THE INTER*PLAY* BETWEEN UNIVERSAL AND UNIQUE CONTEXTS IN SHAPING CHILD DEVELOPMENTAL ASSESSMENT

Tourists
They came into the wilderness clichés in suitcases
Talismans they cherished as shields against poisonous madness….
They saw no familiar hills and heard no familiar songs.
Holding onto their fetishes they defy time and distance…
They surround themselves with jacarandas and pines
Build concrete walls around their homes
I hope next time they will import snow, change
The seasons to humour their eccentric whims

(in Chapman & Voss, 1986, p.237).

Just as the tourists in the poem who defiantly changed the unfamiliar surroundings to become something more familiar to them, but very unfamiliar to the indigenous people, as people with a universal interest in and commitment to making the lives of children of the world better, we need to guard against doing the same. Imagine how people living in a unique context such as a deep (remote) rural area might react with anger and suspicion if an unknown person arrives in their village one day and orders them to do certain strange things?

In this lecture the revision of the Griffiths Scales of Child Development, or Griffiths III as it is now known, will be described. It is not a description or story that falls easily and smoothly into sequence. It is one that has been garnered from many sources and from many people. Some of it comes in the form of fragments from professional men and women who have looked upon developing children with a unique and unrelenting eye. It comes from men and women who carry the germ of knowledge, implanted somewhere deeply in their beings, a place where a curious, natural rhythm exists and a kind of magic. Additionally a suggested plan for the future or "what next" phase in the interplay between universal and unique contexts in shaping child developmental assessment specifically using the Griffiths III will be described and proposed.

Pregnancy and birth

Pregnancy and birth reveals the baby's living architecture. As this miracle of conception grows a unique character begins to emerge with its own preference and perspective on the world. Babies are designed to learn. In fact, their brains are more flexible than adult brains - there are many more connections between the neurons and significantly higher levels of chemicals. Although an infant or young child does not yet have a fully developed prefrontal cortex, strangely enough this leaves them with a most profound and highly sought after uninhibited flexibility. An uninhibited flexibility that allows them to explore creatively, learn flexibly and plan and act effectively making every child's web of development beautifully unique. Children learn about the world in much the same way that adults do. Child development has been described aptly as a dynamic, moving target. And yet it is both Universal and Unique – same, same but different.

Play

Children's appetite for change leads them to be curious about the world about them. Play connects them to the real world - their real world. Play is a science and an essential ingredient to optimal child development. It has been described as a lighting up of the brain. Play allows children to make their own decisions and to be immersed in the moment. It requires intrinsic motivation, is spontaneous (not scripted) and of course, enjoyable. In fact it has been found that children who play tend to be more imaginative, creative, flexible, adaptive, skilled and advanced in language development, more successful with school work, and more emotionally secure. And yet here too we see both Universal and Unique aspects of Play coming into the mix – same, same but different.

Child Development

Children thrive when they have time and space to breathe, to hang out and get bored sometimes, to relax, to take risks and make mistakes, to dream and have fun on their own terms, even to fail. From infancy to adulthood, a child needs its parents or caregivers to balance their protective instincts with the need to let go until, finally, they are fully grown. In the past, the Working Child toiled in the fields and later, in the factories of the Industrial Revolution. The Twentieth century saw the rise of the Free-Range Child and more recently we have experienced the emergence of the age of the Managed Child with the Helicopter Parent hovering overhead trying to control things.Today more specifically we face the challenge to find a new recipe for a child growing up in the Information Age.

Developmental Assessment

The assessment of development involves a comprehensive investigation of a child's abilities, including motor, social and cognitive abilities, by direct observation, testing and reports from caregivers. The rapidly shifting nature of children's development poses problems for the assessment of young children. Of the various methods for assessing child development, the Griffiths Scales are among those which have been accorded world-wide recognition, especially by paediatricians and psychologists. They are not simply a screening test, for they enable a thorough, holistic, diagnosis through analysis of the developmental profile. Through periodic re-examinations of children, we can bring to light developmental trends and establish developmental baselines.

Developmental Baselines

As people or clinicians with an interest in child development, it is necessary for us to establish children's developmental baselines. For example, in the past this need led the Developmental Psychologist Plooij to speak of Regression Periods, the Child Neuropsychologist Vygotsky to highlight the importance of Zones of Proximal Development, the Cognitive Psychologist Piaget to suggest that cognitive development progresses as change happens in the child's knowledge systems and the Child Psychologist Ruth Griffiths to create the Griffiths Scales of Child Development.

The Griffiths Scales of Child Development

Dr Ruth Florence Griffiths was born on 2 September 1895. She experienced an isolated and troubled childhood (which she seemed to remember for ever after). Dr Brian Burne records that it was perhaps these early experiences that laid the roots for her later meticulous observation of young children, her love for them and her pleasure in observing their personalities unfold and blossom. Dr Griffiths designed and created the Griffiths Scales of Mental Development which was published in 1954. The Griffiths Scales originally covered the first two years of life and assessed development in five areas – Locomotor, Personal-Social, Hearing and Speech, Eye and Hand Co-ordination, and Performance. The Griffiths Extended Scales of Mental Development was then developed in the 1960's as an extension of the original Scales and tested children aged two to eight years. A sixth subscale, Practical Reasoning, was introduced with the Extended Scales. When the Griffiths Scales were first introduced, the psychometric conceptions of intelligence were emerging and were to influence psychometric measurement for the next three generations. These narrow conceptions included verbal, visual-spatial and mathematical abilities. The Griffiths Scales brought with it an innovative system for developmental assessment, as Ruth Griffiths was aware of the importance of social and emotional developmental factors and the interplay between these and mental development. She firmly believed in the value of understanding the child as a whole (Griffiths, 1935) and thus, the need to explore various domains of functioning through observation, psychometric assessment and caregiver-reporting (Luiz, et al., 2006). A need for the revision of the Griffiths Scales was suggested by various studies in the 1980s and early 1990s. In 1994 the publication of a draft version of the Revised Baby Scales from Birth to Two Years was realised under the leadership of Dr Michael Huntley. The revision comprised only those changes necessary to update the Baby Scales and to re-norm it (Huntley, 1996). A decision to revise the Extended Griffiths Scales was made concurrently. In 2006, this decision culminated in the publication of the Griffiths Mental Development Scales – Extended Revised (GMDS-ER). In 2010 the Association for Research in Infant and Child Development (ARICD), based in the United Kingdom, London, set up a Project Board to oversee the revision of the Griffiths Scales. This was to be done in conjunction with Hogrefe, the Publishing company responsible for the world wide distribution of the measure and a Team from what was then known as the Nelson Mandela Metropolitan University. The Griffiths III was launched in London on 06 May 2016.

Ruth Griffiths view of Child Development

Ruth Griffiths' view of child development is reflected in her philosophy based on the basic avenues of learning and the concept of observing children in play as depicted in her 1954 diagram below**.** Her diagram of the child surrounded by interlinking circumstances, although very old-fashioned in its language, is still pertinent today. This two-dimensional diagram of Ruth Griffiths has been revised and transformed into a three dimensional working model order to depict the theoretical underpinnings of the Griffiths III. Once again same, same but different.

Revising the Griffiths Scales

The revision was guided by considering the following aspects:

- To ensure that the Griffiths Scales tap relevant developmental domains/constructs.
- To retain the unique qualities of the Griffiths Scales, that is, their 'child friendly' approach and skill and value of observing children in play-like contexts.
- To revise the measure and afford the Griffiths Scales the option of greater flexibility in terms of cross-cultural use and ensure wider global relevance.
- To explore possible alternative methodologies of assessing child development (with regards to globalisation, testing and standardisation).
- To develop and stipulate appropriate test specifications.
- To ensure that the developmental nature of the Griffiths Scales was retained.

There were six phases that provided the landscape for the Revision, namely diagnostic, item review, item design, test finalisation, test release and training.

Following a critical analysis of a literature review conducted, consideration of the theoretical underpinnings of the Scales, information obtained from the Avenues of Learning Workshop and interviews with experts in various fields of child development, and input from the South African project team and the working group of Subscale leaders, a number of guiding principles were established and agreed by the Project Board, namely:

- The purpose of the Griffiths Scales was to measure general development.
- The underlying premise of the Scales should remain structured observation of children using play.
- The breadth of the Griffiths Scales remained important.
- The Scales must be able to be used clinically and for research.
- The ceiling of the Griffiths Scales was reduced to 5 years 11 months.

While the earlier versions of the Griffiths Scales covered a broad scope of constructs, modern literature highlighted some of these constructs or a broader coverage of a construct that would be important for children today. A key decision made by the team of Subscale developers was the need to develop a new subscale called 'Foundations of Learning', and to expand and integrate the constructs covered in the 'Performance' and 'Practical Reasoning' subscales of the Griffiths Scales. Conceptual definitions were developed for the construct domain of each subscale. Each construct was broken down into sub-constructs that could be operationalised in terms of behaviours that could be assessed, observed and measured. All sub-constructs within a domain, taken together, represent the comprehensive conceptualisation of the construct domain. An important result of this process was the development of new subscale names to reflect the identity of each subscale.

A map demonstrating the constructs and subconstructs underpinning the measure was devised by the team of Subscale developers and served to guide the item selection and creation process of the Griffiths III.

The initial source for selecting and developing the items was the previous versions of the Griffiths Scales. A decision was made for each item whether it should be Included as it fitted the updated sub-scale construct domain and definition, or modified so that the core activity or essence of the item was retained but modified or redeveloped, (for example for international relevance), or merged with another item to reduce overlap, or moved to a different, more appropriate subscale where it had a better “construct fit”, or discarded if the item was no longer in line with current developmental guidelines or for statistical reasons. In addition, popular children’s games were consulted for ideas regarding task types to be used, and Griff and Ruthie the bear were introduced into the kit.

Subscale	Example of Item found in the Subscale
Foundations of Learning	Building with blocks and brick boxes; completing formboards; spotting the difference between pictures; drawing a person with a pencil and paper, etc.
Language and Communication	Describing a big picture; following instructions; knowing what opposites, similarities and differences are; naming objects, etc
Eye and Hand Co-ordination	Copying shapes such as a circle, triangle and square using a pencil; threading beads on a string; joining connector blocks; cutting paper shapes with a pair of scissors, etc
Personal, Social and Emotional	Engaging with pictures of Griff and Ruthie the bear to identify and name emotions; taking note of the other’s perspective in social situations; using Griff the Bear to demonstrate aspects of self care, etc.
Gross Motor	Testing out aspects of sitting, crawling, walking, jumping, skipping, running, climbing, etc.

A total of 429 items compiled into prototype experimental versions of the Griffiths III were tried out during two separate administrations. Sub-scale developers tested around 10 children each on the experimental version of their sub-scale, gauging children's responses, refining or replacing items and developing administration instructions. Pilot testing was arranged to pre-screen before large scale standardisation testing in order to check task constructs and make any further changes and refinements. Ethics approval for the pilot testing in Port Elizabeth, South Africa was granted by the Nelson Mandela Metropolitan University’s Ethics Committee. 20 psychologists were recruited and trained to administer the new scales for pilot testing. The sample consisted of 100 children within the age range of the Griffiths III. Conducting pilot testing in South Africa, allowed the test developers to obtain insight into how children outside the United Kingdom and Republic of Ireland may engage with test tasks. Further item amendments and clarifications followed pilot testing. In particular, it was found that there were too many picture tasks across the subscales that hampered test administration. A 'quiet book' was developed which incorporated a number of the tasks from across the sub-scales in a manner which appealed highly to the children. From a quantitative perspective the pilot test results allowed for the calculation of item difficulty level (p). These statistics informed the final selection and placement of items for the standardisation protocol. A total 13 South African psychologists

and 4 members of the Sub-scale team tested 426 children. All the data was useable. The data were then analysed to establish the psychometric properties of the Griffiths III and to generate the norms using a continuous norming approach. The final normative and standardisation sample comprised 426 children from the United Kingdom and Republic of Ireland. The sample consisted of 208 (48.8%) girls and 218 (51.2%) boys.

As part of the blueprint that guided the revision process, a decision was made from the outset that raw scores obtained on the Griffiths III would be transposed to the following norms to aid the interpretation of test performance:

- Scaled scores
- Developmental Quotients (per Subscale as well as an overall developmental quotient)
- Percentiles
- Stanines
- Developmental age equivalent (per raw score)

Evidence for the internal consistency reliability was obtained by computing Cronbach Alpha coefficients for the subscales per year group. The reliability coefficients for the subscales ranged from 0.80 to 0.84. These are acceptable coefficients for a standardised test. There is also evidence of construct validity to the measure as an evaluation evidenced that the subscales are measuring what they purport to measure. While the measure is psychometrically sound, this needs to be enhanced by gathering information about test-retest reliability, factorial validity to get empirical information about the construct validity of the Griffiths III *(*which will require a large sample of children to be assessed) and correlations between performance on the Subscales of the Griffiths III performance and that on other similar tests, which will add further construct validity evidence.

Shaping child development assessment using the Griffiths III – Two Case Studies

Birth and Pregnancy	Universal
	Unique
Children's Developmental Processes	Universal
	Unique
Play	Universal
	Unique
Developmental Assessment Best Practices	Universal
	Unique
Psychological Test Revision & Development	Universal
	Unique
The Griffiths Scales of Child Development (Griffiths III)	Universal
	Unique

The Revision of the Griffiths can be likened to a railway system that begins with a single main route that forks into a number of distinct lines. Although these lines initially continue in the same direction as the main route, each junction brings forth a greater chance of divergence. Some of

the tracks eventually lead to distant lands, some run parallel to the main route. The table captures in a summary the interesting interplay between the universal and unique aspects of the Griffiths III. An analysis of this table suggests that, despite the junctures afforded, there is an enduring tendency for the Griffiths Scales of Child Development to remain relatively close to its original route in both its universal and unique aspects.

Two Case Studies tell the story – the proof of the pudding is in the eating: a measure which was designed to measure normal development can assist in the ascertaining of developmental fallouts or delays in vulnerable children. The first case study is that of Sophiso. Perhaps just a mention is needed here that pseudyms were used and that all ethical principles for reporting case studies were followed.

Case Study One: Sophiso

Child's Date of Birth	17th February 2014
Date of Assessment	13th July 2017
Age at Assessment	3 years 4 months 26 days (41 months)

Background Information

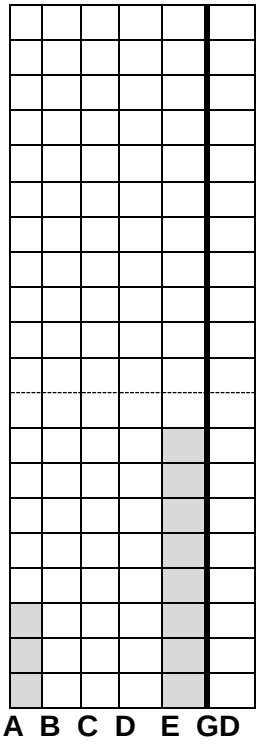
Sophiso's mother had a difficult start to her pregnancy with Sophiso as she had a threatened abortion at six weeks and consequently had to remain on strict bedrest for most of her pregnancy. Sophiso was born uneventfully at term. There were no concerns at birth and other than his speech and language development being delayed, all his other developmental milestones such as sitting, crawling and walking were reached at the appropriate age.

Presentation

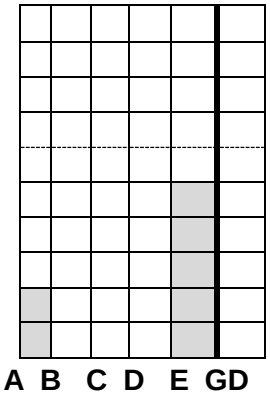
Sophiso presented as a shy child who was a bit nervous to meet new people. Once introduced and given time to play with toys in the room, he began to warm up to one of the assessors and sat down with his mother to start the assessment. Sophiso had difficulty continuing the assessment if others entered the room. He would rub his eyes and stop participating but once they left he would continue the assessment. Sophiso also had difficulty stopping tasks that he was interested in and he was uninterested in participating in several tasks.

Griffiths Scales of Child Development

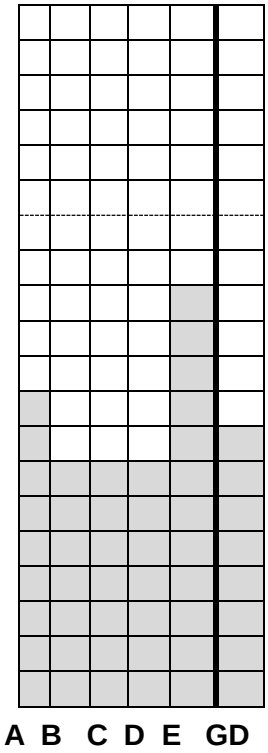
Sophiso was assessed on all five subscales – Foundations of Learning, Language and Communication, Eye and Hand Coordination, Personal, Social and Emotional development and Gross Motor skills.



Scaled Score Profile



Developmental Quotient Profile



Developmental Age Profile

Conclusions and Recommendations

- Sophiso obtained a general developmental age (an average of the developmental ages obtained across the five subscales) of 2 years (24 months), which is 1 year 5 months below his chronological age.
- His general developmental functioning can therefore be described as Extremely Low in comparison to other children of the same age.
- There is consistency in Sophiso's performance across Subscales A, B, C and D, where Sophiso is performing quite well below what one would expect for a child of his age.
- Subscale E is his relative strength.
- Sophiso will experience challenges in a formal school environment.
- Sophiso was recommended for referral to a paediatric neurologist for further assessment.
- Following a full assessment by a paediatrician who specialises in neurology Sophiso should be referred to a Psychologist who could further assist with guidance regarding appropriate educational remediation and placement interventions.

The second case study is that of Joe

Case Study Two: Joe

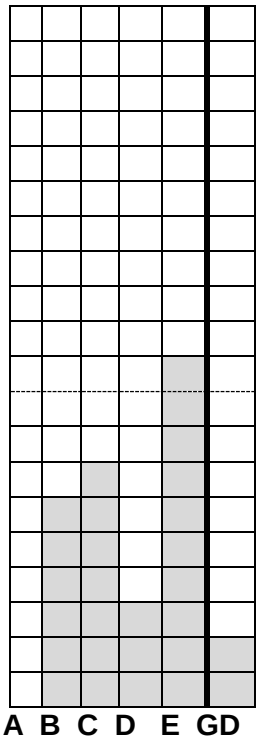
Child's Date of Birth	01st December 2011
Date of Assessment	07th and 13th July 2017
Age at Assessment	5 years 7 months 6 days (67 months)

Background Information

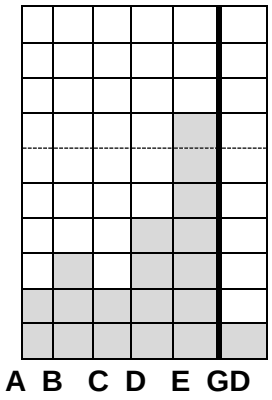
Joe's mother had an uneventful, normal pregnancy with Joe and he was born at term. There were no concerns at birth and all his developmental milestones such as sitting, crawling, walking and talking were reached at the appropriate age. At the age of nine months Joe was diagnosed as having Sickle Cell Anaemia. Although his condition has been treated medically since then, it is only since last year that the haemoglobin levels in his blood have been normal. At present Joe does not need to take medication daily. His condition when not controlled causes him to experience pain and fatigue which influences his sense of well-being, particularly in a formal schooling context.

Presentation

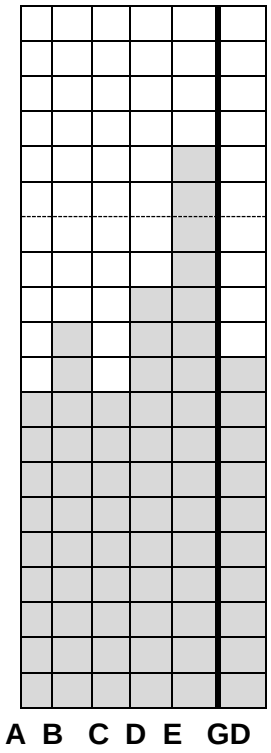
Joe was assessed mostly in English, but when it became apparent early on in the assessment sessions that Joe found tasks challenging, the language of assessment was switched to his mother tongue of Swahili to deliver instructions as necessary. Joe had limited eye-contact and was mostly reserved throughout the assessment, although his spontaneous speech increased slightly as the assessment progressed. Joe persevered with challenging tasks and he remained cooperative and attentive throughout. He clearly enjoyed the more physical subscale with the gross motor activities the most. He was polite at all times, but presented with a strong sense of feeling 'uncertain' about himself especially when completing tasks administered comprising the Foundations of Learning and Eye and Hand Coordination Subscales.



Scaled Score Profile



Developmental Quotient Profile



Developmental Age Profile

Conclusions and Recommendations

- Joe's strength lies in his gross motor development.
- There is consistency in Joe's performance across Subscales A, B, C and D, where he is performing quite well below what one would expect for a child of his age.
- Currently, scores across all subscales suggest that Joe will experience challenges in a formal school environment and that he would benefit from monitoring and devoted remedial attention in all areas.
- Joe's physical condition continues to be monitored by his paediatrician.
- Joe should be referred to an Occupational Therapist and a Psychologist who could assist with guidance regarding appropriate remediation and therapeutic interventions and continue to monitor his educational progress.

Early detection of developmental disorders is critical for children and their families. Current detection rates of developmental disorders are lower than their actual prevalence, which suggests that the challenges to early identification of children with developmental disorders have not been overcome. To this end community-based collaborative systems are being identified as being as important as child health professionals in providing early identification of, and intervention for, children with developmental challenges particularly. In this regard the Griffiths III is suitably set up to assess and intervene in cases where children are presenting with

developmental delays and disorders and with being able to meet the New Millenium Goals which place as a priority the paying particular of attention to vulnerable infants and children. Previous Griffiths research studies that have addressed some of these issues are highlighted in the table below:

NAME	YEAR	TITLE OF TREATISE/DISSERTATION
BAKER, S., LUIZ, D.M., STROUD, L., JANSEN, J.	2005	THE PERFORMANCE OF CHILDREN WITH *ATTENTION DEFICIT HYPERACTIVITY DISORDER* ON THE GRIFFITHS MENTAL DEVELOPMENT SCALES – EXTENDED REVISED. UNPUBLISHED MASTERS TREATISE. NELSON MANDELA METROPOLITAN UNIVERSITY.
MOOSAJEE, S., FOXCROFT, C.D., LUIZ, D.M., STROUD, L.	2007	EXPLORING THE *CONSTRUCT-RELATED VALIDITY OF THE PERSONAL-SOCIAL SUBSCALE* OF THE GRIFFITHS MENTAL DEVELOPMENT SCALES - EXTENDED REVISED (GMDS-ER). UNPUBLISHED DOCTORAL THESIS. NELSON MANDELA METROPOLITAN UNIVERSITY
VAN HEERDEN, R., BARNARD, A., STROUD,L., JANSEN, J.	2007	EXPLORING *NORMAL SOUTH AFRICAN AND BRITISH CHILDREN: A COMPARATIVE STUDY* UTILIZING THE GRIFFITHS MENTAL DEVELOPMENT SCALES - EXTENDED REVISED. UNPUBLISHED MASTERS TREATISE. NELSON MANDELA METROPOLITAN UNIVERSITY.
DAVIDSON, G., STROUD,L., JANSEN, J.	2008	*FIRST AND SECOND BORN TWINS: A COMPARATIVE SUDY* UTILISING THE GRIFFITHS MENTAL DEVELOPMENT SCALES-EXTENDED REVISED UNPUBLISHED MASTERS TREATISE. NELSON MANDELA METROPOLITAN UNIVERSITY.
KHESWA, T., STROUD,L., JANSEN, J.	2009	GRIFFITHS MENTAL DEVELOPMENT SCALES-EXTENDED REVISED: *PROFILES OF CHILDREN FROM LOW SOCIO-ECONOMIC STATUS*. UNPUBLISHED MASTERS TREATISE. PORT ELIZABETH: NELSON MANDELA METROPOLITAN UNIVERSITY.
JAKINS, T., STROUD, L., FOXCROFT, C.	2009	COMPARING THE DEVELOPMENT OF A SAMPLE OF *SOUTH AFRICAN PRE-SCHOOL BOYS AND GIRLS* UTILIZING THE GRIFFITHS MENTAL DEVELOPMENT SCALES-EXTENDED REVISED. UNPUBLISHED MASTERS TREATISE. PORT ELIZABETH: NELSON MANDELA METROPOLITAN UNIVERSITY.
MOORE, N., STROUD, L.	2009	A SYSTEMATIC REVIEW OF THE DEVELOPMENTAL PROFILES OF A SAMPLE OF *SOUTH AFRICAN CHILDREN FROM DIVORCED FAMILIES*. UNPUBLISHED BPSYCH TREATISE. PORT ELIZABETH: NELSON MANDELA METROPOLITAN UNIVERSITY.
WILLS, N., STROUD,L., FOXCROFT, C.D.	2011	THE *GENERAL AND EMOTIONAL DEVELOPMENT OF ASAMPLE OF SOUTH AFRICAN CHILDREN IN RESIDENTIAL CARE*. UNPUBLISHED MASTERS TREATISE. PORT ELIZABETH: NELSON MANDELA METROPOLITAN UNIVERSITY.
ANDREWS, S.M., STROUD,L., JANSEN, J.	2012	THE *GENERAL DEVELOPMENT OF COGNITIVE ABILITY OF A SAMPLE OF CHILDREN IN SPECIALISED EDUCATION*. UNPUBLISHED MASTERS TREATISE. PORT ELIZABETH: NELSON MANDELA METROPOLITAN UNIVERSITY.
BURGER, R.G., HOWCROFT, J.G., STROUD, L.	2012	*HUMAN FIGURE DRAWINGS AND THE GENERAL MENTAL DEVLOPMENT OF SOUTH AFRICAN CHILDREN*. UNPUBLISHED MASTERS TREATISE. PORT ELIZABETH: NELSON MANDELA METROPOLITAN UNIVERSITY.

KAY, L., WATSON, M.B., STROUD, L., MCMAHON, M.	2012	*CHILDHOOD DEVELOPMENT AND CAREER DEVELOPMENT IN EIGHT YEAR-OLD SOUTH AFRICAN BOYS.* UNPUBLISHED MASTERS TREATISE. PORT ELIZABETH: NELSON MANDELA METROPOLITAN UNIVERSITY.
SAMUEL, C., STROUD, L., FOXCROFT, C., CRONJE, J.	2014	*PRACTITIONERS' VIEWS OF THE GRIFFITHS SCALES: INFORMING THE REVISION PROCESS.* UNPUBLISHED MASTERS TREATISE. PORT ELIZABETH: NELSON MANDELA METROPOLITAN UNIVERSITY.
KOLVER, C., CURRIN, L., STROUDL., CRONJE, J.	2016	*COMPARING THE PERFORMANCE AND PRACTICAL REASONING SUBSCALES OF THE GRIFFITHS MENTAL DEVELOPMENT SCALES-EXTENDED REVISED WITH FOUNDATIONS OF LEARNING SUBSCALE OF THE GRIFFITHS III*. UNPUBLISHED MASTERS TREATISE. PORT ELIZABETH: NELSON MANDELA METROPOLITAN UNIVERSITY.

Can a measure developed in the UK be used in other unique contexts?

There is an interplay between universal factors in child development and specific contexts and the big question currently is whether a measure such as the Griffiths III which was developed in the United Kingdom can in fact be used in another unique context such as India, China, Africa, etc. There are encouraging signs in the literature that using culturally appropriate standardized tests adds value to researching key issues related to describing the impact of poverty, quality of education and chronic disease (such as HIV/AIDS) has on the development of children. As a helping professional, the psychological assessment practitioners' core ethical responsibility can be summed up as being that nothing should be done during testing and assessment to harm the client. Doubts arise when the tests used are not perceived to be culturally appropriate and psychometrically sound for the context and purpose for which they are used, and the results are not interpreted and used in a fair and ethical way, which leads to inaccurate diagnoses being made. There are encouraging signs in the literature that using culturally appropriate standardized tests adds value to researching key issues related to describing the impact of poverty, quality of education and chronic disease (such as HIV/AIDS) has on the development of children. Yet, there is a growing body of literature that highlights the important role that psychological testing can play in a range of contexts (e.g., in research, education, clinical practice, organizations, and in medical and health settings). Is it problematic that Western-or – European orientated tests are used in Africa? Yes – unless these tests are adapted, standardized and normed for local contexts.

Africa and the Griffiths III

The peoples of Africa are of diverse ethnic origins and cultural backgrounds, speak a large variety of more than 3000 languages and differ greatly in terms of their religious and political orientations, clothing, gestures, attitudes towards child-rearing and family life, the extent of their formal education, and their levels of literacy. The inhabitants of Africa largely live in rural areas, with only three out of every 10 people living in cities. Being part of the third world, the human development index (HDI) of the majority of African countries is low. Conditions of extreme poverty and severe malnutrition are not uncommon, while the gap between the rich and the poor continues to grow. To be able to assess the impact that such factors have on development, measures such as the Griffiths III need to be adapted. While in the 20th century Western-and

European oriented tests have been largely used without adapting, standardizing and norming them for the local context, there is a growing trend towards establishing local psychometric properties for and/or adapting a range of Western-and European orientated tests that are widely used internationally in some African countries. But sample sizes are often small, and samples are either chosen based on convenience or on regional demographics (e.g., school children, adults that visit a health clinic) and are rarely representative of an entire country, and exploration of psychometric properties is often limited. The choice of test to adapt is often linked to the needs of particular research studies and not what the community needs.

The Griffiths Scales have been researched and are used in countries such as Australia, Brazil, Canada, China, Columbia, France, Germany, Greece, Israel, Italy, Kenya, Lebanon, Malaysia, Namibia, Nigeria, Norway, Portugal, Russia, South Africa, Switzerland, United Arab Emirates, and the United States of America. Studies have shown that the Griffiths Scales provide valuable diagnostic information about a range of developmental disorders in a wide variety of contexts across various countries. Research into the appropriateness of using the Griffiths Scales in different countries has revealed the need for adaptations of some tasks, translations of the instructions, and for country-specific normative information to be gathered. Creativity, ingenuity and knowledge of the behavioural criteria associated with a construct in a specific culture are required when adapting test content or test tasks. It is clear that in order for a culturally appropriate standardized test such as the Griffiths III to be used and available in contexts other than for the one which it was developed, the solution does not lie in developing an indigenous test but rather in the adaptation of the measure.

Adaptation of the Griffiths III for the African context

Here are a few suggestions to guide the adaptation of the Griffiths III for use in an African context:

- To perform an assessment in a valid, ethical and fair way in a multicultural context, you have to acquire knowledge of the test taker in relation to his or her culture, family, linguistic, educational and socio-economic background and heritage. It's important to immerse yourself in the lived-world of the test-taker. Something as important as obtaining informed consent to administer the test can prove to be a challenge as many parents might seek work in large cities while leaving children in the care of grandparents or another member of the extended family in a rural village, or in another urban area. One way of doing this is to use community and family genograms to gain insight into the cultural factors that underlie individual and family development. In the community genograms, test-takers are asked to develop a visual representation of their community and then to generate positive stories related to different groups in the community (e.g., family, neighbourhood, peers, schools and religion). While genograms are used in counselling contexts, they can also be fruitfully employed in testing contexts to provide the assessment practitioner with a vehicle through which the community, family, and cultural background of the test-taker can be understood. Whether using genograms, interviews or community visits or the help of interpreters when there is a language barrier, immersing oneself in the lived world of the test taker is vital.

- In Non-Western societies, keeping track of children's ages is not necessarily the norm, which poses difficulties in developmental assessment in particular. It is necessary to estimate the child's age based on collateral information (e.g., current school grade, onset of menstruation) from a variety of sources. Often parents will tell you that their child was born at a time of the great flood, or not long after the sky went dark during the day (a total solar eclipse), or when the youngest cow calved, and so on. By searching through historical records, an estimate of the year in which the child was born can be established. When interpreting performance on developmental tests, the child's chronological age is of utmost importance. Where the age has to be estimated the practitioner must make allowances that for what appears to be a developmental delay, or even superior development, might in fact not be so.

- In a continent ravaged by diseases such as HIV/AIDS and Tuberculosis, and where the majority of people do not have access to adequate medical care, clean water and sanitation, the impact of the physical status of the test taker on test performance during the interpretation phase should not be overlooked. For eample, lack of adequate sanitation and access to clean water heightens the possibility that children might experience worm infestations, which negatively affetcs their attention span, speed of information prcessessing and responding, and school performance in general. Similarly, a child who is hungry is unlikely to perform according to his or her potential.

- Be aware of the concept of time – non-Westernised people may perceive time differently and be less 'ruled by the clock'. This will influence items where speed and time-limits are imposed upon certain tasks.

- Allow for the practicing of tasks and items to ensure that the child understands what to do. This is especially true when using a computer or tablet/ipad to administer the test item.

- Ask children to draw a figure with a stick in wet sand or to make a person using wet clay, instead of drawing a person usng pencil or crayon and paper.

- Given the richness of the designs found in African beadwork, the reproduction of a design of beads could be used instead of a block design task.

- Less complex bead patterns could be used in series and sequential memory tasks instead of pictures that are Eurocentric or Western in orientation.

- Arithmetical problems can be represented in terms of counting heads of cattle, oranges, beads or stones, or in terms of quantities related to cooking for a number of people.

- When adapting tasks that involve the use of colour, special care needs to be taken. Although yellow is known to be the first colour infants and children see and recognise, in

some cultures the colour vocabulary is limited and the common object whose colour is a prominent attribute is not so easy for the test taker to name and identify. For example the yellow brick or block. Or in isiXhosa the word for blue and green is the same, so to more accurately describe the colour for something that is blue or green an object can be added to the word such as “like the sky”or “like the grass”.

- Digitalization of test items and incorporating innovative methods of assessment, for example tablet-based gamification and a storied approach, opens up a wide range of possibilities to testing. Even in a unique context such as Africa. The innovative possibilities are endless. Preliminary research findings described by Rivca Marais (2017) suggest that the Griffiths III, in particular the Foundations of Learning Subscale, is ready to drive digital innovation in child developmental assessment. Once again the interplay between a universal fact and a unique context is serving to shape child developmental assessment.

- Developing a screening test of the Griffiths III which a larger range of health care workers, professionals and educators can be trained to use, and trained not only to use the test but also to develop and adaptat mthe test, is growing in urgency and need.

In conclusion, the learning I have gained from hours of reflection and preparation of this lecture is that while I thought and hoped that the Griffiths III would become my greatest legacy, I now realise that my greatest legacy is in reality every life I will have the privilege of touching. And to each one of you I say tonight, your legacy too will be every life you touch. No matter how universal or unique the context may seem to be.

In the words of Lucas from the Television Series *One Tree Hill*

> *Most of our lives are a series of images;*
> *They pass us by like towns on a highway.*
> *But sometimes a moment stuns us as it happens,*
> *And we know that this instant is more than a fleeting image.*
> *We know that this moment, every part of it, will live on forever……*
> *(Lucas from One Tree Hill)*

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