characteristics	34
Testing the Data Set for Assumptions	34
Internal Consistency.....	37
Confirmatory Factor Analysis.....	38
Ethics.....	42
Chapter 4.....	44
Results and Discussion	44
Introduction.....	44
Summation of Sample Characteristics	44
Assumption of Normality (Shapiro-Wilk).....	49
Assumption of Sample Adequacy.....	52
Internal Consistency (Reliability Coefficient Cronbach's Alpha).....	53
Confirmatory Factor Analysis (CFA)	55
Synthesis of results	63
Chapter 5.....	64
Conclusion	64
Introduction.....	64
Executive Summary	64
Significance of the Study	66
Limitations	67
Recommendations.....	69
REFERENCES	71
Annexure A: Ethical Clearance	86
Annexure B: The Revised Six-Factor E3SR.....	87
Annexure C: Information Sheet	90
Annexure D: Participant Consent Form.....	93

Annexure E: Letter of Permission from WCEed	95
Annexure F: Circular to Parents	96
Annexure G: Parent Consent Form.....	102
Annexure H: Permission Letter to Use E3SR.....	104
Annexure I: Codebook.....	105
Annexure J: Formal Editing Letter	108



List of Figures

Figure 1. <i>The First Constructed Version of the E3SR Screening Tool</i>	19
Figure 2. <i>The Revised E3SR Screening Tool</i>	30
Figure 3. <i>First Re-specification</i>	58
Figure 4. <i>Second Re-specification</i>	60



List of Tables

Table 2.1 *Personal Attributes in the Nine Domains of the Original E3SR*

Table 3.1 *Interpretive Guide for Alpha Values*

Table 3.2 *Criteria for the Fit Indices*

Table 4.1 *Demographic Composition of the Respondent Group (teachers) (N=24)*

Table 4.2 *Sample Composition of Preschools and Respondents*

Table 4.3 *Demographic Composition of the Target Group (children 5-7 years old)(N=324)*

Table 4.4 *Kolmogorov-Smirnov and Shapiro-Wilk Output for the E3SR Subscales (N=324)*

Table 4.5 *KMO Results for Sample Adequacy (N=324)*

Table 4.6 *Composite Scales' of Internal Consistency*

Table 4.7 *Internal Consistency reliability coefficients and descriptive statistics per domain and item*

Table 4.8 *Model One: Fitness Indices for the Revised E3SR*

Table 4.9 *Model Two: Fitness Indices for the Revised E3SR*

Table 4.10 *Model Three: Fitness Indices for the Revised E3SR*

Table 4.11 *Summary of Index Results*

Table 4.12 *The Results Relative to the Criteria for the Types of Fit*

Chapter 1

Introduction

Background

Preschool represents the start of children's formal education (Wesley & Buysse, 2003). Preschools that provide a conducive environment for children to learn are emphasised in many studies, as this heavily impacts the cognitive and socio-emotional wellbeing of learners (Bakken et al., 2017; Fuller et al., 2017; Leseman, 2002; Visser et al., 2019). The age at which children are expected to have mastered developmentally appropriate cognitive, emotional, and social skills before school entry has been the focus of various research studies locally (Amod & Heafield, 2013; Janse van Rensburg, 2015; Visser et al., 2019) and abroad (Allen & Kelly, 2015; Baber, 2016; Leseman, 2002). According to Kartal et al. (2016), the age of school entry has to do with whether the child is developmentally ready or has the age-appropriate skills to deal with the expectations and pressures from school.

During children's early years, their home environment and educational setting play a vital role in their development (Visser et al., 2019). Their home environment impacts how they think and behave, as well as what they expect and believe (Visser et al., 2019). Bakken et al. (2017) emphasise that children generally benefit from being in high-quality early learning environments. Children who receive high-quality learning during their early years are less likely to need extra support later in their schooling career and are more likely to graduate (Parham, 2016). According to Parham (2016), high-quality early education encourages confident learning, independence, and social engagement. Early childhood education is thus essential for skills development as a prerequisite for the attainment of future skills (Aubrey et al., 2012).

Due to poor early learning experiences at home and low-quality preschool programmes, many learners in South Africa do not reach the required readiness to cope with

mainstream education (Bruwer et al., 2014). In South Africa, the need for high-quality early learning centres has been the focus of ongoing attention (Munnik, 2018), especially for children from low-income families, children at risk and children with disabilities (Bruwer et al., 2014; Van Heerden, 2016). The South African government recognises early childhood education (ECE) as a critical area for the development of children's competencies (Storbeck & Moodley, 2011). The foundation phase of teaching, inclusive of the Grade R reception year, focuses on the establishment of the foundational skills that children need on the cognitive, emotional and social levels, as a prerequisite for further education.

The formalisation and implementation of the Grade R reception year in 2002 by the Departments of Social Development and Basic Education was one initiative to strengthen children's basic competencies (Munnik, 2018). Three government departments (Department of Education, Department of Social Development, and Department of Health) have continued to focus on developing and strengthening policies regarding ECE (Munnik, 2018; Storbeck & Moodley, 2011). However, these policies need to attend to all factors that influence ECE, such as diversity, risk factors, the difference in children's learning experiences, and reasonable expectations of children at school (Aiona, 2005; Donald et al., 2019), in order to present more integrated policies and strategies for school readiness (Munnik, 2018; Storbeck & Moodley, 2011).

There are many risk factors that impact ECE and children's readiness for school (Donald et al., 2019). A few key risk factors are poverty, which is linked to low socio-economic status; malnutrition, which could lead to developmental delays and social factors, such as the environment the child lives in, as well as the physical health of parents and their children (Donald et al., 2019; Munnik & Smith, 2019; Pem, 2015). The assessment of school readiness is one way to identify children at risk and to implement strategies to promote the development of skills needed to make them school-ready (Pem, 2015).

Prior to entering Grade 1, one of the sources of information that is usually used to establish if children are ready for entry to mainstream education is the school readiness assessment (Amod & Heafield, 2013). The purpose of these assessments is to give an indication of preschoolers' readiness in the areas of cognitive, emotional and social development (Bustin, 2007; Mohamed, 2013; Munnik, 2018).

School readiness assessments usually aim to determine if preschool learners will cope with the Grade 1 curriculum and to identify learners who may benefit from additional learning support (Amod & Heafield, 2013). Many studies have concluded that what children need to master are skills in the areas of reasoning, physical development, socio-emotional functioning and academic readiness (Amod & Heafield, 2013; Bustin, 2007; Mohamed, 2013; Munnik, 2018). It is also essential for children to be in good physical and mental health, and they should be able to communicate effectively (Bustin, 2007; Mohamed, 2013; Munnik & Smith, 2019; Wesley & Buysse, 2003).

Problem Statement

The Emotional Social Screening Tool for School Readiness (E3SR) was constructed by Munnik (2018) as a screening tool to assess emotional and social competence in preschoolers as a domain of school readiness. The psychometric properties were tested, which led to the revised E3SR. Whether the revised E3SR is reliable and valid to use has not yet been established. In order to ensure reliable findings and accurate results, validation of the screening instrument for its use on preschoolers needs to be done before it is used (Munnik & Smith, 2021). This study established if the revised E3SR (teacher's form) is a reliable and valid measure to use in the assessment of learners' emotional and social readiness to enter mainstream education.

Rationale

There is a lack of school readiness assessment measures that have adequate psychometric properties (Foxcroft et al., 2004; Mtati, 2020) and that are contextually appropriate to use in the South African context (Munnik & Smith, 2019). Most of the available measures are predominantly focused on the assessment of cognitive skills (Bustin, 2007; Mohamed, 2013), to the detriment of the child's emotional and social components (Mtati, 2020). In an attempt to bridge this perceived gap, Munnik (2018) developed a screening tool to assess emotional and social competence in preschoolers as a domain of school readiness.

The screening tool developed by Munnik (2018) is known as the Emotional Social Screening Tool for School Readiness (E3SR). Munnik (2018) established face and content validity of the E3SR, followed by a pilot study that established reliability, internal consistency and tested construct validity. This led to a revised nine-factor, 56 item questionnaire, as well as refinements of the E3SR (Munnik & Smith, 2019). A post-hoc analysis and data reduction as a further exploration of the factor structure of the E3SR was done, as recommended on the data set of the E3SR (Munnik et al., 2021). The results yielded a six-factor solution (Munnik et al., 2021). Without losing any essential content, the E3SR was successfully reduced to 36 items. It was recommended that the six-factor structure needed to be tested on a new sample. The present study's main aim was to confirm the six-factor structure obtained by the revised E3SR for model fit.

Aims and Objectives

This study aimed to establish reliability and construct validity of the revised E3SR (teacher's form). The main objectives were to:

- Determine the internal consistency of the revised E3SR.

- Confirm the factor structure of the revised E3SR.
- Determine whether the theoretical model underpinning the E3SR is supported.

Theoretical Framework

According to Michell (2001), the philosophical version of the practice of measurement in science is known as measurement theory. Through measurement theory, a test is developed as free as possible of measurement error and yielding the most appropriate measures of the desired constructs (Bandalos, 2018). Measurement theory provides the basis for test evaluation, as well as its uses and interpretations (Linn, 2010). The fundamental concepts of measurement theory, which provide the foundation for analysing the technical quality and the suitability of the uses and interpretation of test results, are validity and reliability (Linn, 2010). In social science measurement, it is important to examine the impact of measurement error on test results and to then use the results to improve the tests, as well as the testing procedures (Bandalos, 2018). Westen and Rosenthal (2003) emphasised the importance of the establishment of reliability and construct validity in psychological measures. Reliability refers to the consistency of a measure or research study (Taherdoost, 2016), while construct validity is the extent to which a test measures the trait or theoretical construct it is supposed to measure (Roodt, 2013).

The theoretical framework in which this study is located is measurement theory. DeVellis (2016) designed a four-step test construction model that highlights the methodological decisions necessary to develop a comprehensive scale. The first step is to develop a theoretical foundation by consulting relevant literature and available instruments and, determining exactly what needs to be measured. The second step is test construction; this is where the development of the screening tool would start. In this step, one would generate the item pool, make decisions regarding structure and content, and have the initial item pool

reviewed by a panel of experts. The third step is test validation; in this step, the tool is pilot studied and pre-tested to establish the psychometric properties of the scale. The fourth and final step is revision and ongoing refinement of the scale. This step entails the writing up of the manual, including a discussion of the administration and scoring, technical aspects of validity and reliability, and any other relevant information about the tool. This step also allows for continuous revision and refinement of the tool. Further research on the validity of the revised E3SR is done in this study. Thus, this study is an operationalisation of the last step of the model, where the revised E3SR is validated.

Thesis Layout

The thesis is organised into six chapters. *Chapter 1* provided an introduction and background to the study, including a focus on the problem statement, rationale, and the aims and objectives to the study. The chapter goes on to contextualise the study within the framework of measurement theory. The chapter concludes with a short description of the chapter organisation. *Chapter 2* provides a short summary of the most pertinent literature, with the main focus on Early Childhood Development (ECD) and Education (ECE), the importance of emotional and social skills in the context of school readiness, assessment, and the need for the validation of the revised E3SR (teacher's form). *Chapter 3* provides an overview of the methodological considerations for the study and data analyses, and reports on important ethics considerations. *Chapter 4* is an integrative chapter, presenting the results, followed by a discussion of relevant literature. *Chapter 5* presents an executive summary of the study, outlines the limitations of the study, and presents recommendations for the way forward as a conclusion to the study.

Technical Requirements

This study used the American Psychological Association's (APA) Seventh Edition style as a guideline for structure, references and citations. All sources were acknowledged in text and included in the reference list, as per APA guidelines. The content structure, as per APA guidelines, included Times New Roman, font size 12, double line spacing and the first line of each paragraph indented by 1.27 cm. The APA guidelines for headings used were as follows: Level 1 was centred, bold and title case font; Level 2 was left-aligned, bold, and title case; Level 3 was left-aligned, bold, italic and title case; Level 4 was indented, bold, title case and ended with a period. Before submission for examination, this thesis received formal editing (Annexure J).



Chapter 2

Literature Review

Introduction

The aim of this chapter is to provide an academic rationale for the study, as evidenced by a summative overview of the most recent literature on school readiness, including the definition of school readiness, the importance of early stimulation, and the impact school readiness has on school performance. The chapter also presents information on the importance of emotional and social skills as domains of school readiness and identifies the relevant policy and legislature that applies to school readiness in the South African context. The chapter proceeds to focus on the assessment of school readiness, the importance and accessibility thereof, and the testing bias towards cognitive functioning. The chapter proceeds to identify and discuss the establishment and relevance of the E3SR as a screening tool for emotional and social competence in the South African context. It includes a detailed description of the E3SR, its development, and what has been done to establish its psychometric properties. Finally, it focuses on the need to validate the revised version with a new sample.

School Readiness Contextualised

DEFINING SCHOOL READINESS AND ITS IMPACT ON SCHOOL PERFORMANCE

School readiness refers to whether a child is ready to successfully transition into formal schooling (Zuckerman & Halfon, 2003). Children need to develop the necessary skills, including visual and auditory processing, memory and problem-solving (van Zyl, 2011); the ability to control their emotions and be relatively independent and confident; and the ability to establish and maintain social relationships (Munnik & Smith, 2019), in order to be regarded as ready for formal schooling. Aiona (2005) states that school readiness is

measured by how well-prepared a child is to succeed in school. Williams and Lerner (2019) state that school readiness does not only involve the child but also the readiness of the school for the child and the ability of the family and community to optimally support the child. A child's readiness for school is thus conceptualised as a function of the family, classroom and community attributes (Munnik & Smith, 2019).

The progress the learner makes in all facets of their school career is referred to as school performance (Pan et al., 2019; van Zyl, 2011). Self-regulating skills, such as paying attention, following instructions and stopping inappropriate actions, are critical elements for school performance (Pan et al., 2019; van Zyl, 2011). Learners' level of school readiness in Grade 1 may impact their school performance positively if their readiness is at an appropriate level (van Zyl, 2011). School readiness can thus be considered as a contributing factor to school performance (van Zyl, 2011). School performance may in turn be negatively impacted if learners are not school ready, which could be attributed to inadequate school readiness programmes (Bruwer et al., 2014).

Several learners fail or have to repeat Grade 1 due to learning problems and inadequate school readiness programmes (Bruwer et al., 2014; Esterhuizen & Grosser, 2014). ECD programmes have positive short- and long-term effects on cognitive functioning; this is especially true for learners from poor or disadvantaged socio-economic backgrounds (Esterhuizen & Grosser, 2014). Children's socio-economic backgrounds have a direct impact on early stimulation or the lack thereof (du Toit, 2021).

THE IMPORTANCE OF EARLY STIMULATION AND DETECTION OF DIFFICULTIES IN PRESCHOOLERS

The early life of children forms a critical foundation for their development (Bakken et al., 2017). In this period, children are particularly vulnerable to harm, but it can also be a

period of rapid development and growth (Anderson et al., 2003). During this period, children develop a variety of skills in different domains that establish the foundation for their behaviour, speech, cognition and socio-emotional development (Bakken et al., 2017; Storbeck & Moodley, 2011). Children start school with different prior life experiences (Kartal et al., 2016). A simple example of such is that some children grow up with exposure to books, while other children start school without any previous encounter with books (Kartal et al., 2016).

Children who enter mainstream education with prior experience in early childhood education and stimulation tend to adapt to school expectations and rules faster, and to have a more enjoyable learning experience (Kartal et al., 2016). When there has been no prior early childhood education, the school environment and rules will be new to the child, and the child will need more time to adapt, which in turn will impact learning speed (Kartal et al., 2016). In addition, early stimulation can help to detect and prevent potential difficulties relating to learning, behaviour, and social interaction (Ertem & WHO, 2012). According to Kartal et al. (2016), early childhood education can also play a major role in minimising negative effects resulting from the socio-economic structure of the family.

Parental involvement is believed to be crucial for children's early academic development (Liu et al., 2020; Prinsloo & Reid, 2015). The parent-child relationship is important to stimulate educational aspirations and the desire to engage in school (Prinsloo & Reid, 2015). Studies have shown that learners' interest in learning is greater when their parents are involved in their academic activities (Munnik et al., 2021a; Prinsloo & Reid, 2015). Involved parents are parents who support their child's academic development and foster positive feelings within the child towards attending school (Munnik et al., 2021a; Prinsloo & Reid, 2015).

Social and economic strain on families can also have an impact on the learner's academic development (McKenzie, 2019). In South Africa, many children are impacted by a range of social and economic inequalities such as poverty, access to health care, nutrition and education (Ashley-Cooper et al., 2019; Atmore et al., 2012; Gordon et al., 2020). According to the research study done by Ashley-Cooper et al. (2019), income level and socio-economic background affect a child's educational outcomes. Income poverty often limits parent-child interaction, as well as access to early childhood development centres (Ashley-Cooper et al., 2019; Atmore et al., 2012; Munnik & Smith, 2019). In many disadvantaged communities, where children are exposed to multiple risk factors, low levels of stimulation can limit a child from reaching his or her full potential (Munnik et al., 2021a; Prinsloo & Reid, 2015).

Learners gain very little from early education programmes within stagnant and overcrowded environments, with little stimulation (Needham & Ülküer, 2020). In the South African context, poverty, poor access to health services and education, low-cost housing and overcrowded environments are a reality that many preschool children face (Atmore et al., 2012; Nortje, 2017). Research shows that children from wealthier homes perform better than children from low socio-economic backgrounds, and these children also enter formal schooling on an unequal footing (Ashley-Cooper et al., 2019; Ferguson et al., 2007).

Children's school success depends greatly on how prepared they are for school entry. One way to enhance children's school readiness is by attendance at a preschool programme (Needham & Ülküer, 2020). Studies suggest that, when children attend high-quality preschool programmes before school entry, this can promote their readiness for school (Bruwer et al., 2014; Duncan & Magnuson, 2013; Needham & Ülküer, 2020). Furthermore, studies suggest that preschool programmes with stimulating and optimal environments improve learners' school outcomes and career prospects (Ferguson et al., 2007; Leseman, 2002; Needham & Ülküer, 2020). The need for early childhood education (ECE) is thus

crucial to lay a strong foundation for children's successes and wellbeing later in life (Anderson et al., 2003; Storbeck & Moodley, 2011). Policy and legislation also play an important role concerning school readiness, as they provide a framework to the understanding of school readiness in context.

LEGISLATION IN SOUTH AFRICA AS A FRAME FOR SCHOOL READINESS

In South Africa, the foundation phase education policy has an established curriculum that caters for Grade 1 to Grade 3 learners (Janse van Rensburg, 2015). In 1998, Grade R was included as a formal school year (Janse van Rensburg, 2015). The Curriculum Assessment Policy Statement (CAPS) for teaching and learning was formally introduced in 2012 and included the foundation phase. In 2010, Grade R became compulsory for all five- and six-year-old children (Atmore et al., 2012; Janse van Rensburg, 2015). However, the Government's target of placing every child in Grade R before entering mainstream education was not met in 2010 (Atmore et al., 2012). According to Statistics South Africa (2016), enrolment in Grade R more than doubled from 2002 to 2015. However, the Grade R enrolment of around 600 000 between 2010 and 2015 was significantly lower compared to Grade 1 enrolment, which was 1.2 million (Statistics South Africa, 2016).

According to the South African Schools Act 84 (Republic of South Africa, 1996), starting Grade 1 (and thus their schooling career) is compulsory for all children from seven years old. Parents are responsible for their children attending school from the age of seven until the child reaches 15 years of age, or until they have completed Grade 9 (Republic of South Africa, 1996). The act also states that every child has a right to basic education and may not be refused admission to a public school on the grounds that their parent(s) is unable to pay school fees (Republic of South Africa, 1996). At the end of the Grade R year, learners should have achieved certain assessment standards according to CAPS (Janse van Rensburg,

2015). When passing from Grade R to Grade 1, learners are expected to be cognitively, physically, emotionally, socially, and linguistically ready to start their schooling career (Janse van Rensburg, 2015). These abilities are assessed through school readiness assessments.

THE IMPORTANCE OF BEING COGNITIVELY, EMOTIONALLY AND SOCIALLY READY FOR SCHOOL

As much as school readiness depends on scholastic ability, it also greatly depends on the cognitive, emotional and social skills that children possess when they enter mainstream education at the age of six to seven years (van Zyl, 2011). Cognitive, emotional, linguistic, motor, physical and social skills are all important facets of school readiness (van Zyl, 2011; Pan et al., 2018). According to Gregory et al. (2021), research has shown that learners' later academic achievement is greatly associated with their school readiness across the mentioned domains. Studies emphasise that there is a significant relationship between the role of social-emotional competence and academic performance, both domains in school readiness (Denham, 2006; Mtati, 2020).

Social and emotional skills are skills that develop from birth and are essential skills that children need to have developed to be able to learn (Allen & Kelly, 2015; Denham, 2006). Emotional competency, as defined by Munnik (2018), is behaviour driven by the child's inner self and contains a skill set that allows the child to deal with age-appropriate issues (Mtati, 2020). Emotional competency is the skill of competently dealing with emotion-provoking circumstances, understanding those emotions and being able to adapt to the social context (Mtati, 2020). Social competency, as defined by Munnik (2018), includes the focus on external relationships as well as the interactions and cooperative activities with others (Mtati, 2020). Social competency is the skill of behaving in a socially acceptable manner and allowing others to achieve social tasks (Mtati, 2020).

Social-emotional competency is defined as showing the appropriate manner of regulating emotions, showing empathy, and social problem-solving skills (Denham et al., 2014). Denham et al. (2014) further states that children who struggle with regulating their negative emotions may find it difficult to focus on learning and can be at a disadvantage in the classroom (Alzahrani et al., 2019). In contrast, children who have developed adequate emotional regulation skills may engage in the classroom without problems, making learning easier for them and socialising with peers a positive experience (Alzahrani et al., 2019; Denham et al., 2014).

Social-emotional development is the process of learning what culturally and socially appropriate behaviour is, when children start to understand who they are, express their feelings and develop strong, meaningful relationships with others (Darling-Churchill & Lippman, 2016; UNESCO, 2017). Acquired social and emotional skills are essential for children to comply with rules, complete tasks, develop a positive sense of self, show empathy, trust their own abilities, as well as identify and regulate their emotions appropriately (Darling-Churchill & Lippman, 2016; Denham, 2006). These skills also influence children's interactions with others and how they respond to events happening around them (Alzahrani et al., 2019). When interactions and/or communications are positive or negative, this impacts children's emotional and social skills (Alzahrani et al., 2019).

Attending preschool is important for children's development as it allows children to start learning about their identities and their own feelings, by practicing social and emotional skills with their teachers and peers (Alzahrani et al., 2019). Children's social-emotional competence is highly dependent on the interaction between adults and children (Bustin, 2007). Teachers play a vital role in children's development by means of a strong teacher-child relationship that fosters a good foundation in the development of children's social and emotional competence (Alzahrani et al., 2019). To foster a good foundation, teachers can use

a variety of strategies such as group activities, warm body language, paying attention to children's needs, etc. (Alzahrani et al., 2019). The assessment of children's competencies is one way to establish if they are ready to enter mainstream education; this is typically accomplished through school readiness assessments.

Assessment of School Readiness

SOURCES OF INFORMATION

The decision to send a child to school is usually made by the parents and the ECD teacher, if the child attends preschool (McBryde et al., 2004). Parents can provide a broad picture of the child's development, and the ECD teacher gives an idea of the child's abilities based on their perception (McBryde et al., 2004). However, parents and teachers may be unable to make informed decisions about the best schooling alternatives for the child (Amod & Heafield, 2013). Consequently, in order to obtain an accurate picture of where the child is at and to assess if the child is ready for school, a school readiness assessment is usually done (Aiona, 2005).

School readiness assessments are psychometric tests which measure a child's cognitive, social, emotional and physical readiness for school; they involve the child, parents, family, teachers, schools and community to give an accurate picture of the child (Maxwell & Clifford, 2004; Munnik & Smith, 2019). School readiness assessments are usually done by the teacher and are built into their assessment practise (Aiona, 2005; Amod & Heafield, 2013). If extra information is needed, a formal assessment is done by either a psychologist or occupational therapist (De Witt et al., 2020; McBryde et al., 2004). Maxwell and Clifford (2004) report on the major purposes of school readiness assessments; these are aimed at improving children's capacity to learn, to identify children with special needs, to monitor trends over time, and lastly to identify if the problem lies with the child or the teacher. It is

therefore important for these assessments to be ethical, appropriate, reliable and hold validity (Aiona, 2005; Amod & Heafield, 2013).

A few school readiness assessments currently available to assess emotional and social competence are as follows: School Readiness Screening Instrument for Grade 00 (Pre-Grade R) learners (Mohamed, 2013), developed in South Africa, Emotional Competence Screening for Preschoolers (Ştefan et al., 2009), Social Competence Screening for Preschoolers (Ştefan et al., 2009), developed in Romania, and the Preschool Behavioural and Emotional Rating Scale PreBERS (Epstein et al., 2009), developed in Washington, DC.

SCHOOL READINESS ASSESSMENTS IN SOUTH AFRICA

In South Africa, school readiness assessments remain a highly contentious issue for many reasons (Amod & Heafield, 2013). Firstly, psychological assessments were historically misused; secondly, the assessments used have outdated norms; and thirdly, many assessments were normed on a limited South African population group (Amod & Heafield, 2013; Foxcroft et al., 2004). School readiness assessments are mainly done in an educational environment and are greatly skewed towards cognitive functioning and academic skills (Amod & Heafield, 2013; Mtati, 2020). Mtati (2020) states that most measures included in assessment batteries focus on scholastic aptitude, intellectual functioning and developmental abilities.

Professionals in South Africa who are involved in school readiness assessments usually use the Aptitude Test for School Beginners (ASB), to test academic aptitude (Amod & Heafield, 2013), the Griffiths Mental Developmental Scales, to measure developmental abilities (Jacklin & Cockcroft, 2013), and the Junior South African Individual Scale (JSAIS), to measure the child's cognitive abilities (Theron, 2013).

Amod and Heafield (2013) add that other tests that are sometimes used as adjuncts to the above measures are the School Readiness Evaluation by Trained Testers (SETT), the

Nursery School Questionnaire (NQES), and the Herbst Instrument for Measuring Cognitive and Motor Development. Most of these assessments were developed more than twenty years ago. Although they are still endorsed and used in assessment practices (Health Professions Council of South Africa [HPCSA], 2010), many are outdated and not culturally suitable in the post-apartheid South African milieu (Mtati, 2020; Munnik, 2018).

School readiness assessments usually assess a broad range of skills such as physical development, cognitive skills and academic readiness, with a lesser focus on social and emotional readiness (Gregory et al., 2021). Munnik (2018) indicates that social and emotional skills are essential for children to become school-ready and therefore, evaluation of these skills needs to be included in formal school readiness assessments. Munnik (2018) also emphasises that most established batteries that are still used in the South African context to date are not assessing the emotional and social needs of children before entry into mainstream education.

To this end, Munnik (2018) developed the Emotional Social Screening Tool for School Readiness (E3SR) to assess emotional and social competencies in preschool children. This measure aimed to be culturally appropriate to produce valid assessment of the emotional and social skills that children possess within a multicultural context. It was reported that the E3SR is valid and reliable, contextually sensitive, cost-effective and easy to administer (Munnik, 2018). Its target population is preschool children (Grade R learners). The E3SR can be used to complement existing formal and informal school readiness assessment practices (Munnik, 2018).

The Emotional Social Screening Tool for School Readiness (E3SR)

Munnik (2018) developed the E3SR as a contextually relevant measure with a focus on the social and emotional skills that learners need to possess to assist them to adjust to the

formal schooling environment on entering Grade 1. The E3SR is easily completed by teachers within 10 to 15 minutes. Teachers complete the questionnaire based on their knowledge of the learner's social and emotional skills; this knowledge is gathered through observation in the classroom and school environment. The E3SR identifies potential strengths and weaknesses to guide parents and educators towards appropriate intervention, if needed. The instrument was developed in English as English is currently perceived as the primary language of instruction in mainstream education.

The first constructed form of the E3SR consisted of two subscales, namely Emotional Competence and Social Competence, each with their respective domains. Emotional Competence focused on the more intrapersonal competencies of the child, while Social Competence focused on the more interpersonal aspects of the child (Munnik, 2018).

Figure 1 presents a graphic representation of the subscales, domains and the number of items in each domain of the originally constructed E3SR.

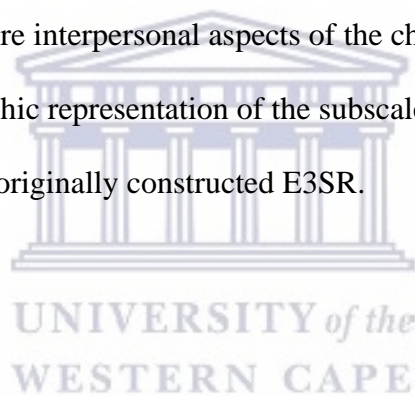


Figure 1

The First Constructed Version of the E3SR Screening Tool

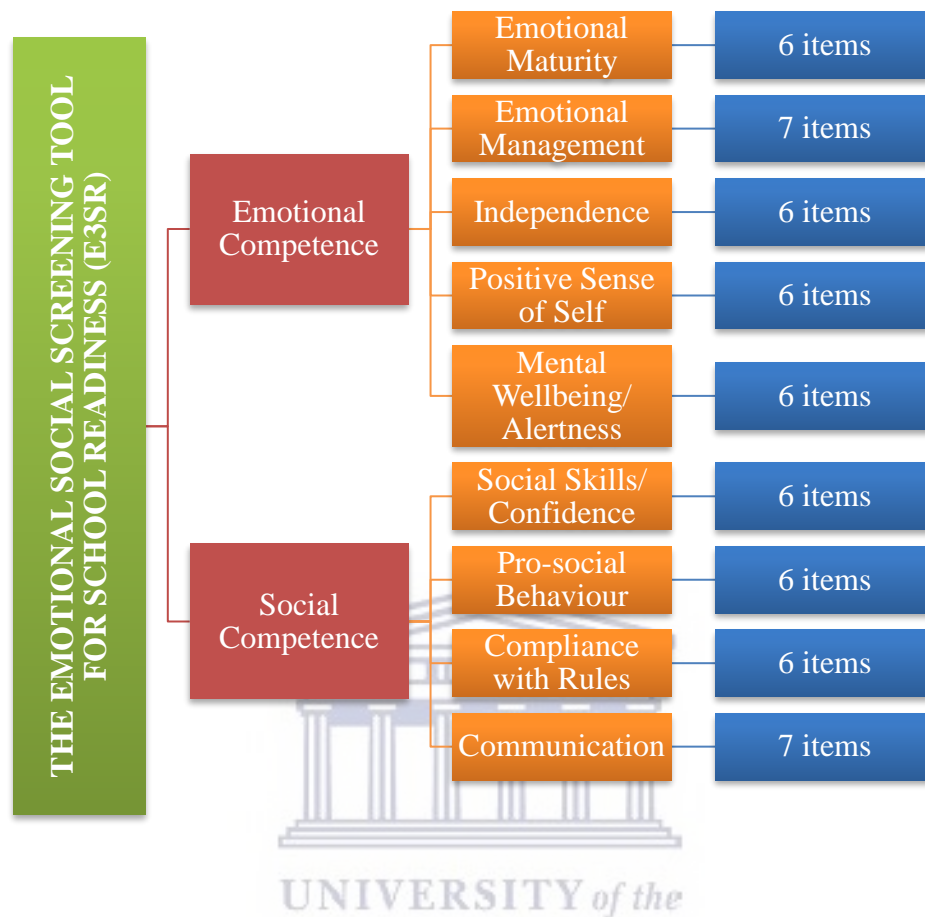


Figure 1 illustrates that the Emotional Competence subscale consisted of five domains: (a) the Emotional Maturity domain, which referred to the child's ability to self-reflect about choices and actions and the consequences thereof, consisting of six items; (b) the Emotional Management domain, which referred to the child's ability to identify and understand emotions in context, consisting of seven items; (c) the Independence domain, which referred to the child's ability to initiate behaviour and take responsibility for their actions in a developmentally appropriate way, consisting of six items; (d) the Positive Sense of Self domain, which referred to the child's ability to hold onto a coherent and constructive sense of self that is not subject to situational outcomes, consisting of six items; and (e) the Mental Wellbeing domain, which referred to the presence of a general sense of wellbeing and the absence of significant symptoms that are not age appropriate and do not fit the specific

situation. In addition, this domain includes Alertness, which referred to the ability to be attentive and to answer age-appropriate questions. This domain consisted of six items.

The Social Competency subscale consisted of four domains: (a) the Social Skills domain, which referred to the ability to interact with others in a developmentally appropriate way, consisting of six items; (b) the Pro-social Behaviour domain, which referred to behaviour and actions that are to the benefit of others, consisting of six items; (c) the Compliance with Rules domain, which referred to the ability to comply with and to follow rules in specific settings, consisting of six items; and (d) the Communication domain, which referred to the ability to use language and non-verbal expression clearly and effectively in the service of expressing thoughts, feelings and needs, consisting of seven items (Munnik, 2018). The original version of the E3SR had 56 items, with the Emotional Competence subscale consisting of 31 items and with 25 items in the Social Competence subscale. The mentioned domains also included personal attributes. Table 2.1 presents the personal attributes in each of the nine domains.

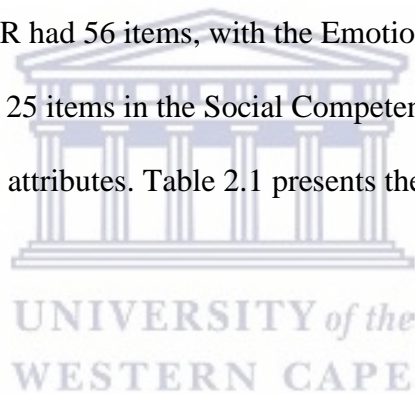


Table 2.1*Personal Attributes in the Nine Domains of the Original E3SR*

Domain	Personal Attributes How well the child is able to:
Emotional Maturity	<ul style="list-style-type: none"> - take responsibility for actions and emotions - learn from experiences - adjust to changes in a positive way - deal with their emotions in an age-appropriate way
Emotional Management	<ul style="list-style-type: none"> - become aware of their own and others' emotions - identify emotions - understand these emotions in context - regulate these emotions appropriately
Independence	<ul style="list-style-type: none"> - self-direct behaviour and thoughts - take responsibility for his/her thoughts, feelings and actions, whether alone or in a group
Positive Sense of Self	<ul style="list-style-type: none"> - show confidence in themselves - see benefits in required tasks or requests - show willingness to engage with challenges - show willingness to persevere - accept negative feedback and see it as separate from the self
Mental Wellbeing and Alertness	<ul style="list-style-type: none"> - function in a societal context and meet the demands of everyday life. - identify strengths and build on them - focus on assets and abilities rather than on problems or weaknesses. - demonstrate an absence of physical, emotional or psychological symptoms - demonstrate general knowledge - demonstrate awareness of surroundings - carry out general reasoning
Social Skills/Confidence	<ul style="list-style-type: none"> - establish warm and empathic relationships - maintain productive and constructive interpersonal relationships - assert him- or herself in social contexts in a socially acceptable manner - successfully achieve social tasks by being aware of the thoughts and feelings of others - direct actions appropriately to achieve goals
Pro-social Behaviour	<ul style="list-style-type: none"> - cooperate with others - act in the interest of self and others - show respect towards others - show thoughtfulness towards others
Compliance with Rules	<ul style="list-style-type: none"> - understand social rules - adhere to ground rules stipulated in specific contexts - follow instructions - cope with discipline and reprimand - be responsive to feedback about behaviour in relation to compliance with rules
Communication	<ul style="list-style-type: none"> - articulate his or her needs effectively, confidently and clearly - be aware of the need to pay attention to the expressed thoughts, feelings and needs of others - listen to and understand the expressed thoughts, feelings and needs of others. - read and accurately interpret non-verbal cues

Note. Sourced from Munnik (2018).

After an initial pilot study in 2018 (Munnik, 2018), confirmatory factor analysis (CFA) demonstrated a promising fit to the model. On the basis of these findings Munnik (2018) recommended that there was room for further investigation on the E3SR's factor structure. A post-hoc analysis of the data yielded a revised six-factor structure (four factors relating to emotional competence and two factors relating to social competence), with a total of 36 questions. This constituted the revised version of the E3SR, which will be discussed in detail under "Instrument" in the Methodology section (Chapter 3). Adaptations of the test to other languages were also recommended and are currently in progress.

Summary

Research has identified that early childhood education is critical before entry into mainstream education. Early stimulation can detect learning difficulties or prevent them from occurring later in life. Many children in South Africa are heavily impacted by social and economic inequalities, which cause them to enter formal schooling with a disadvantage. Before entry into formal schooling, a school readiness assessment is usually done in order to gain an accurate picture of the child's cognitive, emotional and social skills, to establish school readiness. The school readiness assessments presently available place emphasis on cognitive and scholastic functions, with most lacking prominent focus in the emotional and social competence domains. To bridge this gap, Munnik (2018) developed the E3SR. This study's main aim was to establish the construct validity and reliability for the revised E3SR (teacher's form).

Chapter 3

Methodology

Introduction

This chapter outlines the aim, objectives and research questions that guided the study. It also covers the methodological considerations that underpinned the validation study, including a discussion on the chosen research design, research setting, respondent population, current factors that impact social and emotional competence, sample, time, sample recruitment procedure, time schedule, data collection and process, instrument used and data analyses. It proceeds to cover the ethical decisions that were made and implemented.

Aim



This study aimed to establish the reliability and construct validity of the revised E3SR (teacher's form).

Objectives

UNIVERSITY of the
WESTERN CAPE

The main objectives were to:

- Determine the internal consistency of the revised E3SR.
- Confirm the factor structure of the revised E3SR.
- Determine whether the theoretical model underpinning the revised E3SR is supported.

Research Questions

- Is the revised E3SR internally consistent?
- Is the factor structure of the revised E3SR valid?
- Is the theoretical model underpinning the revised E3SR supported?

Research Design

A cross-sectional survey design was used to gather data. Survey designs are usually seen as a useful approach to research variables and constructs (Ponto, 2015). Surveys are relatively easy to conduct with a large population and can be cost effective (Jones et al., 2013). A cross-sectional survey measures a phenomenon at one point in time (Setia, 2016). This means the participants' exposure, as well as outcomes, are measured at the same time (Setia, 2016). The data gathered by means of the revised E3SR questionnaire was used to establish the psychometric properties of the revised E3SR (teacher's form), more specifically its reliability and construct validity.

Research Setting

The research setting was preschools that cater for Grade R classes in the Cape Town Metropolitan area of the Western Cape. Thus, the study was located across the Cape Town Metropolitan area, more specifically in the Bellville, Blackheath, Blue Downs, Brackenfell, Cravenby, Kraaifontein and Muizenberg areas. For the purpose of the study, nine preschools were sampled from community, government and private schools which are following the Western Cape Education Department (WCED) prescribed curriculum. The preschools were all registered with the WCED and located in different socio-economic status (SES) areas.

SES is based on education, income and occupation (Winkleby et al., 1992). The WCED has a quintile ranking of one to five, where schools in quintiles one to three are no-fee-paying schools and quintiles four to five are fee-paying schools. Quintiles one and two and quintiles four and five were combined to derive low- and high-SES classes. Three schools were located in low-SES areas, two schools were located in middle-SES areas and four schools were located in high-SES areas.

Respondent Population

In accordance with the E3SR screening tool, the respondent population for this study was preschool teachers. A total of 24 preschool teachers was selected as the respondent group to complete the E3SR (teacher's form) based on their knowledge and observations of the child's behaviour in their natural class environment and on the playground. In compliance with the requirements of the E3SR screening tool, the teachers were full-time employees at their schools and were familiar with the learners' patterns of behaviour and abilities (Munnik, 2018). The unit of analysis was preschool learners between the ages of five and seven years. Being a Grade R learner was the criterion for inclusion.

Impact of the Covid-19 Pandemic on Data Collection

The Covid-19 pandemic significantly impacted the lives of children as they had known them (Statistics South Africa, 2020). According to Statistics South Africa (2020), the percentage of children attending preschool decreased significantly, from 36.8% in 2019 to 24.2% in 2020. The already fragile educational institutes in South Africa were negatively impacted by the South African national lockdown, which led to a higher percentage of children not attending school in 2020 compared to 2019 (Statistics South Africa, 2020). The pandemic forced schools to adopt alternative systems to face-to-face teaching and learning (Soudien et al., 2022). During the national lockdown, children lost a significant number of school days, and many were restricted to online and home schooling (Soudien et al., 2022). The Covid-19 pandemic negatively impacted children's healthy social and emotional development through restricted social interaction and the stress and anxiety surrounding the pandemic (Li et al., 2021).

This study used data collected from nine preschools from early August 2021 to early November 2021, to establish the reliability and construct validity for the revised E3SR

(teacher's form). It needs to be noted that the data collection took place in the midst of the Covid-19 pandemic; this contextual circumstance needs to be kept in mind.

Sample

Stratified random sampling was employed to select the preschools that partook in the study. A stratified sample is defined as the division of the population into separate groups. Samples are then recruited from each group (Setia, 2016). The sample was stratified based on the schools in the identified SES areas and included schools that were based in community, government and private sectors and that offer Grade R as a reception year. The data collection was intended to commence towards the end of July 2021, to ensure that teachers had become familiar with each learner's emotional and social skills. However, due to the Covid-19 pandemic, the learners did not attend school every day. Adhering to the Covid-19 guidelines provided by the government, the schools made use of a rotation system, where learners went to school every second day or two consecutive days one week, and three consecutive days the following week at some schools. However, the teachers had sufficient contact with each learner to become familiar with their patterns of behaviour and abilities.

The estimated sample that was collected (unit of analysis) had to be at least 300 completed E3SR protocols, thus five to ten protocols per item, based on DeVellis' (2016) recommendation. DeVellis (2016) further recommends that the ratio can be relaxed after the sample reaches 300 protocols. A sample size needs to be kept at an appropriate size required for validity (Faber & Fonseca, 2014). A sample that is too small or too big may not produce valid results and could waste time and money (Faber & Fonseca, 2014). The sample for this study consisted of 394 protocols, which were subjected to data cleaning. After data cleaning, the final sample was 324.

Recruitment Procedure

Preschool settings that met the inclusion criteria were identified by the researcher and her supervisor. The teachers and principals of each school were contacted telephonically to ask if they were willing to participate in the study. Information in the form of an information sheet (Annexure C) and a copy of the ethical clearance letter obtained from the Human Research and Ethics Committee (HSSREC) were sent to them via email after the telephonic conversation, if they showed interest and willingness to participate.

Online and/or face-to-face meetings were held with individuals who confirmed participation, to convey information about the study and the screening tool, and to answer any initial questions that might arise. The decision in terms of the modality of the meeting was left to the principal and teachers. Eight schools engaged in face-to-face meetings, while one school opted for online engagement. Covid-19 protocols were adhered to during face-to-face meetings in the planning phase of the study, as specified by the Department of Education. All parties practised social distancing, face masks were worn at all times, hand-washing and/or sanitising was compulsory, and the meetings were held in well-ventilated rooms.

Time Schedule

School readiness assessments are usually done towards the end of the school year (Maxwell & Clifford, 2004). As the purpose of this study was to validate the E3SR screening tool and not to establish whether the learners were socially and emotionally ready for school, a decision was made to collect data towards the third term of the academic school calendar. This decision was, firstly, based on when the respondents (teachers) would be able to accurately reflect the learners' social and emotional competencies. The advantage of having the data collected soon after mid-year was that it provided the teachers with an opportunity to have gained an in-depth understanding of the learners' social and emotional skill sets; this

was necessary to assist them to complete the questionnaire with knowledge that they had obtained about each learner's skill set. Secondly, the target population (learners) had the opportunity to mature and become accustomed to the formal curriculum in the preschool setting before the evaluation.

The Covid-19 pandemic caused the school year to be shorter than usual. The Department of Education (DOE) requested that no data collection take place during the first or last term of the year. As already mentioned, the data collection period was initially scheduled to occur from July to September 2021. Due to the Covid-19 pandemic and the schools closing abruptly in July 2021, the data collection period commenced in August 2021 and was due to be concluded in October 2021. Two schools requested an extension after not being able to keep to the end-of-October deadline, which resulted in data collection only concluding in early November 2021.

Data Collection and Process

As already discussed, once the school's confirmed participation, face-to-face meetings with eight schools and an online meeting with one school were held between the researcher, research supervisor, the school principal, and the teachers. The aims of the study and information about the screening tool (E3SR), including administration, format, domains and items, were discussed in the meeting. A copy of the E3SR was provided to teachers to peruse, and the teachers were able to ask questions about the process, administration and format of the E3SR. They were also able to share possible concerns. The questions from the teachers included questions around confidentiality, consent from parents and about the time period proposed for data collection. These questions were discussed and resolved before data collection commenced.

Before executing the study, teachers were given an opportunity to fully familiarise themselves with the screening tool. Each teacher indicated how many learners were in their respective classes. The specified number of revised E3SRs (teacher's forms), accompanied by a consent form and an information sheet for each teacher, and an information sheet for each parent accompanied by a consent form, were then distributed to the teachers to complete over a six-week period from September 2021 until October 2021. This allowed teachers to engage with the questionnaires without undue pressure being placed on them. The researcher and her supervisor were available telephonically and via email to assist if there were any questions during the completion period; however, there were no queries received while teachers completed the E3SR questionnaires.

Two teachers requested an extension to complete their questionnaires. The requests were made by one teacher who went on a leave of absence for study purposes and another teacher who felt she did not have enough time to complete the questionnaires due to work-related demands. The requests were granted. Once the teachers completed the questionnaires, the researcher collected the questionnaires, again adhering to Covid-19 protocols. The last questionnaires were collected in early November 2021.

Instrument

The revised E3SR (teacher's form) was used to collect the data (Annexure B). As already mentioned, the E3SR is a pen-and-paper format questionnaire that takes 10 to 15 minutes to administer. The questionnaire has two sections. The demographic section asks questions pertaining to the learner (e.g. age, gender, home language) and the respondent (e.g. length of time that the teacher has known the learner, initial rating of the learner's social and emotional readiness for school), before completion of the questionnaire.

Figure 2 presents a graphic representation of the two subscales, domains and the number of items in each domain of the revised E3SR (teacher's form).

Figure 2

The Revised E3SR Screening Tool

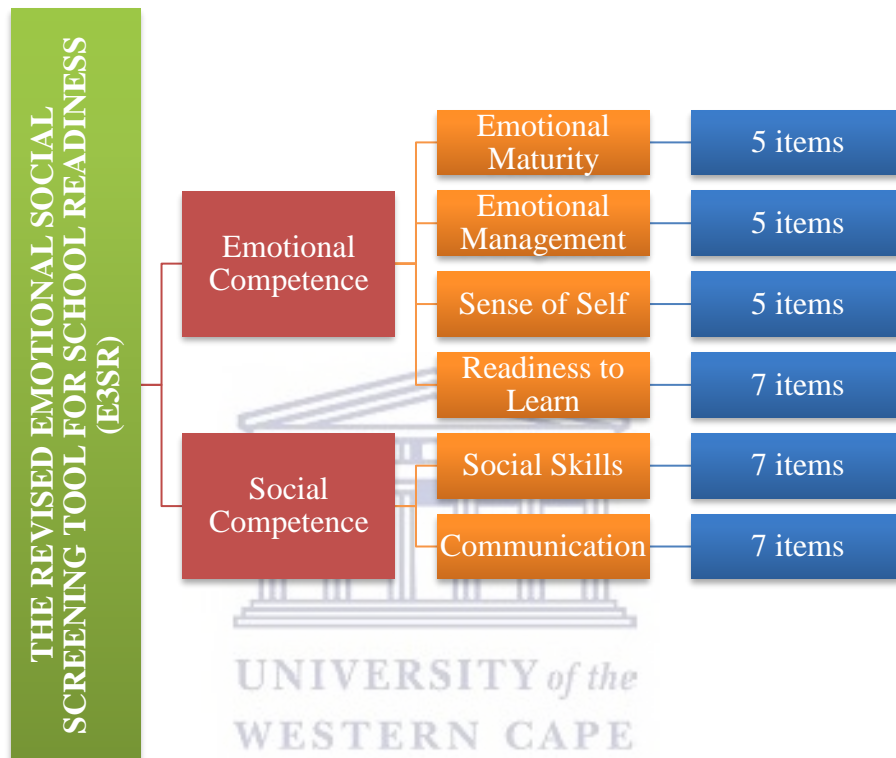


Figure 2 illustrates that the revised Emotional Social Screening Questionnaire (E3SR) consists of two subscales, Emotional Competence and Social Competence, divided into six domains namely: 1) Emotional Maturity (five items): an example of an item in this domain is “Does the learner: accept responsibility for his/her actions?”; 2) Emotional Management (5 items), for example: “Is the learner: aware of his/her emotions?”; 3) Sense of Self (5 items), for example: “Does the learner: act with self-confidence”; 4) Readiness to Learn (7 items), for example: “Can the learner: work quietly and calmly without constant feedback?”; 5) Social Skills (7 items), for example: “Can the learner: maintain new friendships over time?”;

and lastly 6) Communication (7 items), for example: “Is the learner: able to hold a conversation?”. The revised E3SR has a total of 36 items across six domains. The respondents must rate each item on a five-point Likert scale from 1 = *Never*, 2 = *Rarely*, 3 = *Some of the time*, 4 = *Most of the time* and 5 = *Almost always*. An additional response option was included with the revision, *Cannot assess*, to allow respondents to indicate if they were not able to assess the child in a specific item. *Cannot assess* is scored as zero on the questionnaire (0). The *Cannot assess* response item is taken as though the teacher did not answer the question. It was decided to treat the *Cannot assess* responses as a non-response.

Munnik et al. (2021b) did an exploratory factor analysis (EFA) to assess the dimensional structure of the E3SR by using principal axis factoring (PAF). The factor loadings, communalities and factor over-determinations of all scale items were reviewed (Munnik et al., 2021b). After factor loading and extraction, the EFA yielded the removal of twenty items from the original set of 56 items (Munnik et al., 2021b). Without losing important content, a six-factor solution was established and the original version of the E3SR was revised to include 36 items (Munnik et al., 2021b). The revised E3SR showed good psychometric properties and indicated excellent reliability, as evidenced by Cronbach’s alpha coefficient at 0.97 for the revised scale (Munnik et al., 2021b). The Emotional Competence subscale obtained a Cronbach’s alpha of 0.95, and the Social Competence subscale obtained a Cronbach’s alpha of 0.94 (Munnik et al., 2021b). The assumption of normality was violated, but it was explained that this was expected, due to a limited sample group and the timing of the data collection (Munnik et al., 2021b). The authors concluded that the validity of the revised six-factor scale needed to be confirmed using a new sample, as the psychometric properties cannot be retested on the same sample (Munnik et al., 2021b).

Analysis

DATA CAPTURING, CLEANING AND EDITING

A codebook was developed for the coding of the completed questionnaires before data capturing (Annexure I). An appointed statistician assisted with the development of the codebook. The completed questionnaires were manually coded by the researcher to ensure consistency in the application of the codebook. Each questionnaire received a participant identification starting from one (1). The researcher and statistician agreed that all missing data would be identified with a full stop (.). During the coding process, one question was raised by the researcher regarding respondents providing more than one answer for a question in the demographic section. The codebook was adjusted to accommodate an option to record more than one answer.

The three-phase model identified by Van den Broeck et al. (2005) was used for detecting, diagnosing, and editing data abnormalities. Firstly, in the screening phase, the data set was screened for missing data such as missing demographic information, incomplete fields in the questionnaires and completed questionnaires with potential response bias (e.g., a response pattern of three obtained on all questions). Secondly, in the diagnostic phase, the researcher and statistician identified and discussed data abnormalities before data capturing commenced. It was decided that, in cases where data was missing, the protocol would still be coded to be able to capture all information and responses. Thereafter, all the responses captured were reviewed by the researcher. The researcher verified every tenth questionnaire to ensure that the coding and capturing was done accurately. Thereafter, the statistician reviewed the data and proceeded to data cleaning, accompanied by the researcher. Data inconsistencies were discussed between the researcher, statistician and the supervisor, and decisions to correct, delete or leave data unchanged were made before data analysis commenced, in keeping with the recommendations of Van den Broeck et al. (2005). Thirdly,

in the treatment phase, the decisions made regarding the problematic records identified in the diagnostic phase were implemented (Gesicho et al., 2020).

Three hundred and ninety-four profiles (N=394) were collected from the preschools. On review of the entries, it was noted that fourteen (N=14) protocols were completed for children younger than five years old. These protocols were ineligible and were removed, as the children were not within the required age range. Fifty-five (N=55) protocols with missing data were removed as confirmatory factor analyses required no missing data. Many of these incomplete protocols were due to teachers not completing the last page of the questionnaire. One (N=1) completed protocol was also removed, as the response pattern indicated response bias based on the response format.

Fourteen of these protocols had no age, while the others had an incomplete Social Competency section. Teachers noted that the screening tool was difficult to complete due to the impact of Covid-19 protocols. For example, at the time of data collection, the protocol prioritised social distancing and discouraged sharing toys and possessions, as well as physical contact between learners. Thus, items asking about social interactions and interactive play with peers were not allowed, that in turn made it difficult to screen for competencies related to this type of interactions and competencies. Thus, the final sample of protocols for the analyses was three hundred and twenty-four (N=324) profiles.

DATA ANALYSIS

The IBM Statistical Package for the Social Sciences version 26 (SPSS) and the IBM SPSS Amos version 28 statistical programme were used to analyse data. The analysis included both IBM SPSS and an extension of the IBM SPSS programme (IBM SPSS Amos) in order to make the results more robust. The analysis aimed to fulfil four functions, namely:

- summation of sample characteristics of the respondent group (teachers) and the target group (children)
- testing the data set for assumptions
- establishing reliability estimates
- data reduction procedures for establishing construct validity – with the ultimate aim to establish if the sample data fits the theoretical model.

SUMMATION OF SAMPLE CHARACTERISTICS

Descriptive statistics were used to compile the demographic profile of the respondents and target group. The teachers were the respondents, and the target group were children aged between five and seven years. The teachers completed the questionnaires based on the children they taught, who were the sample that the questionnaire is intended to assess. Descriptive statistics were used for the purpose of summarising the data and describing the relationships between variables in the data set (Kaur et al., 2018). Sample characteristics were summarised using sample size, frequencies and percentages.

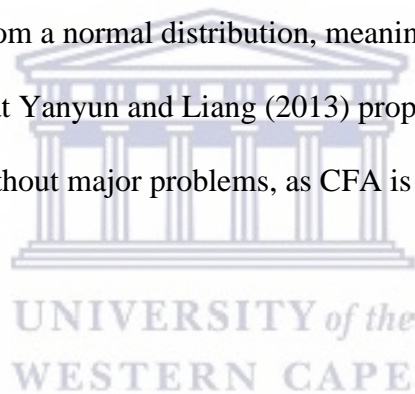
TESTING THE DATA SET FOR ASSUMPTIONS

Before the factor analysis, data was cleaned. The data set was tested to establish if it was ready for multivariable analysis, by assessing the core assumptions as proposed by Field (2013). This included a test of the dataset to see if the data set was distributed normally, thus testing if the assumption of normality was confirmed. Secondly, if the sample was big enough, the assumption of sample adequacy was confirmed.

Assumption of Normality. The assumption of normality was tested with the Shapiro-Wilk test and the Kolmogorov-Smirnov test. The Shapiro-Wilk test was recommended by Field (2013) to be a strong and accurate test for the assumption of normality. The Shapiro-

Wilk test indicates that, if the sample data is approximately normal, then there will be a normal sampling distribution (Ghasemi & Zahedias, 2012). The Kolmogorov-Smirnov test is used to test the null hypothesis that a data set comes from a normal distribution (Mishra et al., 2019). The Shapiro-Wilk test is usually more appropriate on smaller samples but can also be used on larger samples (Mishra et al., 2019). The Kolmogorov-Smirnov test is used for bigger samples (Mishra et al., 2019).

The assumption of normality was tested on the scale total. When testing normality, one must look at whether the statistic tests significant or non-significant. If the statistic tested non-significant ($p > .05$), this would indicate that the distribution of data estimated a normal distribution. If the statistic tested significant ($p < .05$), this would indicate that the distribution of data differed significantly from a normal distribution, meaning the distribution was not normal. It needs to be noted that Yanyun and Liang (2013) propose that the assumption of normality might be violated without major problems, as CFA is robust to violations of normality.



Assumption of Sample Adequacy. The assumption of sample adequacy was measured by the Kaiser-Meyer-Olkin test (KMO). The KMO test measure was developed to test sample adequacy for individual as well as multiple variables (Field, 2013). The measure “represents the ratio of the squared correlation between variables to the squared partial correlation between variables” (Field, 2009, p. 571). The KMO test values vary from 0 to 1 (Rossoni et al., 2016; Shrestha, 2021). According to Shrestha (2021), KMO values between 0.8 to 1.0 indicate adequate sampling, values between 0.7 to 0.79 are middling, values between 0.6 to 0.69 are mediocre, values less than 0.6 indicate the sampling is inadequate, and if the value is less than 0.5, the factor analysis results will definitely not be suitable for interpretation.

A sufficient sample size can also be determined by the number of variables (p) in a model (MacCallum & Widaman, 1999). The sample size is represented by N (Myers et al., 2011). The recommended ratio used in factor analytic studies is $N:p$, which is the sample size to the number of items in a model (DiStefano & Hess, 2005; Kyriazos, 2018; Myers et al., 2011). The recommended ratio for confirmatory factor analysis ranges from five to ten cases per item (Kyriazos, 2018). However, in order to determine an adequate sample size (N) for a particular application of CFA, the rule of thumb suggests that a sample size of at least $N \geq 200$ provides sufficient statistical power (Kyriazos, 2018; Myers et al., 2011). According to Kyriazos (2018), Comrey (1988) suggests that an $N \geq 200$ is sufficient for a measure with up to 40 items. Factor analysis sample size was further graded as $N=50$ very poor, $N=100$ poor, $N=200$ fair, $N=300$ good, $N=500$ very good, and $N=1000$ excellent (DeVellis, 2017; Kyriazos, 2018). The sample for this study is 324 for the 36-item model. For the purpose of this study, the ‘rule of thumb’ of $N \geq 200$ is applied.

INTERNAL CONSISTENCY

Inferential statistics were used to measure internal consistency, using Cronbach's coefficient alpha as an indicator of reliability. Cronbach's alpha is the most common measure used to determine internal consistency in tests and is expressed as a value between 0 and 1 (Tavakol & Dennick, 2011). The value of alpha is influenced by the number of items in a test, the item inter-relatedness and dimensionality (Tavakol & Dennick, 2011). Tavakol and Dennick (2011) state that researchers report different acceptable values of alpha, ranging from 0.70 to 0.95. The authors also explain that a lower alpha value could be attributed to a low number of questions, poor inter-relatedness between items, or heterogeneous constructs. They further propose that a too high alpha value may suggest that items are redundant, as the same questions are being tested in a different form. Therefore, Tavakol and Dennick (2011) recommend a maximum alpha value of 0.90. A Cronbach's alpha of 0.80 or greater was set as the threshold value for this study.

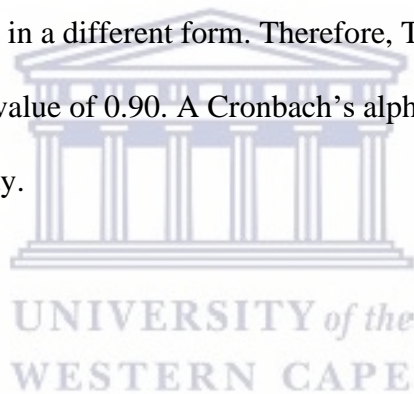


Table 3.1*Interpretive Guide for Alpha Values*

Quality descriptor	Alpha value (a)
<i>Excellent</i>	> 0.90
<i>Good</i>	> 0.80
<i>Acceptable</i>	> 0.70
<i>Questionable</i>	> 0.60
<i>Poor</i>	> 0.50
<i>Unacceptable</i>	< 0.50

Note. Data derived from Koonce and Kelly (2014).

CONFIRMATORY FACTOR ANALYSIS

For the purpose of this study, a decision was made to employ confirmatory factor analysis to test and report on model fit for the revised E3SR six-factor structure, through the use of a new sample.

In order to validate the dimensional structure of the revised E3SR, confirmatory factor analysis (CFA) was done on the statistical software programme Amos version 28. In order to test and confirm model fit, the statistical software programme Amos is used to create a model to test and confirm the relationship between the observed and latent variables. Confirmatory factor analysis is a multivariate statistical technique used to test how well the observed variables represent their underlying constructs (DiStefano & Hess, 2005). For this purpose, goodness-of-fit indices were used to determine if the factorial structure of the revised E3SR represented a good-fit model for the data set obtained. Confirmatory factor analysis was used to investigate the dimensional structure of the revised E3SR. Factor analysis yields a number of indices that can be used to measure the goodness-of-fit of theoretical models.

Absolute-fit indices determine how well a constructed model fits or reproduces data (Hooper et al., 2008). Absolute-fit indices include, but are not limited to, the chi-square test, root mean square error of approximation (RMSEA), goodness-of-fit index (GFI), standardised root mean squared residual (SRMR) (Hooper et al., 2008) and chi-square fit

statistic (CMIN) (Moss et al., 2015). These five indices are typically identified in seminal texts on factor analytic techniques (Kline, 2005). The absolute-fit indices are discussed below.

Chi-square evaluates overall model fit and measures the magnitude of discrepancy between the sample and fitted covariance matrices (Hooper et al., 2008). The chi-square test is used to determine whether the observed data fits the theoretical model. The chi-square result needs to be non-significant to indicate that there is no difference between the observed model and the theoretical model. A low chi-square value means that there is a high correlation between datasets when comparing models (Hooper et al., 2008). Chi-square test assumes multivariate normality, which may cause even properly specified models to be rejected due to severe deviations from normality (Hooper et al., 2008). The chi-square statistic usually rejects a model with a large sample size, as it is sensitive to sample size (Hooper et al., 2008), resulting in a significant chi-square. However, it is important for the chi-square result to not be significant, meaning there should be no difference between the observed model and the theoretical model. These concerns encouraged researchers to use alternative or combinations of indices to assess model fit (Munnik, 2018).

A *chi-square fit statistic (CMIN)* of less than five (<5) indicates a reasonable fit and a CMIN less than three (<3) indicates an acceptable fit between the sample data and the established model (Moss et al., 2015).

Root mean square error of approximation (RMSEA) assesses how far a hypothesised model is from a perfect model (Xia & Yang, 2019). RMSEA is a statistical measure of the average error variance and covariance (Kline, 2013). Kim et al. (2016) suggests that RMSEA values less than 0.05 are considered good. Acceptable values are between 0.05 and 0.08, values between 0.08 and 0.1 are considered marginal, and values greater than 0.1 are

considered poor. RMSEA thus favours models with a lower number of parameters (Hooper et al., 2008).

Goodness-of-fit index (GFI) was created as an alternative to the chi-square test and is a statistical measure of fit that calculates the portion of variance that is accounted for by the estimated population covariance (Hooper et al., 2008). The GFI ranges between 0 and 1, with a value closer to 1 (0.9) usually indicating an acceptable model fit (Kline, 2013). As the number of parameters and sample size increase, the GFI increases (Hooper et al., 2008). Hooper et al. (2008) reports that the use of this index has been recommended less by researchers over the years, given its sensitivity. The index is thus used in combination with other indices (Hooper et al., 2008).

Standardised root mean squared residual (SRMR) is defined as the difference between the observed correlation and the expected correlation (Hooper et al., 2008). An SRMR range is between 0 and 1, with a value less than 0.08 being considered a good fit (Hu & Bentler, 1999). A zero value indicates a perfect fit, thus SRMR is considered an absolute measure of fit (Kline, 2013).

Incremental fit indices are gradually tested against the null hypothesis that all variables are uncorrelated (Hooper et al., 2008). The comparative fit index (CFI) discussed below is the most widely used incremental fit index which is used to test the CFA model.

Comparative fit index (CFI) is a statistic that compares the sample covariance matrix with the independence model and assumes that all latent variables are uncorrelated (Hooper et al., 2008). The CFI statistic ranges from 0 to 1, with indicators closer to 1 considered as good-fit models (Hooper et al., 2008). Initially, the cut-off criterion was $CFI \geq 0.90$ (Hooper et al., 2008); however, recent studies have shown that only values greater than 0.90 are considered good-fitting models, this to ensure that only adequate models are accepted (Hooper et al., 2008; Kline, 2013). This measure is the least affected by sample size (Hooper

et al., 2008). Table 3.2 presents a summary of the criteria for the fit indices and cut-off scores as discussed above.

Table 3.2

Criteria for the Fit Indices

Indices	Symbol/ Acronym	General Threshold Decided Upon
Chi-square	χ^2	Low χ^2 relative to degrees of freedom with a non-significant p-value ($p > 0.05$)
Root mean square error of approximation and standardised root mean squared residual	RMSEA & SRMR	RMSEA of 0.06 or lower and SRMR of 0.08 or lower are considered to be a good-fit model
Goodness-of-fit index	GFI	Value greater than 0.9 generally indicate an acceptable model fit (use with caution)
Comparative fit index	CFI	CFI of 0.90-0.95 or higher is considered to be a good-fit model
Chi-square statistic	CMIN	Less than 5 indicates reasonable fit Less than 3 indicates acceptable fit

Note. Derived from Hu and Bentler (1999), Kline (2013) and Moss et al. (2015).

The six indices above were computed, namely, chi-square, CMIN, RMSEA, SRMR, GFI and CFI, to determine whether the revised E3SR represents a good model fit for the attained dataset. Chi-square assumes multivariate normality and is expected to be significant due to the large sample size.

The following decision matrix was adopted for the present study:

For an *excellent model fit*, the CFA results have to satisfy/fit *five* indices, namely, CMIN, SRMR, CFI, RMSEA and GFI.

For a *good model fit*, the CFA results have to satisfy/fit *four* indices, namely, CMIN, SRMR, CFI and RMSEA, and it must *approach a fit* on GFI.

For an *acceptable* fit, the CFA results have to satisfy/fit *three* indices, namely, CMIN, SRMR and CFI, and they must *approach a fit* on one of the following indices: RMSEA or GFI.

For a *reasonable* fit, the CFA results have to satisfy/fit *two* indices, namely, CMIN and SRMR, and they must approach a fit on *two other indices*, namely, CFI and RMSEA.

Ethics

Ethics clearance was obtained (Ref: HS21/6/8) from the Humanities and Social Science Research Ethics Committee (HSSREC) at the University of the Western Cape (Annexure A). Permission to collect data was obtained from the principals of the preschools and the WCED (Annexure E). An information sheet explaining what participation entailed, as well as the rights of the participants and the responsibilities of the researcher, was attached with the researcher's and supervisor's names included (Annexure C). Participation was voluntary, and participants were allowed to leave the study at any time. Participants were asked to complete a consent form indicating their willingness to participate (Annexure D). Permission to use the revised six-factor E3SR was obtained from Dr Erica Munnik (Annexure H).

Learners' names were not disclosed in the study. Teachers completed the questionnaires based on the knowledge that they had gained on each learner in their natural school environment, after consent was granted by learners' parents (Annexure G). The completion of each form was anonymous, and learners had no direct contact with the researcher as the study was merely based on the observations of the teachers. A circular was sent to the parents in the learners' homework books to ensure that parents knew about the study and gave consent that their child could partake in the study (Annexure F).

Parents were also given the opportunity to respond in the homework book to state if they did not want their child to participate in the study. An online webinar on school readiness was held on 12 August 2021, and invitations to attend the webinar were sent to all parents of children who were invited to partake in the study. The webinar was created to assist parents in attaining knowledge about school readiness, as well as the importance of evaluating emotional and social skills when school readiness is established. Information about the study was presented at the end of the webinar, and parents were allowed to ask questions if there was any uncertainty or concerns about the study. In addition, parents were also allowed the opportunity to discuss the results of the completed E3SR protocols with the teacher in a one-on-one feedback session at the end of the year, thus giving them the opportunity of the feedback session as an intervention. The sessions were arranged between the researcher, supervisor, teachers and parents.

The collection and storage of data were done in compliance with the Data Protection Act of 1998 as well as The Protection of Personal Information Act 4 of 2013. The completed protocols will be kept in a locked cabinet for a six-year period, and the computer analysis is password-protected. The data will be shredded and destroyed after a period of six years.

Covid-19 protocols were strictly adhered to throughout the data collection of the study by the researchers, principals and teachers. All parties practised social distancing, face masks were worn at all times, hand-washing and/or sanitising was compulsory, and the face-to-face meetings were held in well-ventilated rooms.

Chapter 4

Results and Discussion

Introduction

This is an integrative chapter which presents the results and reports on the validation of the revised E3SR. The validation was done to establish internal consistency and confirm the factor structure of the revised six-factor E3SR for model fit. The results are delineated as follows: summation of sample characteristics, the assumptions of normality, sample adequacy, the internal consistency, and the confirmatory factor analysis of the revised E3SR. The results are followed by a comparison to relevant literature.

Summation of Sample Characteristics

Table 4.1 displays the demographic profile of the respondent group.

Table 4.1

Demographic Composition of the Respondent Group/Teachers (N=24)

Item	Category	Frequency	Percentage
Gender	Male	0	0
	Female	24	100
Age	21-30	5	20.83
	31-40	9	37.50
	41-50	6	25.00
	51-60	4	16.67
Education Qualification	Level 4 (Certificate)	0	0
	Level 5 (Diploma)	13	54.17
	Levels 6 & 7 (Degree)	9	37.50
	Not disclosed	2	8.33
Years of Teaching Experience	1-10	14	58.34
	11-20	6	25.00
	21-30	2	8.33
	31-40	2	8.33

Table 4.1 indicates that, out of the nine schools that joined the study, 24 teachers participated. The teachers were all females. The majority of teachers were in the 31-40 years age group, while 20.83% of the teachers were in the 21-30 years age group, 37.50% were in the 31-40 years age group, 25% were in the 41-50 years age group, and 16.67% were in the 51-60 years age group. The majority of the teachers (54.17%) had a diploma as a qualification, followed by 37.50% having a degree and, interestingly, no one had a certificate qualification or a lower NQF level. Most of the teachers had ten or fewer years of teaching experience, while 25% had between 11- and 20-years' experience, and 16.66% had more than 20 years' teaching experience. Table 4.2 presents the sample composition per school sector.

Table 4.2

Sample Composition of Preschools and Respondents

Sectors	Preschools	Percentage	Teachers	Percentage
	N		N	
Government	5	55.56	14	58.33
Private	3	33.33	9	37.50
Community	1	11.11	1	4.17

Table 4.2 indicates that there were 24 respondents (teachers) across nine preschool settings. There were five government preschools with 14 teachers (58.33%), three private preschools with nine teachers (37.50%), and one community preschool with one teacher (4.17%). The school sectors were spread out between the five WCED quintile rankings. Out of the five government schools, two schools were in quintiles one and two (low-SES areas), one school was in quintile three (middle-SES area), and two schools were in quintiles four and five (high-SES area). Out of the three private schools, one school was in quintile three (middle-SES area), and two schools were in quintiles four and five (high-SES area). The one community school was in quintiles one and two (low-SES area).

According to Veldman (2020), the Western Cape Education Department (WCED) reported on the quintile ranking of schools in South Africa. Veldman (2020) reported that 438 schools ranked in quintiles one and two, 204 schools ranked in quintile three, and 802 schools ranked in quintiles four and five. This clearly indicates that most schools in the Western Cape are ranked in the upper quintiles followed by the lower quintiles, with the fewest schools ranked in the middle quintile. However, both the upper and lower quintiles have two quintiles within it. The ratio of this study is thus representative of preschools in the Western Cape, with four out of the nine participating schools ranking in quintiles four and five, three out of the nine schools ranking in quintiles one and two, and two schools ranking in quintile three. However, Mveli and Veldman (2020) suggest that the Covid-19 pandemic will have a devastating effect on the quintile ranking system, due to many parents and caregivers losing their jobs.

Table 4.3 presents the demographic composition of the target group/children.

Table 4.3

Demographic Composition of the Target Group/Children 5-7 Years Old

Item	Category	Frequency	Percentage
Age	5-6	267	82.41
	6-7	57	17.59
Gender	Male	143	44.1
	Female	178	54.9
	Not disclosed	3	1
Ethnicity	White	53	16.36
	Coloured	158	48.77
	Black	51	15.74
	Indian	1	0.3
	Other	7	2.16
	Not disclosed	54	16.67
Home Language	English	180	55.6
	Afrikaans	95	29.3
	Xhosa	32	9.9
	Other	12	3.7
	Not disclosed	5	1.5

Table 4.3 provides the demographic profile of the target group or unit of analysis. The table indicates that the majority of the children (82.41%) were in the five-six years age group, with 17.59% being in the six-seven years age group. Where gender is concerned, 54.9% were girls, 44.1% were boys, and 1% were not disclosed. The most prevalent ethnicity was Coloured (48.8%), followed by White (16.4%), Black (15.7%), Indian (0.3%), and other (2.2%), which included French. A further 16.7% did not disclose their ethnicity. English was the most spoken first language (55.6%), followed by Afrikaans (29.3%), and isiXhosa (9.9%). Other primary languages that were specified as mother tongues included, seSotho, Shona and XiTsonga (3.7%).

In comparing the present study with Munnik (2018), the respondent and target groups for this study had fewer participants than the Munnik (2018) study, where she used the nine-factor E3SR scale and established its psychometric properties. The smaller sample size might be attributed to the context in which the study was done. The Covid-19 pandemic and the request from the WCED to only collect data in the third term might have impacted on principals' and teachers' willingness to participate in the study.

The results indicate that most of the respondents either had a diploma or a degree qualification. Quality and stimulating foundation phase teaching is important for learners to thrive and to improve learners' school outcomes and career prospects (Bruwer et al., 2014; Ferguson et al., 2007; Leseman, 2002). There is thus a need for continuous tertiary training amongst foundation phase teachers. According to the study by Hadebe (2015), the education department must persuade universities to continuously train ECE teachers in play-based learning and provide opportunities for them to expand their knowledge.

The study by Munnik (2018) had one male respondent and the rest were female respondents, whereas this study only had female respondents. The ECE setting is noticeably female dominated. Historically, female teachers have been associated with the foundation

phase level of teaching (Ravhuhali et al., 2019). This could be attributed to gender prejudice and stereotyping, with foundation phase teaching being seen as a ‘woman’s job’ (Mashiya, 2014). It could also be attributed to stigma and the roles ascribed to women as caregivers of young children, as foundation phase teaching is often compared to child-care (Mashiya, 2014; Petersen, 2014). This might have resulted in fewer men choosing to teach in the foundation phase (Mashiya, 2014; Petersen, 2014).

Similarly, to the study by Munnik (2018), the majority of teachers in this study had ten or fewer years of teaching experience, suggesting that they had relatively limited experience. However, less experience has no necessary bearing on teachers’ competence or their quality of teaching (Graham et al., 2020). The majority of respondents in this study were younger than in the study by Munnik (2018). One of the possible explanations for the younger cohort of teachers might be that the Munnik (2018) study was done in 2016, prior to the Covid-19 pandemic, whereas this study was conducted in 2021 during the pandemic. This could have impacted the sample, as older teachers and those with underlying conditions were seen to be at high risk for the virus. Many of the older teachers could not continue teaching for months, or they left or retired, and were then replaced by younger teachers (Gustafsson & Deliwe, 2020). There was also a significant number of teachers who passed away due to Covid-19, at a higher rate than before the pandemic (Shepherd & Mohohlwane, 2021).

The majority of the target group for this study was five to six years old, whereas the majority for the nine-factor scale (Munnik, 2018) was six to seven years old. This could imply that more children in the study by Munnik (2018) were already in Grade 1, as they should begin formal schooling at the age of seven. The majority of learners in this study were girls, whereas the majority of learners were boys in the nine-factor scale (Munnik, 2018). This was, however, understandable considering one school in the study by Munnik (2018) was a government school that only accommodated boys. The researcher was not able to

establish the recent ratio between the number of boys and girls usually entering Grade R; however, in 2015, a study by Kotzé (2015) found that there was no significant difference between the number of boys and girls entering Grade R.

In terms of ethnicity, almost half of the learners in this study (48.8%) were indicated as Coloured learners, whereas the children in the study by Munnik (2018) were almost equally indicated as White or Coloured learners. In this study, White learners comprised 16.4%, and Black learners 15.7%. According to Statistics South Africa (2021), the ethnic composition in the Western Cape was 80.9% Black learners, 8.8% Coloured learners, 7.8% White learners, and 2.6% Indian and Asian learners. The sample in this study is thus not reflective of the ethnic composition of the Western Cape. This might be partially attributed to the Cape Town Metropolitan areas where the study was conducted. This study's results indicate that the learners were mostly English mother-tongue speakers, followed by Afrikaans and isiXhosa, while a small percentage had other languages as mother tongue. According to statistics presented by Alexander (2021), the main language spoken in the Western Cape was Afrikaans (49.7%), followed by isiXhosa (24.7%) and English (20.3%). The sample does not accurately reflect the Western Cape statistics; however, many of the schools that took part in this study were predominantly in areas where Coloured people reside, where English and Afrikaans are the most spoken languages.

Assumption of Normality (Shapiro-Wilk)

Table 4.4 reports on the Kolmogorov-Smirnov and the Shapiro-Wilk tests for the E3SR subscales.

Table 4.4*Kolmogorov-Smirnov and Shapiro-Wilk Output for the E3SR Subscales (N=324)*

Subscale	Kolmogorov-Smirnov			Shapiro-Wilk			
	Statistic	df	N	Statistic	df	N	Significance
Emotional Maturity	.156		324	.933		324	.000
Emotional Management	.154		324	.932		324	.000
Sense of Self	.142		324	.950		324	.000
Readiness to Learn	.166		324	.917		324	.000
Social Skills	.156		324	.934		324	.000
Communication	.151		324	.913		324	.000
Scale Total	.091		324	.967		324	.000

Table 4.4 illustrates that the scale total of the Shapiro-Wilk test reported significance of $p=.000$ and the Kolmogorov-Smirnov test reported $p=.000$ as well. The Kolmogorov-Smirnov and the Shapiro-Wilk statistics both tested significant at the 0.01 alpha level for the six subscales. This suggests that the distribution of scores for the sample significantly deviates from a normal distribution. The assumption of normality has thus been violated and not met for each subscale. The violation of normality was expected, as data collection occurred towards the end of the academic year. The learners should have already mastered the measured competencies.

The Covid-19 pandemic protocols and restrictions had a significant impact on children's social skills as it restricted demonstrative social communication, play, sharing and socialisation between learners. The respondents selected the response option, "cannot assess" as they felt they had reduced ability to observe the behaviour and competencies assessed by the items. Thus, the response on specific items that were dependent on physical interaction were scored as 0 (cannot assess) in contrast to other items on the subdomains that were scored substantially higher. The impact of the Covid-19 restrictions systematically influenced the responses and scoring of the screening tool. This patterned way of responding could also have contributed further to the violation of the assumption of normality. For

example, the analysis employed, treated cases with responses coded as 0 (cannot assess) as missing data. All protocols with missing data were removed from the data set as confirmatory factor analysis can only be performed with missing data removed. This might have contributed to the skewing of data which impacted the results of the assumption of normality. The removal of these cases in turn also reduced the sample size. The use of imputations was considered to offset the impact on sample size. However, the contextual issues created by the pandemic and containment measures were unique and it was decided to not use imputation as it was unclear whether preschoolers had an actual reduction in skills resulting from limited socialisation and opportunity of whether respondents were more cautious in selecting responses as if the context was normalised. The resulting response pattern was thus treated as a unique occurrence and its potential impact on normal distribution and subsequent analysis will be acknowledged as a limitation. It will be more judicious to proceed conservatively by interpreting results cautiously and replicating the study under normalised and revised circumstances.

This is similar to the result on the Shapiro-Wilk test done by Munnik (2018), which showed a violation of normality of the data from the nine-factor scale, confirming that the observed data did not fit the theoretical model on the nine-factor scale. In the Munnik (2018) study, the assumption of normality was not met for the full scale; however, it was met for the five- to six-year-old cohort when the cohorts were split. The author argued that this was an expected result, as the five- to six-year-old cohort would not have mastered most of the emotional and social readiness attributes when the pilot took place. Munnik (2018) concluded that the assumption accurately reflected where each cohort (five- to six-year-olds and six- to seven-year-olds) should have been, in terms of the measured competencies.

The Shapiro-Wilk test done by Munnik et al. (2021) in a post-hoc analysis of the 2018 dataset again showed that the assumption of normality was violated for the overall scale, as

well as for the nine subscales (Shapiro-Wilk = $p < 0.05$). The results showed a distribution that was positively skewed, and the assumption of normality was not met for this group. The authors concluded that the violation was in line with the expected results, as the children aged six to seven years were assumed to already have mastered most of the attributes of emotional and social readiness in the fourth term of the academic year when the data was collected. The authors concluded that the distribution accurately reflected where the cohort should be in terms of the measured competencies and that the non-normal distribution was, in fact, an accurate representation of the target group. The assumption of normality was violated in all of the studies, either because of the time of the year the assessment was conducted, or because the learners were in different developmental cohorts, or both.

Assumption of Sample Adequacy

The Kaiser-Meyer-Olkin (KMO) test of sample adequacy results is demonstrated in Table 4.5.

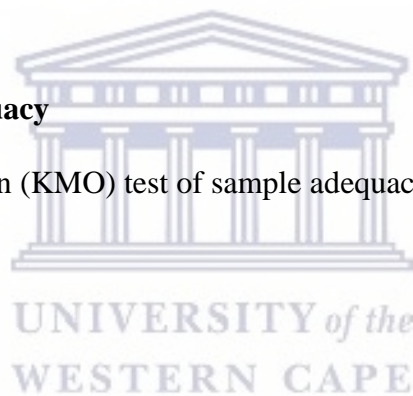


Table 4.5

KMO Results for Sample Adequacy (N=324)

KMO	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.964

* $p < 0.05$

The KMO statistic in Table 4.5 confirms that the assumption of sample adequacy was met. KMO values closer to 1.0 indicate that the data is suited for factor analysis (Shrestha, 2021). The data for this study is thus ideal for factor analysis. Munnik (2018) obtained a similar result of .966.

Internal Consistency (Reliability Coefficient Cronbach's Alpha)

The composite scale and subscales were subjected to internal consistency analysis for the present study. Table 4.6 indicates the results for internal consistency for the Emotional Social Competence scale, the Emotional Competence subscale, and the Social Competence subscale.

Table 4.6

Internal Consistency of Composite Scale

SCALE/SUBSCALES	No. items	α	Mean	Standard Deviation
Emotional and Social Competence	36	.981	142.80	23.82
Emotional Competence	22	.972	86.64	15.02
Emotional Maturity (EM)	5	.956	19.62	3.92
Emotional Management (EMX)	5	.941	20.02	3.62
Sense of Self (SOS)	5	.947	19.16	4.01
Readiness to Learn (RTL)	7	.962	27.84	5.60
Social Competence	14	.961	56.15	9.53
Social Skills (SS)	7	.948	27.78	5.08
Communication (COM)	7	.970	28.37	5.38

Table 4.6 indicates that the full scale as well as the two subscales obtained excellent Cronbach's alphas coefficient of .981 (all 36 items), .972 (22 items), and .961 (14 items) respectively. The threshold Cronbach's alpha value of .80 set for this study was met and exceeded. Table 4.7 shows the Cronbach's alpha results for the respective domains and items on the Emotional and Social Competence scale. Table 4.7 gives an indication of the Cronbach's alpha per domain and item.

Table 4.7*Internal Consistency reliability coefficients and descriptive statistics per domain and item*

Domain	Item Statistics			
	<i>N</i>	<i>Mean</i>	<i>Std dev</i>	<i>α if Item Deleted</i>
Emotional Maturity $\alpha = .956$				
EM1	324	3.74	.862	.962
EM2	324	3.89	.862	.946
EM3	324	3.99	.840	.940
EM4	324	3.89	.853	.939
EM5	324	4.02	.829	.942
Emotional Management $\alpha = .941$				
EMX1	324	3.74	.862	.926
EMX2	324	3.89	.862	.921
EMX3	324	3.99	.840	.947
EMX4	324	3.98	.853	.919
EMX5	324	4.02	.829	.922
Sense of Self $\alpha = .947$				
SOS1	324	3.94	.872	.937
SOS2	324	3.85	.837	.943
SOS3	324	3.87	.836	.932
SOS4	324	3.69	.979	.931
SOS5	324	3.81	.878	.930
Readiness to Learn $\alpha = .962$				
RTL1	324	3.96	.910	.955
RTL2	324	3.92	.956	.954
RTL3	324	3.96	.915	.954
RTL4	324	3.97	.883	.959
RTL5	324	4.03	.819	.955
RTL6	324	4.01	.865	.957
RTL7	324	3.99	.855	.957
Social Skills $\alpha = .948$				
SS1	324	3.95	.771	.941
SS2	324	4.10	.695	.939
SS3	324	4.02	.804	.941
SS4	324	4.00	.911	.939
SS5	324	3.86	.953	.940
SS6	324	3.99	.814	.934
SS7	324	3.88	.849	.941
Communication $\alpha = .970$				
COM1	324	3.95	.771	.967
COM2	324	4.10	.695	.964
COM3	324	4.02	.802	.963
COM4	324	4.00	.911	.964
COM5	324	3.86	.953	.966
COM6	324	3.99	.814	.964
COM7	324	3.88	.849	.967

Table 4.7 shows that the internal consistency results for the six domains showed excellent levels of internal consistency. The Emotional Maturity (EM), Emotional Management (EMX) and Sense of Self (SOS) domains each consisted of five items and achieved excellent Cronbach's alphas of .956, .941 and .947, respectively. It is noteworthy that the omission of the first item in the Emotional Maturity domain (EM1: "Is able to place him/herself in the shoes of others") and the third item in the Emotional Management domains (EMX3: "Physically demonstrates emotions") might lead to a small increase in internal consistency reliability, respectively, by .006 ($\alpha = .962$) and by .006 ($\alpha = .947$). These items could be considered for revision, if necessary.

The Readiness to Learn (RTL), Social Skills (SS) and Communication (COM) domains each consisted of seven items and achieved excellent internal consistency reliability of .962, .948, and .970, respectively. It is also noteworthy that removing any of these subscale items would not have resulted in an increase in internal consistency. Of note is that the maximum alpha value of 0.90 recommended by Tavakol and Dennick (2011) was exceeded. This points to the homogeneous and inter-related nature of the items.

Confirmatory Factor Analysis (CFA)

The confirmatory factor analysis results are discussed below. The analysis was done with the IBM SPSS Amos 28 statistical programme. The model was tested using the six indices, namely, chi-square, RMSEA, SRMR, GFI, CFI and CMIN as portrayed in Table 3.2. Two specifications were conducted to determine whether there was an improvement in the model fit. In the first step of the CFA, the original model was fit to the dataset. The initial CFA results are indicated in Table 4.8.

Table 4.8*Model One: Fitness Indices for the Revised E3SR*

	Chi-Square	Df	Sig	CMIN	CFI	RMSEA	SRMR	GFI
Model 1	2660.600	579	.000	4.595	.870	.106	.0725	.660

Table 4.8 illustrates the indices results from the first analysis. The chi-square statistic is significant, indicating that the model does not fit. A significant chi-square was expected, as normality was violated due to the target population representing two developmental cohorts with developmentally diverse skill sets, as previously explained. As already discussed, researchers such as Hooper et al. (2008) alert us to the fact that we need to keep in mind that the chi-square test assumes multivariate normality, which may cause even properly specified models to be rejected due to severe deviations from normality. This might have been the case here.

Hooper et al. (2008) further explain that the chi-square statistic usually rejects models with a larger sample size, as it is sensitive to sample size, resulting in a significant chi-square result. The latter might be an explanation for the significant chi-square result in this analysis. The significant chi-square result was thus not sufficient to discontinue the CFA.

The CMIN index value of 4.595 is, however, below 5, indicating a reasonable model fit. The CFI index value of .870 approached an acceptable model fit, as it falls below the .95 threshold score for a good fit. The RMSEA index value of .106 indicates a poor fit, as it was well above the .06 threshold score. The SRMR index value of .0725 also illustrated a poor fit, as it was well above the acceptable .08 threshold score. The GFI index value of .660 is below the .90 threshold score. The results indicated that not all indices moved towards an acceptable model fit, thus requiring a subsequent analysis.

Similarly, to the studies by Munnik (2018) and the post-hoc analysis of the data by Munnik et al. (2021), where the assumption of normality tested significant but was

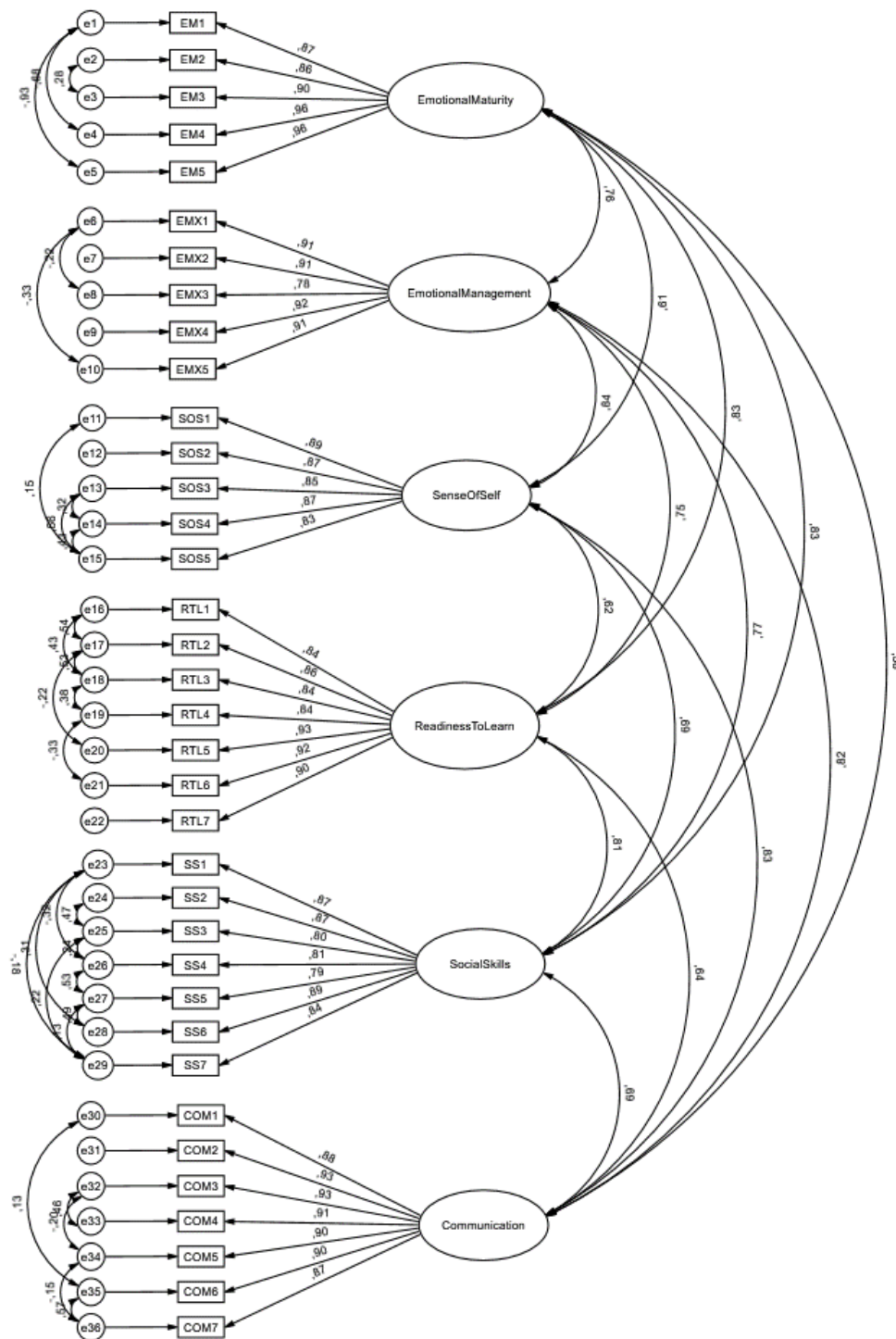
theoretically supported in the first step of CFA, the model generated mixed results and did not fit the dataset. The results did suggest that the model was moving towards an acceptable fit but required a second step in which a re-specification was done to obtain a better model fit (Munnik, 2018). Model specifications allow the determination of which latent variables are related to each other (Fan et al., 2016). As indices are sensitive to covariance, it was sensible and expected to do the specification then and again with the present data set.

The Process of Re-Specification. An iterative process was done for the remaining analysis, and the re-specifications were made based on the modification indices to improve model fit through model re-specification of covarying of items. Modification indices were used to determine what modifications should be done to the dataset, by adding correlations between the error terms. Modification indices determine whether there would be improvement in the model after suggested re-specification is made to the model (Fan et al., 2016). Error terms of the items with the highest modification indices were covaried one at a time, by covarying the error terms with the highest modification indices in each analysis run. Only items within the same factor (domain) were covaried at this point.

The following items were covaried, as illustrated in Figure 3: e36-e35; e27-e26; e28-e27; e17-e16; e19-e18; e33-e32; e18-e17; e1-e5; e25-e24; e18-e16; e26-e25; e15-e13; e29-e25; e26-e23; e21-e19; e28-e23; e10-e6; e20-e17; e4-e1; e3-e2; e15-e14; e13-e14; e6-e8; e32-e34; e34-e36; e30-e35; e11-e15; e27-e29; e23-e29. The highest modification index suggested covarying e28-e21 and e8-e14 however, these are not in the same domain, thus it was decided not to covary these items.

Figure 3

First Re-specification



For the first re-specification process, only items in the same domain were covaried.

For example, five items within the Emotional Maturity domain were covaried, and the seven

items within the Readiness to Learn domain were covaried. This was done because these items fell under the same domain and had similar attributes. Table 4.9 shows the results of the analysis after this re-specification.

Table 4.9

Model Two: Fitness Indices for the revised E3SR

	Chi-square	Df	Sig	CMIN	CFI	RMSEA	SRMR	GFI
Model 2	1608.704	550	.000	2.925	.934	.077	.0599	.774

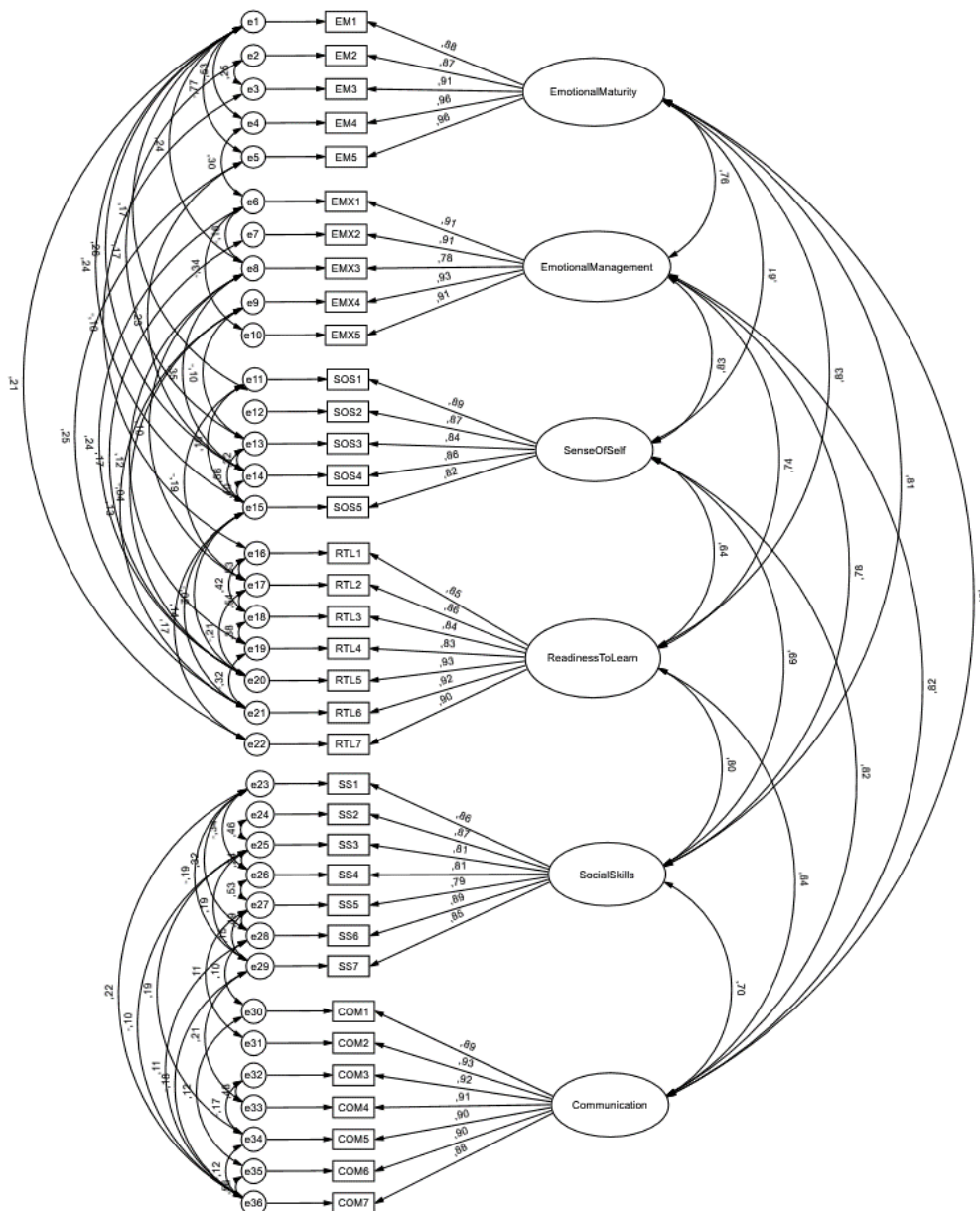
Table 4.9 illustrates that the chi-square statistic remains significant, indicating the model does not fit. This was an expected result for reasons mentioned above. The CMIN index result decreased; however, is below 3, indicating a good fit. The CFI value increased and fell just below the .95 threshold for a good fit. The CFI value of .934 indicates an acceptable fit. The RMSEA value decreased; the RMSEA value of .077 indicates an acceptable fit. The SRMR value decreased; the SRMR value of .0599 is still below the .08 benchmark for an acceptable model fit; however, it indicates a moderate fit. The GFI value increased and the value, .774, is not far below the accepted .95 mark, indicating a well-fitting model. The revisions on the indices suggested an improved model fit; however, covarying between factors within the same domain could further improve the model fit.

A third and final analysis was run to further improve the model fit through model re-specification/covarying. Modification indices were used to determine what modifications could further be done to the dataset. Covarying between domains, but within the same subscale was done. The following error terms of the items were covaried, as illustrated in Figure 4: e29-e33; e8-e14; e4-e6; e1-e3; e25-e35; e11-e17; e5-e14; e23-e36; e28-e36; e29-e36; e8-e19; e2-e13; e27-e31; e9-e21; e9-e20; e1-e15; e1-e22; e28-e30; e25-e36; e15-e22; e15-e20; e1-e14; e8-e17; e6-e20; e5-e21; e3-e16; e9-e13; e7-e20; e2-e11. No further

covariances were found to improve the model fit without covarying errors across the emotional and social subscales.

Figure 4

Second Re-specification



For the remaining analysis, items were still covaried within each domain, for instance, the seven items within the Social Skills domain were covaried. These items were also

covaried with the seven items in the Communication domain. This was done because these domains fall under the broader Social Competence subscale, still assessing the same theoretical construct. Table 4.10 shows the result after the above re-specification.

Table 4.10

Model Three: Fitness Indices for the Revised E3SR

	Chi-Square	Df	Sig	CMIN	CFI	RMSEA	SRMR	GFI
Model 3	1308.797	520	.000	2.517	.951	.069	.0581	.818

Table 4.10 shows the results after specifying covariance within the Emotional and Social domains. The chi-square statistic remains significant, indicating no model fit. The CMIN index result, 2.517, significantly decreased; however, it is below 3, indicating a good model fit. The CFI value increased from .934 to .951, showing a steady increase and falling just above the .95 threshold; the CFI value thus indicates a good model fit. The RMSEA index value of .069, and the SRMR index value of .0581 steadily decreased and improved, indicating a good model fit. The GFI value steadily increased and improved from .774 to .818, indicating a good model fit. Table 4.11 provides a summary of the index results before and after re-specifications.

Table 4.11

Summary of Index Results

	Chi-square	Df	Sig	CMIN	CFI	RMSEA	SRMR	GFI
Model 1 (original)	2660.600	579	.000	4.595	.870	.106	.0725	.660
Model 2 (after specifying covariance within factors)	1608.704	550	.000	2.925	.934	.077	.0599	.774
Model 3 (after specifying covariance within domains)	1308.797	520	.000	2.517	.951	.069	.0581	.818

Table 4.11 shows how the two re-specifications on the indices improved the model fit. All the indices improved, resulting in a better model fit. The SRMR, CFI and CMIN results indicate a good model fit. The RMSEA and GFI improved but still fall just short of a ‘great’ model fit. However, as expected, chi-square is still significant. The analysis results satisfied/fit four indices, namely CMIN, SRMR, CFI and RMSEA, thus indicating a good model fit. The results were applied to the decision matrix presented in the previous chapter. Table 4.12 illustrates the results relative to the criteria for the types of fit.

Table 4.12

The Results Relative to the Criteria for the Types of Fit

Indices	Value	Threshold	Fit
CMIN	2.517	<3.00	*
SRMR	.0581	<0.08	*
CFI	.951	>0.95	*
RMSEA	.069	<0.06	^
GFI	.818	>0.9	^

*fit, ^approaching fit

From Table 4.12, it becomes evident that the CFA results satisfied the fit criteria for CMIN, SRMR, CFI. It can be seen that the RMSEA and the GFI criterion was not met or satisfied, but the index suggests that a model fit is being *approached*. Thus, the confirmatory factor analysis established a *good model* fit after the process of re-specification for the revised E3SR, as per the decision-making matrix.

Summary: The study by Munnik (2018) obtained a satisfactory model fit after the process of re-specification and the model was accepted with caution. The confirmatory factor analysis in this study established a good model fit for the revised E3SR after the process of re-specification. This shows that the revised E3SR is an improved model.

Synthesis of results

Three hundred and twenty-four protocols completed by twenty-four teachers were subjected to multivariate analysis. The assumption of normality tested significant and was violated. However, the assumption was theoretically expected, given the two developmental cohorts of children aged five to six and six to seven years. The assumption of sample adequacy was met with a KMO value of .964 and a sample of 324 for the 36-item scale. The respective domains all showed excellent reliability with Cronbach's alphas of .941 to .970. The items all clustered together in a reliable manner as shown by their alpha levels. Confirmatory factor analysis results demonstrated a good model fit. The revised E3SR demonstrates a better model fit compared to the original version.



Chapter 5

Conclusion

Introduction

This chapter concludes the study with an executive summary in relation to the research aims and objectives. The limitations in the study are discussed and, finally, the recommendations for further research are outlined.

Executive Summary

This study aimed to establish if the revised E3SR (teacher's form) is a reliable and valid measure to use in the assessment of preschool learners' emotional and social readiness to enter mainstream education. The main objectives of the study were to determine the internal consistency of the revised E3SR, to confirm its factor structure, and to determine whether the theoretical model underpinning the revised E3SR was supported.

The study made use of a cross-sectional survey design to collect data. The data was collected across the Cape Town Metropolitan area, and sampled from nine preschools from low, middle and high SES. The data collection period commenced in the third term and continued into the fourth school term in 2021. The data was gathered by means of the revised E3SR questionnaire; the screening tool consists of 36 items with a five-point Likert scale.

The sample of preschools included government, private and community schools. Twenty-four female Grade R teachers participated in the study. Fourteen teachers were from government schools, nine teachers were from private schools, and one teacher taught at a community-based preschool. A sample of 394 protocols was collected. A codebook was developed for the revised E3SR by an appointed statistician, and the completed questionnaires were manually coded by the researcher. Three hundred and twenty-four (324) protocols were analysed after data curing and cleaning took place. More than 80% of this

sample group was in the five to six years age-group cohort, and the rest in the six to seven years age-group cohort.

The data set was tested to establish if it was ready for multivariable analysis through assumption testing. The assumption of normality was not met; however, this was theoretically expected given that the target population (children aged five to seven years) represented two developmental cohorts that included children aged five to six years and six to seven years, with developmentally diverse skill sets that were dependent on maturation and formal instruction. The results showed that the distribution of scores was negatively skewed. The distribution of scores for the sample showed that most learners were scoring on the higher end. This result is to be expected with the data collected towards the end of the preschool year when the majority learners are expected to have mastered these skills. It is not expected for half of the learners to be below the competent point towards the end of the preschool year. This is thus an accurate reflection of reality, and it is understandable for normality to be violated.

The assumption of sample adequacy was met with an adequate sample size. This study used the rule of thumb criterion for sample size adequacy that stipulated that a sample larger than 200 is adequate for confirmatory factor analysis. The data for this study met this assumption with a sufficient sample size of $N=324$, for the 36-item scale.

The revised E3SR established excellent internal consistency for each scale and the respective subscales, which is demonstrated by the Cronbach's alpha levels that indicate an excellent reliability. All subscales obtained the threshold score of .80. The overall emotional and social scale, emotional and social subscales and the respective items all showed excellent internal consistency, and it was established that the scale items cohere in a reliable manner, as shown by their internal consistency reliability.

Confirmatory factor analysis was done to confirm the model fit of the revised E3SR six-factor structure. The model was tested using chi-square and five indices, namely, RMSEA, SRMR, GFI, CFI and CMIN. In the first step of the CFA, the original model was fit to the dataset. The results indicated a significant chi-square value. A significant chi-square value was expected, as normality was violated due to the target population representing two developmental cohorts with developmentally diverse skill sets, as well as the sensitivity to sample size. The significant result was thus not sufficient to discontinue the CFA. The first analysed results showed that three indices namely: CMIN, CFI and GFI, moved towards an acceptable model fit, while two indices namely: RMSEA and SRMR, did not move towards an acceptable model fit, thus requiring subsequent analyses.

A subsequent analysis of model re-specification/covarying items was done to improve the model fit. The process of re-specification improved the five indices' model fit, but did not indicate a good-fit model. In order to further improve the model fit, a third analysis was run through model re-specification/covarying between factors within the same domain. After the third and final re-specification, the confirmatory factor analysis results showed that five indices, namely CMIN, SRMR, CFI, RMSEA and GFI, obtained the set thresholds, thus indicating a *good model* fit. The results of the confirmatory factor analysis thus affirmed that the factor structure of the revised E3SR fits the established theoretical model.

Significance of the Study

This study made an important contribution as it assisted to establish the psychometric properties, more specifically the validity and reliability, for the revised E3SR. This strengthens the applicability and use of the tool as a valid and reliable measure in the South African preschool context.

This study identified the lack of school readiness assessments that are contextually appropriate for use in South Africa, and which have sound psychometric properties. The revised E3SR was developed to increase contextual relevance, and the measure was tested to ensure sound psychometric properties.

Contribution to practise: This study contributes to practise by affirming a reliable and valid measure to assist teachers to screen for emotional and social competence in preschoolers. Teachers can use the revised E3SR as an additional outcome-based assessment. The assessment can be done in the last term, or quarterly, to provide feedback to parents about the learner's emotional and social competence strengths and weaknesses. It could provide a platform for parents to support the child's needs or for referral to a clinician, if need be.

Contribution to policy: The present study focused attention on the importance of early childhood education and social emotional skills as a prerequisite for entry into mainstream schooling. The study highlights the importance of the use of valid and reliable, locally developed screening measures to assess children's emotional and social skills before entry into mainstream education, with the main aim being to identify the need for early intervention programmes. It also focused on the need for close liaison between the various stakeholders, such as government, principals and teachers, and other assessment practitioners, to develop emotional and social skills in children. The revised E3SR was designed to provide stakeholders with an opportunity for early identification of a child's strengths and weaknesses in the domains of emotional and social competence, so they can provide appropriate support.

Limitations

This section outlines five major limitations in this study.

The first limitation for this study was the time schedule of data collection. School readiness assessments are usually done in the fourth term of the reception year. However, due to the Covid-19 pandemic, the Department of Education requested that no data collection take place during the first or last term of the academic year. Therefore, the decision was made to collect data from the beginning of the third term. The timing of the data collection period thus impacted the data set.

The second limitation related to the ages of the sample group. The sample group consisted of Grade R learners. The South African Schools Act 84 (1996) states that children should start Grade 1 from seven years old, making the Grade R cohort younger than seven. Grade R consists of a huge cohort, where children are usually aged five and six years. The assumption of normality was violated due to the sample consisting of two developmental cohorts, children aged five to six years, and children aged six to seven years. Normality would likely not be violated if the sample consisted of only one developmental cohort.

The third limitation was the impact of the Covid-19 pandemic on the learners' wellbeing and the teachers' ability to see children regularly to evaluate their emotional and social skill set. The Covid-19 pandemic had a massive impact on children's emotional and social development, as they were restricted in terms of contact and socialisation with peers. Thus, due to the Covid-19 protocols, the teachers were also not able to assess the learners' social and emotional abilities in the same way that they were previously able to. The Covid-19 guidelines restricted the number of learners allowed in a class, as they had to practice social distancing. This impacted the time that the learners spent in the classroom for face-to-face learning, as most schools made use of a rotation system, where learners went to school every second day or two consecutive days one week, and three consecutive days the following week. Furthermore, the time spent in the classroom had many restrictions, such as being limited to no contact with peers, as well as always wearing a face mask. This might

have impacted teachers' ability to complete the questionnaires accurately. As mentioned before, the Covid-19 pandemic protocols and restrictions moreover had an impact on the data analysis as it potentially led to skewing of data and reduction of the sample size.

The fourth limitation was the inclusion of schools that were mainly in one geographical urban area of the Western Cape. Only one community-based school was included in the sample. Although the sample was stratified and robust enough for data reduction techniques to continue, the use of samples from a restricted geographical area might have had an impact on representivity. The inclusion of samples from a broader geographical area and even rural areas could have made the sample more representative, inclusive of all ethnicities and languages, and more in line with the demographics presented in the statistics. The sampling did not correspond with the current demographic composition in terms of ethnicity, as reported by Statistics South Africa (2021). A more representative sample would have more accurately reflected the current demographic makeup.

The fifth limitation was that the impact of the potential response pattern of respondents to items screening for competencies related to physical interaction and socialisation was not followed up. The Covid-19 restrictions had a real time impact on how the E3SR was completed. The conservative approach adopted (e.g. not using imputation) was justified at a theoretical level, but it still may have impacted the subsequent analysis. Failure to run a parallel analysis including imputation may have been a consideration.

Recommendations

This chapter concludes with the following recommendations for future research:

- Further research should explore the inclusion of a sample spread over a broader geographical area, possibly including schools in both urban and rural areas. Attention needs to be given to including a more representative sample in terms of ethnicity.

- Future research could explore replicating the study with a new sample at a more appropriate time in the school year. The study should take into consideration the potential contextual factors surrounding the data collection period that could have an impact on the analysis and the study's results.
- Future research should explore making use of Structural Equation Modelling (SEM) for data analysis.
- The English form of the E3SR was used to collect data. Future research should explore the development of the E3SR in other languages. The availability of an Afrikaans and IsiXhosa form, or forms in other languages, will most probably increase the inclusion of a more representative unit of analysis.
- Future studies could ensure the timing of the data collection takes place towards the middle of the year, to accurately assess learners' emotional and social competencies in Grade R.
- Further research could explore the development of a feedback method to parents containing the study's results of each child. This would greatly impact participation, and it could also help parents seek intervention where necessary.

REFERENCES

- Aiona, S. (2005). Assessing school readiness. *Educational Perspectives*, 38(1), 47-50.
- Alexander, M. (2021). *What languages are spoken in South Africa's nine provinces?* South Africa Gateway. <https://southafrica-info.com/infographics/animation-languages-south-africas-provinces/>
- Allen, L. R., & Kelly, B. B. (2015). Child development and early learning. In L. R. Allen & B. B. Kelly (Eds.), *Transforming the workforce for children birth through age 8: A unifying foundation* (pp. 85-204). National Academies Press (US).
<https://www.ncbi.nlm.nih.gov/books/NBK310550/>
- Alzahrani, M., Alharbi, M., & Alodwani, A. (2019). The effect of social-emotional competence on children's academic achievement and behavioral development. *International Education Studies*, 12(12), 141-149.
<https://doi.org/10.5539/ies.v12n12p141>
- Amod, Z., & Heafield, D. (2013). School readiness assessment in South Africa. In S. Laher & K. Cockcroft (Eds.), *Psychological assessment in South Africa: Research and applications* (pp. 74-85). Wits University Press.
- Anderson, L., Shinn, C., Fullilove, M., Scrimshaw, S., Fielding, J., Normand, J., & Carande-Kulis, V. (2003). The effectiveness of early childhood development programs. *American Journal of Preventive Medicine*, 24(3 Suppl), 32-46.
[https://doi.org/10.1016/S0749-3797\(02\)00655-4](https://doi.org/10.1016/S0749-3797(02)00655-4)
- Ashley-Cooper, M., van Niekerk, L. J., & Atmore, E. (2019). Early childhood development in South Africa: Inequality and opportunity. In N. Spaull & J. D. Jansen (Eds.), *South African schooling: The enigma of inequality, policy implications of research in Education* (pp. 87-108). Springer. https://doi.org/10.1007/978-3-030-18811-5_5

- Atmore, E., van Niekerk, L., & Ashley-Cooper, M. (2012). Challenges facing the early childhood development sector in South Africa. *South African Journal of Childhood Education*, 2(1), 120-139.
- Aubrey, C., Ghent, K., & Kanira, E. (2012). Enhancing thinking skills in early childhood. *International Journal of Early Years Education*, 20(4), 332-248.
<http://dx.doi.org/10.1080/09669760.2012.743102>
- Baber, M. A. (2016). Appropriate school starting age: A focus on the cognitive and social development of a child. *Journal of Education and Educational Development*, 3(2), 280-290. <http://dx.doi.org/10.22555/joeed.v3i2.1065>
- Bakken, L., Brown, N., & Downing, B. (2017). Early childhood education: The long-term benefits. *Journal of Research in Childhood Education*, 31(2), 255-269.
<https://doi.org/10.1080/02568543.2016.1273285>
- Bandalos, D. L. (2018). *Measurement theory and applications for the social sciences*. The Guilford Press
- Bruwer, M., Hartell, C., & Steyn, M. (2014). Inclusive education and insufficient school readiness in Grade 1: Policy versus practice. *South African Journal of Childhood Education*, 4(2), 18-35.
- Bustin, C. (2007). *The development and validation of a social emotional school readiness scale* [Doctoral dissertation, University of the Free State]. UFS-UV KofsieScholar.
<https://scholar.ufs.ac.za/bitstream/handle/11660/1458/BustinC.pdf?sequence=1&isAllowed=y>
- Comrey, A. L. (1988). Factor-analytic methods of scale development in personality and clinical psychology. *Journal of Consulting and Clinical Psychology*, 56(5), 754-761.
<https://doi.org/10.1037/0022-006X.56.5.754>

- Darling-Churchill, K. E., & Lippman, L. (2016). Early childhood social and emotional development: Advancing the field of measurement. *Journal of Applied Developmental Psychology, 45*, 1-7. <https://doi.org/10.1016/j.appdev.2016.02.002>
- Denham, S. A. (2006). Social-emotional competence as support for school readiness: What is it and how do we assess it? *Early Education and Development, 17*(1), 57-89. https://doi.org/10.1207/s15566935eed1701_4
- Denham, S. A., Bassett, H. H., Zinsler, K., & Wyatt, T. M. (2014). How preschoolers' social-emotional learning predicts their early school success: Developing theory – promoting, competency-based assessments. *Infant and Child Development, 23*(4), 426-454. <https://psycnet.apa.org/doi/10.1002/icd.1840>
- DeVellis, R. F. (2016). *Scale development: Theory and applications* (4th ed.). Sage Publications.
- DeVellis, R. F. (2017). *Scale development: Theory and applications* (4th ed.). Sage Publications.
- De Witt, P. A., Du Toit, K., & Franzsen, D. (2020). Parents' and caregivers' knowledge of school readiness for children admitted to Grade R and Grade 1. *South African Journal of Occupational Therapy, 50*(1), 28-34. <http://dx.doi.org/10.17159/2310-3833/2020/vol50no1a5>
- DiStefano, C., & Hess, B. (2005). Using confirmatory factor analysis for construct validation: An empirical review. *Journal of Psychoeducational Assessment, 23*, 225-241. <https://psycnet.apa.org/doi/10.1177/073428290502300303>
- Donald, K., Wedderburn, C., Barnett, W., Nhapi, R., Rehman, A., Stadler, J., Hofman, N., Koen, N., Zar, H. J., & Stein, D. J. (2019). Risk and protective factors for child development: An observational South African birth cohort. *PLOS Medicine, 16*(9). <https://doi.org/10.1371/journal.pmed.1002920>

- Duncan, G. J., & Magnuson, K. (2013). Investing in preschool programs. *Journal of Economic Perspectives*, 27(2), 109-132. <https://doi.org/10.1257/jep.27.2.109>
- Du Toit, M., van der Linde, J., & Swanepoel, D. W. (2021). Early childhood development risks and protective factors in vulnerable preschool children from low-income communities in South Africa. *Journal of Community Health*, 46(2), 304-312. <https://doi.org/10.1007/s10900-020-00883-z>
- Epstein, M. H., Synhorst, L. L., Cress, C. J., & Allen, E. A. (2009). Development and standardization of a test to measure the emotional and behavioural strengths of preschool children. *Journal of Emotional and Behavioural Disorders*, 17(1), 29-37. <https://psycnet.apa.org/doi/10.1177/1063426608319223>
- Ertem, I. O., & World Health Organization (WHO). (2012). *Developmental difficulties in early childhood prevention, early identification, assessment and intervention in low- and middle-income countries: A review*. World Health Organization. <https://apps.who.int/iris/handle/10665/97942>
- Esterhuizen, S., & Grosser, M. (2014). Improving some cognitive functions, specifically executive functions in grade R learners. *South African Journal of Childhood Education*, 4(1), 111-138. <https://doi.org/10.4102/sajce.v4i1.181>
- Faber, J., & Fonseca, L. M. (2014). How sample size influences research outcomes. *Dental Press Journal of Orthodontics*, 19(4), 27-29. <http://dx.doi.org/10.1590/2176-9451.19.4.027-029.ebo>
- Fan, Y., Chen, J., Shirkey, G., John, R., Wu, S. R., Park, H., & Shoa, C. (2016). Applications of structural equation modeling (SEM) in ecological studies: An updated review. *Ecological Processes*, 5(19), Article 19. <https://doi.org/10.1186/s13717-016-0063-3>

- Ferguson, H. B., Bovaird, S., & Mueller, M. P. (2007). The impact of poverty on educational outcomes for children. *Paediatrics & Child Health, 12*(8), 701-706.
<https://doi.org/10.1093/pch/12.8.701>
- Field, A. (2009). *Discovering statistics using SPSS*. Sage Publications.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Sage.
- Foxcroft, C., Paterson, H., Le Roux, N., & Herbst, D. (2004). *Psychological assessment in South Africa: A needs analysis: The test use patterns and needs of psychological assessment practitioners. Final report*. Health Professions Council of South Africa.
<https://repository.hsrc.ac.za/handle/20.500.11910/7498>
- Fuller, B., Bein, E., Bridges, M., Kim, Y., & Rabe-Hesketh, S. (2017). Do academic preschools yield stronger benefits? Cognitive emphasis, dosage, and early learning. *Journal of Applied Developmental Psychology, 52*, 1-11.
<http://dx.doi.org/10.1016/j.appdev.2017.05.001>
- Gesicho, M. B., Were, M. C., & Babic, A. (2020). Data cleaning process for HIV-indicator data extracted from DHIS2 national reporting system: A case study of Kenya. *BMC Medical Informatics and Decision Making, 20*(293), 293.
<https://doi.org/10.1186/s12911-020-01315-7>
- Ghasemi, A., & Zahedias, S. (2012). Normality tests for statistical analysis: A guide for non-statisticians. *International Journal of Endocrinology & Metabolism, 10*(2), 486-489.
<https://doi.org/10.5812/ijem.3505>
- Gordon, T., Booysen, F., & Mbonigaba, J. (2020). Socio-economic inequalities in the multiple dimensions of access to healthcare: The case of South Africa. *BMC Public Health, 20*(289), Article 289. <https://doi.org/10.1186/s12889-020-8368-7>

- Graham, L. J., White, S. L., Cologon, K., & Pianta, R. C. (2020). Do teachers' years of experience make a difference in the quality of teaching? *Teaching and Teacher Education, 96*, 1-10. <https://doi.org/10.1016/j.tate.2020.103190>
- Gregory, T., Dal Grande, E., Brushe, M., Engelhardt, D., Luddy, S., Guhn, M., Gadermann, A., Schonert-Reichl, K. A., & Brinkman, S. (2021). Associations between school readiness and student wellbeing: A six-year follow up study. *Child Indicators Research, 14*, 369-390. <https://doi.org/10.1007/s12187-020-09760-6>
- Gustafsson, M., & Deliwe, C. N. (2020). *How is the Covid-19 pandemic affecting educational quality in South Africa? Evidence to date and future risks*. [Working Papers](#) 23/2020, Stellenbosch University, Department of Economics. <https://ideas.repec.org/p/sza/wpaper/wpapers358.html>
- Hadebe, N. P. (2015). *An exploration of foundation phase teachers' experiences in using play as a teaching strategy in Grade R* [Masters dissertation, University of KwaZulu-Natal]. ResearchSpace. <https://researchspace.ukzn.ac.za/xmlui/handle/10413/13902>
- Health Professions Council of South Africa. (2010). The professional board for psychology Health Professions Council of South Africa. List of tests classified as being psychological tests. Form 207. Retrieved from www.hpcsa.co.za/Uploads/PSB_2019/List_of_Classified_tests_Board_Notice_155_of_2017.pdf on 11 April 2021
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal on Business Research Methods, 6*(1), 53-60.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55. <https://doi.org/10.1080/10705519909540118>

In, J. (2017). Introduction of a pilot study. *Korean Journal of Anesthesiology*, 70(6), 601-605.

<https://doi.org/10.4097/kjae.2017.70.6.601>

Jacklin, L., & Cockcroft, K. (2013). The Griffiths Mental Developmental Scales: An overview and a consideration of their relevance for South Africa. In S. Laher & K. Cockcroft (Eds.), *Psychological assessment in South Africa* (pp. 169-185). Wits University Press.

Janse van Rensburg, O. (2015). The school readiness performance of a group of Grade R learners in primary schools in the Gauteng Province of South Africa. *South African Journal of Childhood Education*, 5(1), 106-124.

<http://dx.doi.org/10.4102/sajce.v5i1.352>

Jones, T., Baxter, M., & Khanduja, V. (2013). A quick guide to survey research. *Advancing Surgical Standards*, 95, 5-7. <https://doi.org/10.1308/003588413X13511609956372>

Kartal, H., Balantekin, Y., & Bilgin, A. (2016). The importance of early childhood education and school starting age in the reading-writing learning process. *Participatory Educational Research*, 3(1), 79-101. <http://dx.doi.org/10.17275/per.16.05.3.1>

Kaur, P., Stoltzfus, J., & Yellapu, V. (2018). Descriptive statistics. *International Journal of Academic Medicine*, 4(1), 60-63. <http://www.ijam-web.org/text.asp?2018/4/1/60/230853>

Kim, H., Ku, B., Kim, J. Y., Park, Y., & Park, Y. (2016). Confirmatory and exploratory factor analysis for validating the Phlegm Pattern Questionnaire for Healthy Subjects. *Evidence-Based Complementary and Alternative Medicine*, 2696019.

<http://dx.doi.org/10.1155/2016/2696019>

Kline, R. B. (2005). *Principals and practice of structural equation modeling* (2nd ed.). Guilford Publications.

- Kline, R. B. (2013). Exploratory and confirmatory factor analysis. In Y. Petscher & C. Schatsschneider (Eds.), *Applied quantitative analysis in the social sciences* (pp. 171-207). Routledge.
- Koonce, G. L., & Kelly, M. D. (2014). Analysis of the reliability and validity of a mentor's assessment for principal internships. *National Council of Professors of Educational Administration, 15*(2), 33-48.
- Kotzé, J. (2015). Can pre-grade R be the stepping stone to social equality in South Africa? *South African Journal of Childhood Education, 5*(2), 1-27.
- Kyriazos, T. A. (2018). Applied psychometrics: Sample size and sample power considerations in factor analysis (EFA, CFA) and SEM in general. *Psychology, 9*, 2207-2230. <https://doi.org/10.4236/psych.2018.98126>
- Leseman, P. P. M. (2002). *Early childhood education and care for children from low-income and minority backgrounds*. Organisation for Economic Cooperation and Development (OECD). <https://www.oecd.org/education/school/1960663.pdf>
- Li, L., Flynn, K. S., DeRossier, M. E., Weiser, G., & Austin-King, K. (2021). Social-emotional learning amidst Covid-19 school closures: Positive findings from an efficacy study of adventure abroad the S.S Grin program. *Frontiers in Education, 6*, 683142. <https://doi.org/10.3389/feduc.2021.683142>
- Linn, R. L. (2010). Educational measurement: Overview. In B. McGaw, P. L. Peterson, & E. L. Baker (Eds), *International encyclopedia of education* (3rd ed., pp. 45-79). Elsevier. <https://doi.org/10.1016/B978-0-08-044894-7.00243-8>
- Liu, Y., Sulaimani, & M. F., Henning, J. E. (2020). The significance of parental involvement in the development in infancy. *Journal of Educational Research & Practice, 10*(1), 161-166. <https://doi.org/10.5590/JERAP.2020.10.1.11>

- MacCallum, R. C., & Widaman, K. F. (1999). Sample size in factor analysis. *Psychological Methods*, 4(1), 84-99. <https://doi.org/10.1037/1082-989X.4.1.84>
- Mashiya, N. (2014). Becoming a (male) foundation phase teacher: A need in South African schools? *South African Journal of Childhood Education*, 4(3), 24-36.
<http://dx.doi.org/10.4102/sajce.v4i3.224>
- Maxwell, K., & Clifford, R. (2004). School readiness assessment. *Young Children*, 59(1), 42-46.
- McBryde, C., Ziviani, J., & Cuskelly, M. (2004). School readiness and factors that influence decision making. *Occupational Therapy International*, 11(4), 193-208.
<https://doi.org/10.1002/oti.211>
- McKenzie, K. (2019). The effects of poverty on academic achievement. *BU Journal of Graduate Studies in Education*, 11(2), 21-26.
- Michell, J. (2001). Measurement theory: History and philosophy. *International encyclopedia of the social and behavioural sciences* (pp. 9451-9454). Elsevier.
<https://doi.org/10.1016/B0-08-043076-7/00595-7>
- Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anaesthesia*, 22(1), 67-72. https://doi.org/10.4103/aca.ACA_157_18
- Mohamed, S. A. (2013). *The development of a social readiness screening instrument for grade 00 (pre-grade R) learners* [Doctoral dissertation, University of the Free State]. UFS-UV Kovsky Scholar. <https://scholar.ufs.ac.za/handle/11660/2084>
- Moss, T. P., Lawson, V., White, P., & The Appearance Research Collaboration. (2015). Identification of the underlying factor structure of the Derriford Appearance Scale 24. *PeerJ*, 3, e1070. <https://doi.org/10.7717/peerj.1070>

- Mtati, C. N. (2020). *A systematic review: Instruments that measure emotional and social competency as a domain of school readiness of preschool children in South Africa* [Masters dissertation, University of the Western Cape]. UWCScholar - ETD Repository. <http://etd.uwc.ac.za/xmlui/handle/11394/7668>
- Munnik, E. (2018). *The development of a screening tool for assessing emotional social competence in preschoolers as a domain of school readiness* [Doctoral dissertation, University of the Western Cape]. UWCScholar - ETD Repository. <http://etd.uwc.ac.za/xmlui/handle/11394/6099>
- Munnik, E., Meyburgh, C., & Smith, M.R. (2021a). Fathers' perspectives of school readiness. *South African Journal of Social Work and Social Development*, 33(1). <https://doi.org/10.25159/2708-9355/7709>
- Munnik, E., & Smith, M. (2019). Methodological rigour and coherence in the construction of instruments: The Emotional Social Screening Tool for School Readiness. *African Journal of Psychological Assessment*, 1(0), a2. <https://doi.org/10.4102/ajopa.v1i0.2>
- Munnik, E., Wagener, E., & Smith, M. (2021b). Validation of the Emotional Social Screening Tool for School Readiness. *African Journal of Psychological Assessment*, 3(0). <https://doi.org/10.4102/ajopa.v3i0.42> (in press)
- Mweli, M., & Veldman, E. (2020, August 25). *Department of Basic Education on quintile system & budget allocation* [Paper presentation]. Briefing by the DBE on the National School's Quintile system, Western Cape. <https://pmg.org.za/committee-meeting/30934/>
- Myers, N. D., Ahn, S., & Jin, Y. (2011). Sample size and power estimates for a confirmatory factor analytic model in exercise and sport: A Monte Carlo approach. *American Alliance for Health, Physical Education, Recreation and Dance*, 82(3), 412-423. <https://doi.org/10.1080/02701367.2011.10599773>

- Needham, M., Ülküer, N. (2020). A growing interest in early childhood's contribution to school readiness. *International Journal of Early Years Education*, 28(3), 209-217.
<https://doi.org/10.1080/09669760.2020.1796416>
- Nortje, M. J. (2017). The effect of poverty on education in South Africa. *Educator Multidisciplinary Journal*, 1(1), 47-62.
<https://journals.co.za/doi/pdf/10.10520/EJC-d872bb67d>
- Pan, Q., Trang, K. T., Love, H. R., & Templin, J. (2019). School readiness profiles and growth in academic achievement. *Frontiers in Education*, 4, 127.
<https://doi.org/10.3389/educ.2019.00127>
- Parham, K. (2016). *Exceptional circumstances: A blog series on issues in early childhood special education*. <https://eric.ed.gov/?id=ED570897>
- Pem, D. (2015). Factors affecting early childhood growth and development: Golden 1000 Days. *Journal of Advanced Practices in Nursing*, 1(101), 2573-0347.
<http://dx.doi.org/10.4172/2573-0347.1000101>
- Petersen, N. (2014). The 'good', the 'bad' and the 'ugly'? Views on male teachers in foundation phase education. *South African Journal of Education*, 34(1), Article 772.
<https://files.eric.ed.gov/fulltext/EJ1136428.pdf>
- Ponto, J. (2015). Understanding and evaluating survey research. *Journal of the Advanced Practitioner of Oncology*, 6(2), 168-171.
- Prinsloo, M., & Reid, M. (2015). Experiences of parents regarding a school-readiness intervention for pre-school children facilitated by Community Health nursing students. *International Journal of Africa Nursing Sciences*, 3, 94-101.
<http://dx.doi.org/10.1016/j.ijans.2015.09.003>
- Ravhuhali, F., Mashau, T. S., Lavhelani, P. N., Mudzielwana, N. P., & Mulovhedzi, S. (2019). Demystifying foundation phase teaching: Male student teachers' motivation to

- enroll for B.Ed. degree in foundation phase at a rural university. *South African Journal of Higher Education*, 33(6), 283-299. <http://dx.doi.org/10.20853/33-6-3138>
- Republic of South Africa. (1996). South African Schools Act of 1996 (Report No. 17579). <https://www.gov.za/documents/south-african-schools-act>
- Roodt, G. (2013). Validity: Basic concepts and measures. In C. Foxcroft & G. Roodt (Eds.), *Introduction to Psychological Assessment in the South African context* (4th ed., pp. 57-67). Oxford University Press.
- Rossoni, L., Engelbert, R., & Bellegard, N. L. (2016). Normal science and its tools: Reviewing the effects of exploratory factor analysis in management. *Revista de Administração*, 51(2), 198-211. <https://doi.org/10.5700/rausp1234>
- Setia, M. (2016). Methodology series Module 3: Cross-sectional studies. *Indian Journal of Dermatology*, 61(3), 261-264. <https://doi.org/10.4103/0019-5154.182410>
- Shepherd, D., & Mohohlwane, N. (2021). *The impact of COVID-19 on education – more than a year of disruption*. National Income Dynamics Study (NIDS) – Coronavirus Rapid Mobile Survey (Cram). <http://dx.doi.org/10.1080/0376835X.2021.2017855>
- Soudien, C., Reddy, V., & Harvey, J. (2022). The impact of COVID-19 on a fragile education system: The case of South Africa. In F. M. Reimers (Ed.), *Primary and secondary education during Covid-19* (pp. 303- 325). Springer. https://doi.org/10.1007/978-3-030-81500-4_12
- Statistics South Africa. (2016). *Education series Volume III: Educational enrolment and achievement, 2016*. http://www.statssa.gov.za/publications/Report%2092-01-03/Education_Series_iii.pdf
- Statistics South Africa. (2020). *General household survey*. <http://www.statssa.gov.za/publications/P0318/GHS%202020%20Presentation%202-Dec-21.pdf>

Statistics South Africa. (2021). *Mid-year population estimates*.

<http://www.statssa.gov.za/publications/P0302/P03022021.pdf>

Ştefan, C. A., Bălaj, A., Porumb, M., Albu, M., & Miclea, M. (2009). Preschool screening for social and emotional competencies – development and psychometric properties.

Cognition, Brain, Behaviour: An Interdisciplinary Journal, 13(2), 121-146.

Storbeck, C., & Moodley, S. (2011). ECD policies in South Africa: What about children with disabilities? *Journal of African Studies and Development*, 3(1), 1-8.

https://www.researchgate.net/publication/228477033_ECD_policies_in_South_Africa-What_about_children_with_disabilities

Taherdoost, H. (2016). Validity and reliability of the research instrument: How to test the validation of a questionnaire/survey in research. *International Journal of Academic Research in Management*, 5(3), 28-36. <http://dx.doi.org/10.2139/ssrn.3205040>

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55. <https://doi.org/10.5116/ijme.4dfb.8dfd>

Theron, L. C. (2013). Assessing school readiness using the Junior South African Individual. In S. Laher & K. Cockcroft (Eds.), *Psychological assessment in South Africa* (pp. 60-73). Wits University Press.

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2017). *Overview: MELQO: Measuring early learning quality and outcomes*.

<https://unesdoc.unesco.org/ark:/48223/pf0000248053>

Van den Broeck, J., Cunningham, S. A., Eeckels, R., Herbst, K. (2005). Data cleaning: Detecting, diagnosing, and editing data abnormalities. *PLoS Medicine*, 2(10), 966-970. <https://doi.org/10.1371/journal.pmed.0020267>

- Van Heerden, J. (2016). Quality of South African early learning centres: Mothers' and teachers' views and understanding. *South African Journal of Childhood Education*, 6(1), a423. <http://dx.doi.org/10.4102/sajce.v6i1x.423>
- Van Zyl, E. (2011). The relationship between school readiness and school performance in Grade 1 and Grade 4. *South African Journal of Childhood Education*, 1(1), 82-94. <http://dx.doi.org/10.4102/sajce.v1i1.77>
- Visser, M., Juan, A., & Hannan, S. (2019). Early learning experiences, school entry skills and later mathematics achievement in South Africa. *South African Journal of Childhood Education*, 9(1), 1-9. <http://dx.doi.org/10.4102/sajce.v9i1.597>
- Wesley, P., & Buysse, V. (2003). Making meaning of school readiness in schools and communities. *Early Childhood Research Quarterly*, 18, 351-375. [http://dx.doi.org/10.1016/S0885-2006\(03\)00044-9](http://dx.doi.org/10.1016/S0885-2006(03)00044-9)
- Westen, D., & Rosenthal, R. (2003). Quantifying construct validity: Two simple measures. *Personality and Social Psychology*, 84(3), 608-618. <https://doi.org/10.1037//0022-3514.84.3.608>
- Williams, P.G., & Lerner, M. A. (2019). School readiness. *Pediatrics*, 144(2), e20191766. <https://doi.org/10.1542/peds.2019-1766>
- Winkleby, M. A., Jatulis, D. E., & Fortmann, S, P. (1992). Socioeconomic status and health: How education, income, and occupation contribute to risk factors for cardiovascular disease. *American Journal of Public Health*, 82(6), 816-820. <https://doi.org/10.2105/ajph.82.6.816>
- Xia, Y., & Yang, Y. (2019). RMSEA, CFI, and TLI in structural equation modelling with ordered categorical data: The story they tell depends on the estimation methods. *Behavior Research Methods*, 51, 409-428. <https://doi.org/10.3758/s13428-018-1055-2>

- Yanyun, Y., & Liang, X. (2013). Confirmatory factor analysis under violations of distributional and structural assumptions. *International Journal of Quantitative Research in Education*, 1(1), 61-84. <https://doi.org/10.1504/IJQRE.2013.055642>
- Zuckerman, B., & Halfon, N. (2003). School readiness: An idea whose time has arrived. *Pediatrics*, 111(6), 1433-1436. <https://doi.org/10.1542/peds.111.6.1433>



Annexure A: Ethical Clearance



UNIVERSITY of the
WESTERN CAPE



10 August 2021

Ms L Koopman
Psychology
Faculty of Community and Health Sciences

HSSREC Reference Number: HS21/6/8

Project Title: Establishing reliability and construct validity for the revised emotional social screening tool for school readiness (teacher's form)

Approval Period: 6 August 2021 – 6 August 2024

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report by 30 November each year for the duration of the project.

The permission to conduct the study must be submitted to HSSREC for record keeping purposes.

The Committee must be informed of any serious adverse events and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

NHREC Registration Number: HSSREC-130416-049

Director: Research Development
University of the Western Cape
Private Bag X 17
Bellville 7535
Republic of South Africa
Tel: +27 21 959 4111
Email: research-ethics@uwc.ac.za

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

Annexure B: The Revised Six-Factor E3SR

ANNEXURE B – E3SR (TEACHER’S FORM) SECTION A

DEMOGRAPHICS

PERSONAL PARTICULARS

Learner’s birth date: Month _____ Day _____ Year _____ Age of learner: _____

Learner’s Gender: Boy Girl

Learner’s ethnic group: _____

Home language/ mother tongue: English Afrikaans Xhosa Other: _____

Language of instruction at pre-school: English Afrikaans Xhosa Other: _____

Preschool: Governmental Private Community Other, specify _____

Does the learner have any illness or disability?

Yes No If Yes, Physical Cognitive Psychological

Has he/ she ever been referred for special support? Yes No

Psychologist Social worker Occupational therapist Speech therapist Paediatrician

Other, please specify _____

Is there trauma in the learner’s life at present or history of trauma? Yes No Unsure

(e.g. Disruption, divorce, move, death, bullying)

List any challenges experienced in the class environment.

RESPONDENT INFORMATION

For how many months have you known this learner? _____ months.

HOW WOULD YOU RATE THIS LEARNER’S?	EXCELLENT	GOOD	NEEDS SOME ATTENTION	NEEDS LOTS OF ATTENTION	POOR
Overall emotional readiness for school					
Overall social readiness for school					

e/m-2021

SECTION B: Below is a list of statements that describe the **learner's** emotional and social competencies/skills. For each item choose one description that best fits the **learner's** emotional and social competencies/skills now or within the past 3 months. Indicate your choice with a cross (X).

EMOTIONAL COMPETENCE						
EMOTIONAL MATURITY THE LEARNER ...	Never 1	Rarely 2	Some of the time 3	Most of the time 4	Almost Always 5	Cannot assess 0
Is able to place him/herself in the shoes of others (e.g. consoles when someone is hurt).						
Accepts when things are not going his/her way.						
Apologises if he/she acted wrong (e.g. hurt a peer, broke a toy).						
Accepts responsibility for actions.						
Accepts correction/discipline.						
EMOTIONAL MANAGEMENT THE LEARNER ...	Never	Rarely	Some of the time	Most of the time	Almost Always	Cannot assess
Is aware of their emotions.						
Can say what he/ she feels.						
Physically demonstrates emotions (e.g. hugs to express affection).						
Able to identify emotions (e.g. happy, sad).						
Able to communicate emotional experiences to teacher or caregiver (e.g. how was your day?).						
SENSE OF SELF THE LEARNER ...	Never	Rarely	Some of the time	Most of the time	Almost Always	Cannot assess
Acts with self-confidence when asked to do something.						
Is willing to learn/ take a risk even if a task seems difficult.						
Stands up for him/ herself.						
Is able to take the lead when expected in class.						
Able to stand his/ her own ground if peers have unrealistic demands.						
READINESS TO LEARN THE LEARNER...	Never	Rarely	Some of the time	Most of the time	Almost Always	Cannot assess
Can work quietly and calmly without constant feedback (e.g. praise and affirmation).						
Sits still when asked to do so or when busy with a task.						

Pays attention and can focus on a task.						
Completes a task given to him/her within reasonable time.						
Listens to and follow simple directions/ instructions from the teacher.						
Is able to follow rules in class or structured environments.						
Can participate in group tasks (e.g. sit still and listen to a story).						

SOCIAL COMPETENCE						
SOCIAL SKILLS THE LEARNER ...	Never 1	Rarely 2	Some of the time 3	Most of the time 4	Almost Always 5	Cannot assess 0
Considers other learners (e.g. can take turns to play with a toy).						
Is generally accepted and liked by other learners.						
Can make and maintain new friendships over time.						
Plays cooperatively with one or more learners for up to 5 minutes with minimal supervision.						
Willingly shares his/ her possessions with others his/ her own age.						
Is able to give peers a turn to start or play.						
Tries to help/ intervene when someone is hurt, considerate towards others.						
COMMUNICATION THE LEARNER...	Never	Rarely	Some of the time	Most of the time	Almost Always	Cannot assess
Speaks clearly and audibly without whispering or shouting.						
Is able to ask for what he/ she needs in understandable language.						
Can speak in full sentences.						
Can hold a conversation.						
Can communicate, say something in a group.						
Is able to answer direct questions when asked.						
Can understand when spoken to or given simple verbal instructions.						

e/m-2021 revised

Annexure C: Information Sheet



UNIVERSITY OF THE WESTERN CAPE

Department Psychology, Private Bag X 17, Bellville
7535

Tel: +27 21-959 2283, e-mail: 3626944@myuwc.ac.za,
emunnik@myuwc.ac.za

INFORMATION SHEET

Dear Participant,

Project Title: Establishing reliability and construct validity for the revised Emotional Social Screening Tool for School Readiness (teacher's form).

What is this study about?

This is a research project being done by Ms Lauren Koopman under the supervision of Dr. Erica Munnik, for the fulfilment of a Master's degree, at the University of the Western Cape. The study aims to establish the reliability and construct validity of the revised E3SR screening tool to assess emotional/social competence in pre-schoolers for use in the South African context. We are using the revised E3SR (teacher's form) for the study.

What will I be asked to do if I agree to participate?

Your participation will entail completing the E3SR questionnaire (screening tool) for each of the learners in your class. The questionnaire asks questions based on the learners' learned emotional and social skills. The checklist has 36 items.

Would my participation in this study be kept confidential?

The questionnaires will be completed anonymously and will be coded to remove identifying information. The completed questionnaires will be kept locked in a secure safe at all times and will be accessed only by my supervisor and me. We will do our best to keep personal information confidential. To help protect your confidentiality, your name will not be mentioned in my research project. If we write an article about this research project, your identity will be protected to the maximum extent possible.

What are the risks of this research?

There are no known or anticipated risks to participating in this study.

What are the benefits of this research?

You will have an opportunity to assess your learners' emotional/social skills using the questionnaire. This might stimulate awareness of the importance of the developmental skills involved and increase the ability to track the learner's progress in this domain. This project will generate knowledge that can assist in the assessment of emotional/social competence as a sub-domain of school readiness in pre-schoolers and will add to the endorsement of the validity and reliability of the screening tool.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is totally voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you decide to withdraw, you will not be penalised or lose any benefits for which you otherwise qualify.

Is any assistance available if I am negatively affected by participating in this study?

Negative impacts are not anticipated, but relevant referrals will be made if unexpected negative impacts arise. For example, should you become aware that your one of your learners appears to have trouble in some of the skills measured, referrals could be made for a more comprehensive assessment to the local district clinic or the psychologist or social worker based at your school.

What if I have questions?

This research is being conducted by Lauren Koopman at the Department of Psychology at the University of the Western Cape under the supervision of Dr E. Munnik. If you have any questions about the research study itself, you can contact:

Lauren Koopman or Dr Erica Munnik at the Department of Psychology, UWC on 0833916893 or 021-9592283/0827753221. Our emails are: 3626944@myuwc.ac.za or emunnik@uwc.ac.za.



Dean CHS: Prof Anthea Rhoda

Faculty of Community and Health
Sciences,

University of the Western Cape

Private Bag X17, Bellville, 7535

Chs-deansoffice@uwc.ac.za

Humanities and Social Sciences Research
Ethics

Committee (HSSREC), University of the
Western Cape,

University of the Western Cape

Private Bag X17, Bellville 7535

research-ethics@uwc.ac.za

REFERENCE NUMBER: HS21/6/8

Annexure D: Participant Consent Form



UNIVERSITY OF THE WESTERN CAPE
 Department of Psychology, Private Bag X 17, Bellville 7535,
 Tel: +27 21-959 2283, E-mail: 3626944@myuwc.ac.za,
 emunnik@myuwc.ac.za

PARTICIPANT CONSENT FORM

I, the undersigned, fully understand the research aims, my rights and my role as participant in the study, as well as issues related to confidentiality, as outlined in the information leaflet.

I also grant permission to the researcher to disseminate the information obtained in the following formats:

Unpublished thesis

Conference presentation

Published manuscript or article

I take cognisance that all documents and recordings will be kept safe for a period of five years and destroyed thereafter.

Signature	Print Name	Date
-----------	------------	------

This section is to be cut off and retained by the participant for future reference.

Researcher's Contact Details

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Student: Lauren Koopman, Dept of Psychology, UWC, 0833916893, 3626944@myuwc.ac.za

Supervisor: Erica Munnik, Dept of Psychology, UWC 021-9592283/ 0827753221, emunnik@uwc.ac.za

Thank you for your cooperation and you are welcome to contact me for any queries at the address given above.



UNIVERSITY OF THE WESTERN CAPE
 Department Sielkunde, Privaatsak X 17, Bellville 7535
 Tel: +27 21-959 2283, e-mail: 3626944@myuwc.ac.za,
 emunnik@myuwc.ac.za

TOESTEMMINGS VORM

Ek, die ondergetekende, verstaan die navorsingsdoelwitte ten volle, asook my regte en my rol as deelnemer in die navorsingsprojek. Ek verstaan en neem ook kennis van alle stellings oor konfidensialiteit wat uiteengesit is in die inligtingsbrochure.

Ek gee hiermee ook toestemming aan die navorser om inligting oor die studie in die vorm van die volgende dokumente te versprei:

Ongepubliseerde meesters tesis
 Konferensie aanbiedings
 Gepubliseerde artikels

Ek neem kennis dat alle dokumente veilig gestoor sal word vir 'n tydperk van vyf jaar en daarna vernietig sal word.

Handtekening

Print Naam

Datum

Hierdie gedeelte word afgesny en kan deur die deelnemer gehou word vir toekomstige verwysing.

Navorser se kontak besonderhede

Indien jy enige vrae het oor die studie of oor jou regte as deelnemer of as jy enige probleme omtrent die studie onder my aandag wil bring is jy welkom om my te kontak by:

Student: Lauren Koopman, Departement Sielkunde UWK, 0833916893, 3626944@myuwc.ac.za

Supervisor: Erica Munnik, Departement Sielkunde, UWK, 9592283/ 0827753221, emunnik@uwc.ac.za

Dankie vir jou deelname aan hierdie studie. U is welkom om my te skakel indien jy enige navrae het.

Annexure E: Letter of Permission from WCEd



Directorate: Research

meshack.kanzi@westerncape.gov.za
 Tel: +27 021 467 2350
 Fax: 086 590 2282
 Private Bag x9114, Cape Town, 8000
wced.wcape.gov.za

REFERENCE: 20210913-5777

ENQUIRIES: Mr M Kanzi

Ms Lauren Koopman
 50 De Troit Crescent
 Malibu Village
 Blue Downs
 7100

Dear Ms Lauren Koopman,

RESEARCH PROPOSAL: ESTABLISHING RELIABILITY AND CONSTRUCT VALIDITY FOR THE REVISED EMOTIONAL SOCIAL SCREENING TOOL FOR SCHOOL READINESS (TEACHER'S FORM).

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from **30 September 2021 till 30 June 2022**.
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).
7. Should you wish to extend the period of your survey, please contact Mr M Kanzi at the contact numbers above quoting the reference number.
8. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.
9. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.
10. The approval of your research request does not imply a promise of any data from the WCED. Should you require data, you will have to request it from the participating schools where it will be possible to secure parental consent.
11. Please note that POPIA prohibits the sharing of personal information without parental consent.
12. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
13. The Department receives a copy of the completed report/dissertation/thesis addressed to:

**The Director: Research Services
 Western Cape Education Department
 Private Bag X9114
 CAPE TOWN
 8000**

We wish you success in your research.

Kind regards,

A handwritten signature in black ink, appearing to read 'Meshack Kanzi'.

Meshack Kanzi
Directorate: Research
DATE: 30 September 2021

1 North Wharf Square, 2 Lower Loop Street,
 Foreshore, Cape Town 8001
 tel: +27 21 467 2531

Private Bag X 9114, Cape Town, 8000
 Safe Schools: 0800 45 46 47
wcedonline.westerncape.gov.za



Annexure F: Circular to Parents

UNIVERSITY OF THE WESTERN CAPE

Department Psychology, Private Bag X 17, Bellville 7535

Tel: +27 21-959 2283, *e-mail:* 3626944@myuwc.ac.za,
emunnik@myuwc.ac.za

CIRCULAR: PARENTS

Title of Research Project: Establishing reliability and construct validity for the revised Emotional Social Screening Tool for School Readiness (E3SR) (teacher's form).

What is this study about?

This research project will be done by Lauren Koopman as part of a study for her master's degree in Psychology at the University of the Western Cape. The E3SR screening tool helps teachers and parents to screen if your child has the necessary emotional and social skills to adjust to the school environment before he/she enters Grade 1. This research will help to make sure that the E3SR is measuring emotional and social skills in the way that it is supposed to, and that all the questions that are asked are questions that are relevant to ask to measure the emotional and social skills necessary for your child to be school-ready. In this study, the Grade R teacher will fill in a questionnaire (E3SR) by thinking about your child's behaviour in general in the classroom and on the playground. The teachers will use what they know about your child in the classroom and on the playground to complete the questionnaire. So, although they will think about your child and complete the questionnaire, your child will not take part in the study physically.

What will I be asked to do if I agree that my child may participate?

You are requested to give consent that the teacher can fill in the questionnaire thinking about your child's emotional and social skills. Your child will not be required to anything or be exposed to specific observation, as the teacher will only be required to report on their existing knowledge and experiences of the child. Your child will not be exposed to any other person during the course of this study, and the information that the teacher will give on the questionnaire will be done anonymously, without mentioning your child's name. Please also note that you may withdraw this consent immediately at any point in time if you change your mind.

Would my child's participation in this study be kept confidential?

The researcher undertakes to protect your child's identity. To ensure anonymity, teachers will not assign names to the questionnaires and thus the researcher will not know your child's identity. A number will be assigned for each name, for example 'Protocol 1'. The collection and storage of the questionnaires will be done as recommended by the Data Protection Act of 1998 as well as The Protection of Personal Information Act 4 of 2013. The questionnaires will be kept in a locked cabinet for a five-year period, and all computer analysis will be password-protected. If I write a report or article about this research project, your child's identity will be protected.

What are the risks of this research?

There are no known or anticipated risks for your child to participate in this study.

What are the benefits of this research?

This research may assist teachers with their assessments of your child's skills (formative assessments) and will help them to give feedback to you as a parent about your child's social and emotional skills. It may also help you to identify areas and ways to improve these skills, if there is room for improvement.

Does my child have to be in this research and may he/she stop participating at any time?

Your child's participation in this research is completely voluntary. You may choose not to consent to their participation. If you allow your child to participate in this research, you have the right to stop their participation at any time. If you decide to not consent to their participation in this study or to stop their participation at any time, you will not be penalised in any way.

Is any assistance available if my child is negatively affected by participating in this study?

There are no negative effects expected in this research but, if there are, the teacher and the researcher will assist you to get the help that you need by ensuring that you are referred to district-level services or private services to assist you to deal with the challenges that might arise.

What if I have questions?

This research is being done by Lauren Koopman in the Psychology Department at the University of the Western Cape. If you have any questions about the research itself, please contact me at: 3626944@myuwc.ac.za.

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study supervisor:

Dr Erica Munnik

Department of Psychology
 University of the Western Cape
 Private Bag x17
 Bellville
 7535
 Telephone: 0827753221
 E-mail: emunnik@uwc.ac.za

Should you have any further questions regarding this study and your rights or if you wish to report any problems you have experienced related to the study, please contact:

Prof Anita Padmanabhanunni Department of Psychology Faculty of Community and Health Sciences University of the Western Cape Tel: 021 9592851 Email: apadmana@uwc.ac.za	Prof Anthea Rhoda Dean: Faculty of Community and Health Sciences University of the Western Cape Private Bag X17 Bellville 7535 chs-deansoffice@uwc.ac.za
---	--

This research has been approved by the University of the Western Cape's Humanities and Social Sciences Research Ethics Committee.

Humanities and Social Sciences Research Ethics Committee

University of the Western Cape
 Private Bag X17
 Bellville 7535
 Tel: 021 959 4111
 E-mail: research-ethics@uwc.ac.za

REFERENCE NUMBER: HS21/6/8



UNIVERSITEIT VAN WES-KAAPLAND

Departement Sielkunde, Privaatsak X 17, Bellville 7535

Tel: +27 21-959 2283, e-mail: 3626944@myuwc.ac.za,
emunnik@myuwc.ac.za

INLIGTINGSVORM: OUERS

Titel van die navorsingsprojek: Die vasstelling van betroubaarheid en konstruktiefheid vir die hersiene instrument vir emosionele sosiale sifting vir skoolgereedheid (E3SR) (onderwysers vorm).

Waaroor gaan die studie?

Hierdie navorsingsprojek sal deur Lauren Koopman gedoen word as deel van 'n studie vir haar meestersgraad in Sielkunde aan die Universiteit van Wes-Kaapland. Die E3SR siftingsinstrument help onderwysers en ouers om vas te stel of u kind oor die nodige emosionele en sosiale vaardighede beskik om aan te pas by hoofstroom onderwys voordat hy/ sy Graad 1 betree. Hierdie navorsing sal help om seker te maak dat die E3SR emosionele en sosiale vaardighede meet, soos dit veronderstel is om te meet, en dat al die vrae wat gestel word, vrae is wat toepaslik is om die emosionele en sosiale vaardighede wat nodig is vir u kind om skoolgereed te wees, te meet. In hierdie studie sal die Graad R onderwyser 'n vraelys (E3SR) invul deur na te dink oor die gedrag van u kind in die klaskamer en op die speelgrond. Sy sal dit wat sy van u kind weet, in die klaskamer en op die speelgrond, gebruik om die vraelys in te vul. Alhoewel sy aan u kind sal dink en die vraelys voltooi, sal u kind dus nie fisies aan die studie deelneem nie.

Wat word van my kind verwag as ek toestem dat hy/sy kan deelneem?

U word versoek om toestemming te verleen dat die onderwyser 'n vraelys kan invul waar sy nadink oor die emosionele en sosiale vaardighede van u kind. Daar sal nie van u kind verwag word om blootgestel te word aan spesifieke waarneming nie, aangesien die onderwyser die vraelys voltooi deur hom/ haar bestaande kennis en ervarings van die kind te gebruik. U kind sal gedurende die loop van die studie nie aan enige ander persoon blootgestel word nie en die inligting wat die onderwyser op die vraelys invul, sal anoniem gedoen word sonder om die naam van u kind te noem. Let ook daarop dat u hierdie toestemming op enige tydstip onmiddellik kan terugtrek as u van mening oor deelname aan die studie verander.

Sal my kind se deelname in die studie konfidensieel hanteer word?

Die navorser onderneem om u kind se identiteit te beskerm. Om anonimiteit te verseker, sal onderwysers nie name op die vraelyste aandui nie en dus sal die navorser nie u kinders kan identifiseer nie. 'n Nommer sal aan elke naam toegeken word, byvoorbeeld 'Protokol 1'. Die

versameling en bewaring van die dokumente sal voldoen aan die Wet op die Beskerming van Data van 1998, sowel as die Wet op die Beskerming van Persoonlike Inligting 4 van 2013. Die vraelyste sal vir vyf jaar in n geslote kabinet bewaar word en alle rekenaar analise sal wagwoord-beskerm wees. As ek n 'n verslag of artikel oor hierdie navorsingsprojek skryf, sal u kind se identiteit ten alle koste beskerm word.

Wat is die riskios verbonde aan deelname?

Daar is geen bekende of verwagte risiko's vir u kind om aan hierdie studie deel te neem nie.

Wat is die voordele van die navorsing?

Hierdie navorsing kan onderwysers help met hul assessering van u kind se vaardighede (formatiewe assesserings) en sal hulle help om terugvoer aan u as ouer te gee oor die sosiale en emosionele vaardighede van u kind. Dit kan u ook help om gebiede en maniere te identifiseer om hierdie vaardighede te verbeter indien daar ruimte vir verbetering bestaan.

Moet my kind aan die studie deelneem en kan hy/sy enige tyd onttrek?

U kind se deelname aan hierdie navorsing is heeltemal vrywillig. U kan kies om nie toestemming te verleen nie. As u u kind toelaat om aan hierdie navorsing deel te neem, het u die reg om die deelname teen enige tyd te stop, sonder dat u kind in enige manier benadeel word.

Is daar enige ondersteuning beskikbaar indien my kind se deelname aan die studie hom/haar negatief so beïnvloed?

Daar word geen negatiewe gevolge in hierdie navorsing verwag nie, maar indien wel, sal die onderwyser en die navorser u help om die nodige hulp te kry deur te verseker dat u na distriksvlakdienste of private dienste verwys word om u te help om uitdagings wat kan ontstaan die hoof te bied.

Wat as ek enige vrae het?

Die navorsing word onderneem deur Lauren Koopman onder leiding van die Departement van Sielkunde van die Universiteit van die Wes-Kaap. Indien u enige vrae oor die navorsing self het, kontak die navorser asseblief by: 3626944@myuwc.ac.za

Indien u enige vrae rakende die studie het of enige probleme wat u ervaar het rakende die studie en u regte as deelnemer wil rapporteer, kontak asseblief die studie supervisor:

Dr Erica Munnik.

Departement van Sielkunde

University of the Western Cape

Private Bag x17

Bellville

7535

Telefoon: 0827753221

E-pos: emunnik@uwc.ac.za

Indien u enige verdere vrae rakende die studie het of enige probleme wat u ervaar het rakende die studie en u regte as deelnemer wil rapporteer, kontak asseblief die studie supervisor:

<p>Prof Anita Padmanabhanunni</p> <p>Department of Psychology</p> <p>Faculty of Community and Health Sciences</p> <p>University of the Western Cape</p> <p>Tel: 021 9592851</p> <p>Email: apadmana@uwc.ac.za</p>	<p>Prof Anthea Rhoda</p> <p>Dean: Faculty of Community and Health Sciences</p> <p>University of the Western Cape</p> <p>Private Bag X17</p> <p>Bellville 7535</p> <p>chs-deansoffice@uwc.ac.za</p>
--	--

Hierdie navorsing is aanvaar deur die Universiteit van die Wes-Kaap se “Humanities and Social Sciences Research Ethics Committee”.

Humanities and Social Sciences Research Ethics Committee

University of the Western Cape

Private Bag X17

Bellville 7535

Tel: 021 959 4111

e-pos: research-ethics@uwc.ac.za

VERWYSINGSNOMMER: HS21/6/8

By voorbaat dankie vir u deelname.

Annexure G: Parent Consent Form



UNIVERSITY OF THE WESTERN CAPE
 Psychology Department, Private Bag X 17, Bellville 7535
Tel: +27 21-959 2283, e-mail: 3626944@myuwc.ac.za.

PARENT CONSENT FORM

I, the undersigned, fully understand the research aims, my rights and my role as parent to the observed learner in the study, as well as issues related to confidentiality, as outlined in the information circular.

I also grant permission to the researcher to disseminate the information obtained in the following formats:

Unpublished thesis

Conference presentation

Published manuscript or article

I take cognisance that all documents and recordings will be kept safe for a period of five years and destroyed thereafter.

Signature

Print Name

Date

This section is to be cut off and retained by the participant for future reference.

Researcher's Contact Details

Should you have any questions regarding this study and your rights as a parent to the observed learner or if you wish to report any problems you have experienced related to the study, please contact:

Student: Lauren Koopman, Dept of Psychology, UWC, 0833916893, 3626944@myuwc.ac.za

Supervisor: Erica Munnik, Dept of Psychology, UWC 021-9592283/ 0827753221, emunnik@uwc.ac.za

Thank you for your cooperation and you are welcome to contact me for any queries at the address given above.



UNIVERSITEIT VAN WES-KAAPLAND
 Department Sielkunde, Privaatsak X 17, Bellville 7535
 Tel: +27 21-959 2283, E-mail: 3626944@myuwc.ac.za,
 emunnik@myuwc.ac.za

OUER TOESTEMMINGS VORM

Ek, die ondergetekende, verstaan die navorsingsdoelwitte ten volle, asook my regte en my rol as ouer van leerder wat waargeneem word in die navorsingsprojek. Ek verstaan en neem ook kennis van alle stellings oor konfidensialiteit wat uiteengesit is in die inligtingsbrochure.

Ek gee hiermee ook toestemming aan die navorser om inligting oor die studie in die vorm van die volgende dokumente te versprei:

Ongepubliseerde meesters tesis
 Konferensie aanbiedings
 Gepubliseerde artikels

Ek neem kennis dat alle dokumente en opnames veilig gestoor sal word vir 'n tydperk van vyf jaar en daarna vernietig sal word.

Handtekening	Print Naam	Datum
--------------	------------	-------

Hierdie gedeelte word afgesny en kan deur die deelnemer gehou word vir toekomstige verwysing.

Navorser se kontak besonderhede

Indien jy enige vrae het oor die studie of oor jou regte as ouer van leerder wat waargeneem word, of as jy enige probleme omtrent die studie onder my aandag wil bring is jy welkom om my te kontak by:

Student: Lauren Koopman, Departement Sielkunde UWK, 0833916893, 3626944@myuwc.ac.za

Supervisor: Erica Munnik, Departement Sielkunde, UWK, 9592283/ 0827753221, emunnik@uwc.ac.za

Dankie vir jou deelname aan hierdie studie. U is welkom om my te skakel indien jy enige navrae het.

Annexure H: Permission Letter to Use E3SR

UNIVERSITY OF THE WESTERN CAPE
Psychology Department, Bag X 17, Bellville 7535
Tel: +27 21-959 2283, e-mail: emunnik@myuwc.ac.za

PERMISSION LETTER TO USE E3SR

3 May 2021

To whom it may concern

PERMISSION FOR THE USE OF THE E3SR

I hereby grant permission to Ms. Lauren Koopman, student number 3626944, to use the E3SR for her Masters by thesis research project entitled: "Establishing reliability and construct validity for the revised Emotional Social Screening Tool for School Readiness (teacher's form).

Warm regards

Handwritten signature of Erica Munnik.

Dr Erica Munnik
Senior lecturer, Clinical Psychologist
Department of Psychology
Faculty of Community and Health Sciences
University of the Western Cape

Annexure I: Codebook

SECTION A

DEMOGRAPHICS

PERSONAL PARTICULARS: Child's birth date: Month ____ Day ____ Year ____ Age of child: _____

Child's Gender: 1 Boy 2 Girl

Birthdate is one cell/variable in SPSS. You can enter in this mm/dd/yyyy format

Numeric in years

Child's ethnic group: 1 = White; 2 = Coloured; 3 = Black; 4 = Indian; 5 = Mixed race; 6 = Other; 7 = Not disclosed

Home language/ mother tongue: 1 English 2 Afrikaans 3 Xhosa 4 Other: _____ New variable for 'specify other' - string/text variable

Language of instruction at pre-school: 1 English 2 Afrikaans 3 Xhosa 4 Other: _____ New variable for 'specify other' - string/text variable

Preschool: 1 Governmental 2 Private 3 Community 4 Other, specify _____ New variable for 'specify other' - string/text variable

Does the child have any illness or disability?

Yes 1 No 2 If Yes, 1 Physical 2 Cognitive 3 Psychological

Has he/ she ever been referred for special support? 1 Yes 2 No

1 Psychologist 2 Social worker 3 Occupational therapist 4 Speech therapist 5 Paediatrician

6 Other, please specify _____ String /text variable for 'specify other'

Any reported history of trauma (e.g. disruption, divorce, move, death, bullying) during the following periods?

Each of these is its own variable with a yes/no option.

1 = Yes
2 = No Birth- 2 years of age

1 = Yes
2 = No 2-4 years of age

1 = Yes
2 = No 5 years

Was the traumatic issue resolved? 1 Yes 2 No 3 Unsure

Did the child return to normal levels of functioning? 1 Yes 2 No 3 Unsure

List any challenges currently experienced at home.

String/ text variable

RESPONDENT INFORMATION

For how many months have you known this learner? _____ months in numbers _____ months:

HOW WOULD YOU RATE THIS CHILDS?	EXCELLENT	GOOD	NEEDS SOME ATTENTION	NEEDS LOTS OF ATTENTION	POOR
Overall emotional readiness for school	1	2	3	4	5
Overall social readiness for school	1	2	3	4	5

e/m-2021

SECTION B: Below is a list of statements that describe **the child's** emotional and social competencies/skills. For each item choose one description that best fit **the child's** emotional and social competencies/skills now or within the past 3 months. Indicate your choice with a cross (X).

EMOTIONAL COMPETENCE						
EMOTIONAL MATURITY THE CHILD _	Never	Rarely	Some of the time	Most of the time	Almost Always	Cannot assess
	1	2	3	4	5	0
Is able to place him/herself in the shoes of others (e.g. consoles someone when hurt).						
Accepts when things are not going his/her way.						
Apologises if he/she acted wrongly (e.g. hurt a friend, broke a toy).						
Accepts responsibility for actions.						
Accepts correction/discipline.						
EMOTIONAL MANAGEMENT THE CHILD _	Never	Rarely	Some of the time	Most of the time	Almost Always	Cannot assess
Is aware of emotions.						
Can say what he/ she feels.						
Physically demonstrates emotions (e.g. hugs to express affection).						
Able to identify emotions (e.g. happy, sad).						
Able to communicate emotional experiences to caregiver (e.g. how was your day?).						
SENSE OF SELF THE CHILD _	Never	Rarely	Some of the time	Most of the time	Almost Always	Cannot assess
Acts with self-confidence when asked to do something.						
Is willing to learn/ take a risk even if a task seems difficult.						
Stands up for him/ herself.						
Is able to take the lead when expected.						
Able to stand his/ her own ground if siblings/ peers have unrealistic demands						
READINESS TO LEARN THE CHILD _	Never	Rarely	Some of the time	Most of the time	Almost Always	Cannot assess
Can work quietly and calmly without constant feedback (e.g. praise and affirmation).						
Sits still when asked to do so or when busy with a task.						
Can focus on a task.						
Completes a task given to him/her within reasonable time.						

Listens to and follow simple directions/ instructions from an adult.						
Is able to follow rules in a structured environment.						
Can participate in group tasks (e.g. sit still and listen to a story).						

SOCIAL COMPETENCE						
SOCIAL SKILLS THE CHILD ...	Never 1	Rarely 2	Some of the time 3	Most of the time 4	Almost Always 5	Cannot assess 0
Considers his/ her friends (e.g. can take turns to play with a toy).						
Is generally accepted and liked by other peers.						
Can make and maintain new friendships over time.						
Plays cooperatively with one or more peers for up to 5 minutes with minimal supervision.						
Willingly shares his/ her possessions with others his/ her own age.						
Is able to give peers a turn to go first or play with a toy.						
Tries to help/ intervene when someone is hurt (consideration towards others).						
COMMUNICATION THE CHILD ...	Never	Rarely	Some of the time	Most of the time	Almost Always	Cannot assess
Speaks clearly and audibly without whispering or shouting.						
Is able to ask for what he/ she needs in understandable language.						
Can speak in full sentences.						
Can hold a conversation.						
Can communicate, say something in a group.						
Is able to answer direct questions when asked.						
Can understand when spoken to or given simple verbal instructions.						

e/m-2021 revised

Annexure J: Formal Editing Letter**Viv O'Neill**

M.A. (Couns. Psych.) (Natal)

Counselling Psychologist

(Regd. Health Professions Council of South Africa)

17 Kinnoull Road**Pelham****Pietermaritzburg****3201****Cell: 083 464-7666**

25 June 2022

To Whom It May Concern

This confirms that I have edited the following thesis by Lauren Koopman, under supervision of Dr. Erica Munnik:

Establishing reliability and construct validity for the revised Emotional Social Screening Tool for School Readiness (teacher's form)

I completed a three-day Basic Editing and Proofreading course with John Linnegar (from McGillivray Linnegar Associates) in March, 2008. Since then, I have undertaken extensive copy editing work for Oxford University Press (South Africa), including editing both the first and second editions of their *Abnormal Psychology* text.

I have also edited multiple articles for submission to journals in South Africa and abroad, as well as many theses.



V.C. O'Neill