# GRADE R TEACHERS' SUBJECT KNOWLEDGE
# OF VISUAL PERCEPTUAL SKILLS
# FOR EARLY READING

by

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# DECLARATION

I hereby declare that this thesis submitted for the degree of Master in Education at the Cape Peninsula University of Technology, is my own work and has not previously been submitted to any other institution of higher education. I further declare that all sources cited or quoted are indicated or acknowledged by means of a comprehensive list of references.

Christelle Andrich

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# ABSTRACT

This study investigates the quality of Grade R teachers' subject knowledge of Visual Perceptual Skills (VPS). This knowledge includes their competence in visual-training design, which they need in order to give their learners access to early reading.

Literature reviewed covers areas pertaining to the knowledge specialization required by Grade R teachers in order to impart VPS to young learners in the pre-reading or pre-alphabetic phase. These areas are: Visual Perception (VP), cognitive development, early reading, teacher knowledge and the Grade R policy framework.

The mainly qualitative data collected over a period of ten months was derived from various potential or actual sources of teacher subject knowledge of VP. The most important source was the existing knowledge base of the four Grade R teachers in the sample. The connections between the data provided a picture of the accuracy and explicitness of the VP conceptual-content in the sources. For the Grade R teachers to be competent in visual training design, they would need suitable subject knowledge capacitation in VP.

The findings revealed that training undergone by most Grade R teachers is VP deficient; the Grade R curriculum is VP vague; teacher training requires more infusion of Grade R curriculum; the regional Grade R diagnostic test is VP rich, albeit semi-concrete and not concrete in the assessment activities' learning levels; finally, the Grade R teachers in the sample are highly motivated, and they are hungry for professional development.

**Key words**: subject knowledge; Visual Perceptual Skills (VPS)/Visual Perception (VP); visual-training design; pre-reading/pre-alphabetic phase; professional development.

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# ACRONYMS

| | |
|---|---|
| ANAs | Annual National Assessments |
| B Ed | Bachelor of Education |
| BtLAB | Barriers to Learning Assessment Battery |
| CA | Curriculum Advisor |
| CAPS | Curriculum Assessment Policy Statement |
| CWD | Cape Winelands District |
| DBE | Department of Basic Education |
| DHET | Department of Higher Education and Training |
| DoE | Department of Education |
| ECD | Early Childhood Development |
| EWP5 | Education White Paper 5 |
| FP | Foundation Phase |
| HOD | Head of Department |
| IQMS | Integrated Quality Management System |
| LNI | LitNum Intervention |
| LOLT | Language of Learning and Teaching |
| LSA | Learning Support Advisor |
| LSE | Learning Support Educator |
| LTSM | Learner Teacher Support Materials |
| NCS | National Curriculum Statement |
| NPA | National Protocol for Assessment |
| NPPPPR | National Policy Pertaining to the Programme and Promotion Requirements |
| NQF | National Qualifications Framework |
| OBE | Outcomes Based Education |
| PCK | Pedagogical Content Knowledge |
| SBRR | Scientifically Based Reading Research |
| SGB | School Governing Body |
| SMAP | Systemic Management of Assessment Processes |
| SMT | School Management Team |
| SNE | Special Needs Education |
| VP | Visual Perception |
| VPS | Visual Perceptual Skills |
| WCED | Western Cape Education Department |

# CHAPTER 1: INTRODUCTION

In South Africa there is broad social consensus that "getting basic education right" is foundational for the future well-being of this country. The debate about the school dropout rate overshadows the debate about the validity of the school-leaving qualification pass rate. This is because, whatever the social or scientific validity of the latter may be, it is only relevant to about half the learners who enter the school system. There is a great deal of discussion in the public space about the role played by the Foundation Phase in ensuring that learners complete their schooling; that they complete it with the knowledge and skills required to successfully access tertiary studies and the working world.

This study seeks to join a growing number of voices that declare that it is difficult to get basic education right without doing the reception year or years (Grade R) properly. For example, when Basic Education Minister Angie Motshekga handed over a Grade R Unit to Mbonisweni Primary School in Tongaat, Kwa-Zulu Natal on 9 February 2013, she said:

> In respect of Early Childhood Development, the National Development Plan underlines the need for access for all children to at least two years of pre-school education. The Grade R programme is one of our critical interventions for improving people's lives. Through this programme we aim to ensure that children are well-prepared for formal schooling.

During her speech, Motshekga spoke about the importance of the Grade R programme for the learners:

> The early years are critical for the acquisition of skills and concepts laying the foundation for lifelong learning. These include acquisition of language, perception and motor skills required for learning to read and write.

Then she switched the focus to the teachers delivering that programme:

> We recognise the challenges of teacher training; working conditions and supply of skilled practitioners...We accept the task of ensuring that Grade R teachers are paid well and know what they are supposed to do (South Africa, 2013a).

Motshekga's speech not only reflects the connection between Grade R and basic education, it also reflects the implicit connection between the skills of the Grade R learner and the skills of the Grade R teacher. Examining such a connection has greater relevance when dealing with specific Grade-R developmental issues. This study seeks to address a particular developmental matter in connection with what is referred to as Emergent Literacy and Emergent Numeracy, namely: Visual Perceptual Skills (VPS) and visual training. Grade R results will tell us something about what learners know in these developmental areas. But it is also important to focus on what Grade R teachers and practitioners know. One learner may interact with one teacher, but one teacher will interface with cohorts of learners year on year. What the Grade R teacher knows, and does, based on that knowledge, is therefore extremely important. Teachers impart what they know. Once what they know is identified, then they can be capacitated further. The research presented here is solution oriented. It is not helpful to simply present problematic findings on what Grade R teachers know about VPS and how much of those they impart. Instead, elements of professional development must be promoted which will empower Grade R teachers to progressively improve the visual training they are doing in the classroom.

The quality of the Grade R teacher's motivation, knowledge and skill is pivotal to the effectiveness of a Grade R educational system. This instrumentality of the teacher is widely recognized. For instance, the McKinsey report on the world's top school systems, in the executive summary, cites three best practices which are all related to teacher knowledge, namely: "1) getting the right people to become teachers, 2) developing them into effective instructors and, 3) ensuring that the system is able to deliver the best possible instruction to every child" (Barber & Mourshed, 2007:5).

In order to assist South African Grade R teachers, this study will focus on strengthening a limited but vital aspect of teacher subject knowledge: VPS and the design of visual training needed to impart those skills to the Grade R learner. Visual Perception is the mind's ability to interpret or give meaning to what is seen with the eyes. It is a skill that must be learned by all normally sighted children prior to learning to read. It is not enough for a child's eyes to send the correct visual images produced by the retina at the back of the eye, to the brain. The brain must make sense of those images to form meanings. For example, the retina sends a picture of an ice-

cream cone to the brain, and the child knows what it is. But if that child sees the words "ice cream cone", then the retina will send the picture of the words as code which has to be correctly decoded to produce meaning, to denote an ice-cream cone. The mind must receive visual training in which a range of VPS are established, in order to learn how to decode these words and phrases. All the visual aspects of the words, such as their overall shape and the patterned sequence of their letters and syntax, need to be correctly perceived, and connected to what the mind has previously processed, in order to produce meaning.

In Chapter 2 this *pre-reading* or *pre-alphabetic* phase will be examined more closely. During this phase, learners need to be trained to "read" letters, words and even phrases by remembering visual cues in the words, or contextual cues around them. This training process first involves mediating a set of VPS to the learners. Therefore it is referred to as visual training. Once learners have begun to be equipped with these interpretive tools, they are able to proceed with pre-alphabetic decoding tasks. Only after this are they able to transition to the early reading or partial alphabetic phase. In this latter phase, learners remember how to read words by using the sound values of some letters to form connections between spellings and pronunciations.

The general order is clear: Only once learners are trained to use the visual tools to decode letters, words and phrases correctly, are they ready to learn to read them. The question is whether the Grade R teachers know these visual tools, or VPS, well enough to impart them to learners by means of visual training for early reading. This matter has to be closely investigated, as something is holding many Foundation Phase learners back from accessing early reading in such a way that they go on to read fluently.  Therefore this study is titled as follows: *Grade R teachers' subject knowledge of Visual Perceptual Skills for early reading.*

Grade R education puts teachers in a position to prepare young learners to read and calculate. Grade R in the hands of such teachers is the foundation of the Foundation Phase, which provides a platform for learners to move towards a valid school-leaving qualification and beyond. The national government declared in Education White Paper 5 (EWP5) that every South African child should have the benefit of Grade R (South Africa, 2001a). Such a phased roll-out would require vast stores of political will and public funds. Furthermore, skilled and knowledgeable Grade R teachers

would have to be mobilized. It is in this latter sphere that this study wishes to contribute ideas for solutions to the general problem: inferior, insufficient and uneven delivery of Grade R education, as discussed in EWP5. The mobilizing of Grade R teachers includes their professional development in specialized areas, such as teacher subject knowledge capacitation in VP and visual training for early reading.

In Chapter 2, the *Literature Review and Theoretical Framework*, I will provide an overview of literature which is relevant to this study, in the areas of visual perception, cognitive development, early reading, teacher knowledge and Grade R policy. *Visual perception* will be investigated in Section 2.2. The next Section, 2.3., will be dedicated to a critical discussion of issues related to *cognitive development*. This will be followed in Section 2.4 by an investigation of some of the key ideas in academic discourse involving *early reading*. In bringing the research discussed in the former three sections within the scope of the research sample, Section 2.5 will discuss the work done to clarify the nature and challenges of *teacher knowledge* in terms of teacher subject knowledge capacitation (The choice of the word 'capacitation' will be discussed there.). Finally, in Section 2.6 an overview will be provided of the Department of Education's (DoE) key source documents for the *Grade R policy framework* and the curriculum itself.

The *Research Design and Methodology* will be explained in Chapter 3. In Section 3.2 the chosen site and sample will be profiled. Section 3.3 will explain how the general research framework of pragmatism is related to the teacher subject-knowledge directed research aim, in which this study seeks to answer the following research question: *What subject knowledge of Visual Perceptual Skills is possessed by the Grade R teachers in School A?* T In line with the general framework, Section 3.4 will provide an overview of the particular approach taken to the research, that is, mixed methods. Section 3.5 will explain how the discourse analysis of the teachers' responses to questionnaires and group discussions will describe the teachers' subject knowledge of VPS. Section 3.6 will seek to show that documentary analyses of both the curriculum and a diagnostic assessment instrument are important for clarifying related aspects of teacher knowledge in addition to teacher subject knowledge, namely curriculum knowledge and pedagogic content knowledge. Linked to the value of the document analysis, Section 3.7 will seek to explain the use and value of the other data-collection instrument used in this study, namely the statistical

analysis. Section 3.8 aims to provide more details of how the data will be analysed once collected. The chapter is concluded by a discussion dealing with how the research will be validated, in Section 3.9. Finally, Section 3.10 will suggest what limitations are connected to the research.

Chapter 4 will cover the *Presentation of the data*. In this chapter, the discourse of a sample of Grade R teachers collected by means of a questionnaire and a related focus group discussion will be analysed in Section 4.2., with particular reference to subject knowledge of VP. Documentary analysis of the Grade R component of the Curriculum Assessment Policy Statement (CAPS) follows in 4.3, with attention given to the validity of VP subject content. In Section 4.4, the Barriers to Learning Assessment Battery (BtLAB) will be analysed based on similar considerations as above. The Grade R CAPS and BtLAB documents will be analysed because of their relevance and value as potential or actual sources of teacher subject knowledge of VP. In 4.5, a brief statistical analysis of CAPS and BtLAB assessment results pertaining to core VPS relevant to teacher subject knowledge will be made.

The *Interpretation of the Findings* will take place in Chapter 5. Here the challenges arising from each theme, under which the data will be organized, will be identified. The themes will be framed by the discourse analysis. Section 5.2 will seek to set forth the salient points of what the Grade R teachers in the sample said about their training, VP, CAPS, BtLAB and their motivation levels. In Section 5.3 the analysis of the CAPS curriculum will be discussed in terms of the VP subject knowledge content of its key publications. The VP subject knowledge contained in BtLAB, arising from its analysis, will be dealt with after that, in Section 5.4. In conclusion, Section 5.5 will cover a number of basic issues raised by the analysis of performance results arising from both CAPS and BtLAB assessments conducted at the end of 2012.

The formulation of the challenges arising from each theme will lead to *Recommendations*, in Chapter 6, which will generate solution-oriented discussion and investigation. The recommendations will be set forth under the same themes framed by the discourse analysis. Therefore Section 6.2 will discuss Grade R teacher training related to pre-and in-service establishment of working knowledge of VP and CAPS. In Section 6.3, Grade R teacher understanding of BtLAB will be discussed. Finally, in Section 6.4, Grade R teacher self-awareness will be covered.

The recommendations will be concerned primarily with general strategies which could promote better Grade R teacher training, particularly in the area of VP subject knowledge towards visual training. This, in turn, may help Grade R learners to have greater success in learning to read and calculate during the remainder of the Foundation Phase.

# CHAPTER 2: LITERATURE REVIEW

# AND THEORETICAL FRAMEWORK

## 2.1   Introduction

This chapter reviews a selection of literature which has a bearing on Grade R teachers' subject knowledge of VPS.

The review seeks to provide some background to different aspects of subject knowledge a teacher needs to have in order to introduce a young learner to early reading, in particular, the teacher must know enough about VP development in order to visually train the learner using suitable activities which progressively challenge the learner to correctly interpret what is seen. The learner's VPS are strongly influenced by how the learner's mind has developed cognitively. Hence the teacher must know how visual training and cognitive development work in tandem to equip the learner with the requisite skills to access specific early-reading decoding tasks. The teacher must possess self awareness of her own agency in collaborating with the learner to facilitate the visual learning process. Given the speciality of her field, she must be committed to receive continuous professional development within particular Grade-R curriculum and systemic contexts.

*Visual Perception* will be investigated in Section 2.2. The next Section, 2.3., will be dedicated to a critical discussion of issues related to *cognitive development*. This will be followed in Section 2.4 by an investigation of some of the key ideas in academic discourse involving *early reading*. In bringing the research discussed in the former three sections within the scope of the research sample, Section 2.5 will discuss the work done to clarify the nature and challenges of *teacher knowledge* in terms of teacher subject knowledge capacitation. Finally, in Section 2.6 an overview will be provided of the Department of Education's (DoE) key source documents for the *Grade R policy framework* and the curriculum itself.

## 2.2    Visual Perception

*A 5 year old child, Jason, goes out for a milkshake with his family. At the KFC drive through, there is a vivid picture of a frozen milkshake branded as KFC Krushers. Jason knows from the context what the name represents, but cannot yet recognise the words below it designating the flavours: berry, banana, mango etc. He must still learn to interpret them.*

Visual Perception is in essence the capacity to interpret or give meaning to what is seen. Jason will eventually learn to interpret the arrangement of letters shaping the word "banana" as denoting that yellow, crescent-shaped fruit. VP includes recognition of, insight into and interpretation of what is seen, at the higher levels of the central nervous system (Gardner, 1996). This interpretive process also includes auditory and haptic (tactile, kinaesthetic) perception. However, because most people read with their eyes, it is important to examine the role that visual perception plays when a sighted child interprets a written text.

The quotes below, gleaned from a selection of professional internet sites dedicated to VP or visual training, illustrate that VP is clear and omnipresent as a stand-alone concept in the practitioners' domain. For example, VP is defined as "the ability to interpret, analyze and give meaning to what is seen" (Children's Vision Coalition, n.d.), the ability to "organize and integrate visual patterns" or, "...the mental process which takes place inside the brain which gives meaning to the things seen by the eyes" (The Learning Centre Foundation, n.d.). It has also been described as interpreting visual information on the basis of past experience (Learninginfo, n.d.).

However, when we speak of teacher knowledge of VP, there are two basic aspects of that knowledge which require further exploration. The first is the range of individual and interlinking skills which make up VPS, which the teacher is informed about via the curriculum. The second aspect of teacher knowledge of VP is the insight needed to impart VPS in the teaching process. It is my opinion that both aspects of teacher subject knowledge are important for consideration. In this study the writer has preferred the term *visual training* over *visual-perceptual development* because: The term highlights teacher knowledge and agency; and, the term pre-

supposes a teaching-learning process. For the same reasons, the term *learner* has been preferred to the term *child* in this study.

To be imparted to teachers, subject knowledge of VP would need to be made explicit in all the sources the Grade R teacher draws from, whether it is formal training, the curriculum and all the input which is made as part of professional development. This explicitness is vital for empowering the Grade R teacher to impart VPS towards early reading to learners in turn. The teachers can only impart what has been imparted to them. Accurate knowledge of VPS is critical to the teacher's ability to provide the learner with training towards early reading, irrespective of the methods used. There have been, in the past, intense academic debates about the methods that should be used to impart early reading skills. Some Grade R teachers may actually be in a position to engage with these debates, based on their formal training and lifelong learning. Most will, however, rely primarily on relevant and current curriculum and teacher support. The debate should not merely centre around suitable methods, but on a more basic level about whether that method is built on actual visual training. For example, in the mid 1970's in the United Kingdom (UK), Christopher Walker reported as follows, introducing his chapter entitled *Training in visual skills*:

> In practice, the vast majority of teachers in England and Wales introduce recognition by whole word methods. When a substantial sight word vocabulary has been established, some phonic work is begun, and hence such an approach can be called an eclectic one. In Scotland teachers are more likely to adopt phonic methods at the outset and only use (whole word) methods for words where phonic conventions do not apply... Where phonic methods predominate, pre-reading visual work will aim at discrimination of individual letter shapes. Exponents of whole word methods will put the emphasis on discriminating between word patterns. *In either case*, the majority of children starting school will require *some training in visual discrimination*. (Italics mine) (1975: 26)

This quotation serves to illustrate that in the South African context, a Grade 1 teacher can potentially employ *whatever* method is currently in use to teach early reading, whether a phonic or whole word method, provided that method in turn can build on *some* visual training to impart VPS in Grade R.

The purpose of visual training is essentially to train the eyes to process textual elements speedily and accurately. Bosse & Valdois (2009: 233) have grouped certain VPS which collaborate in the reading process, under the concept Visual

Attention (VA) span. VA span may be defined as "the number of distinct visual elements - i.e. the number of orthographic units in words, with respect to reading – that can be simultaneously processed at a glance". The value of such an approach is that an attempt is made to gain more insight into how the different VPS work together. VA span has also been used as an organizing principle for grouping language acquisition concepts, for example, "linguistic, perceptual and cognitive cross-modal skills" (Plaza & Cohen, 2006:67).

Of critical importance to a working understanding of how VPS operate in the early reading process, is a closer examination of eye movements in the interpretive process. These eye movement patterns, when recorded during the reading process, provide data which clarify the connections between the eyes and the mind via the VPS (Rayner, Juhasz & Pollatsek, 2007:97).

It is necessary to gain a firm understanding of the specifics of how the eyes themselves, through their movements, gather data for interpretation via VPS. Basically, eye movements involve fixations (periods when eyes are stable for 200-250 milliseconds) and saccades (periods when eyes are moving for 20-40 milliseconds). Wolverton and Zola (1983:41-53) established that visual information is only acquired from the text during the fixations. Most words are fixated on somewhere in the first half of the word, 3-4 letters into the word, unless they are short, frequent or predictable words. At the same time, partial information is extracted about the word following the one fixated on, as it usually falls within the fixation's peripheral span of 14-15 letters to the right of the fixation. This partial information is combined with subsequent information extracted when the subsequent word is fixated on. In sum, the total area usually processed during a fixation spans an area 3-4 letters to the left of the fixation and 14-15 letters to its right. Essentially, the eyes read ahead. This is referred to as the *perceptual span* (Rayner, Juhasz & Pollatsek, 2007: 85). It is critical to study the VPS which are operative during the total perceptual span surrounding a fixation. If the VPS are effective, then the quality of information extracted and processed cognitively leads to superior reading comprehension. If the VPS are defective, the skills themselves need to be remedied, instead of waiting for the products of defective VPS to materialize, namely, reading or learning disabilities and difficulties. In this paper, learning difficulties, which are found in approximately one in three young learners in South Africa (South Africa,

2001: 15), will be referred to as *learning barriers*, as the latter expression is the most commonly used in the South African context. Learning disabilities, affecting approximately 3% of young learners in South Africa (South Africa, 2001: 15), will not be referenced in any detail as such learners are streamed through special needs education, which falls outside the mainstream ambit of this study.

At this point the distinction must be made between visual perception and visual acuity, so that the correct remedies can be applied to visual perceptual defects. VP involves interpretation of what is seen, by the mind. It is a complicated psychological process. On the other hand, visual acuity refers to the exact representation or recording of what is seen, by the eyes themselves. It is a simple physical process. This distinction is important because visual perceptual defects require remedial interventions to help correct them, whereas visual acuity defects require medical interventions to help correct them. Remedial work will involve visual and cognitive training. But that training may not be a panacea in the presence of a visual acuity defect. Neglect of immediate medical intervention may later give rise to learning difficulties requiring remedial work. This is why, when learning barriers are encountered, a medical examination must be prioritized to ensure that physical barriers to learning are removed as far as possible. These distinctions are therefore important, as a child's eyes may be sending the correct visual images to his brain, but the brain may not be making the correct interpretation of the visual or "photographic" images produced by the retina at the back of the eye.

There are three basic groups of visual acuity or sight problems, namely, errors of refraction (near-sightedness, far sightedness, and blurred sight), muscular imbalance (squints, controlled squints) and jerky eye movements. These problems can be corrected by an optician (who tests eyes to make spectacles), an ophthalmologist (a medical eye specialist) or an optometrist (a non-medical eye specialist who deals with both visual acuity and visual perception). Like the optometrist, the Grade R teacher also deals with VP. Unlike the optometrist, the teacher has to mainly deal with VP preventatively, not remedially. But to be proactive, the teacher must have a solid grasp of the subject knowledge of VP and visual training required in the classroom for the learner to apply the VPS themselves. These applications will be illustrated in Table 2.1.

In accessing the literature related to VPS, it is important to extract from that literature, a basic working knowledge of the specific functions of each of the different VPS within the total activity of interpreting what is seen with the eyes. The reason for this differentiation of the functions of individual VPS is that the literature cited must connect appropriately with specific VPS; the literature must contribute to setting specific and reliable VP subject-knowledge criteria for the data collection and analysis considerations employed in Chapter 3. VP subject-knowledge must be measured accurately and comprehensively - in the diagnostic Barriers to Learning Assessment Battery (BtLAB) assessments, the Grade R Curriculum and Assessment Policy Statement (CAPS) and in the subject knowledge of the teachers in the sample. Although the knowledge will be described, it must at least be described according to an accepted and reliable, if not prescribed, standard of knowledge.

The importance of credible subject knowledge of VP for early reading is illustrated in Table 2.1, in which examples of correct applications or recognisable defects by Grade 1 teachers are provided, as well as Grade R assessment for learning activities (South Africa, 2006). The VPS featured in Table 2.1 are each listed most frequently in a sample of sources which provide a list of basic VPS (Kavale, 1982; Gardner, 1996; South Africa, 2005; South Africa, 2006; South Africa, 2009; The Learning Centre Foundation, n.d.; Children's Vision Coalition, n.d.). VPS which were listed 3 times or less are not included, such as Visual-Motor Integration, Visual Association, Visual-Auditory Integration, Visual Tracking, and Visual Analysis and Synthesis. Some of the sources refer to Visual Spatial Relationships in terms of the ability to position oneself or an object in front of, behind, etc., another person or object. In most of the sources, Visual Spatial Relationships are referred to as the ability to see that a symbol placed in a different position in fact becomes a different symbol. It is in this sense that it has been referenced in this study, as it is more directly applicable to early reading and, it is differentiated from Visual Form Constancy which deals with the same symbol written in various ways. Visual Discrimination is differentiated from Visual Form Perception in Table 2.1 in that the former deals with letters/symbols and the latter with words.

**Table 2.1        Prominent Visual Perceptual Skills**

| VPS | Definition | **Example of correct application and/or of a recognisable defect in Grade 1, as well as appropriate Grade R assessment for learning activities.** (Identification of concrete, semi-concrete and abstract levels will be done in Chapter 4.) |
|---|---|---|
| **Visual Perception** (VP) | The capacity to interpret or give meaning to what is seen. | Aspects of VP include Visual Discrimination, Visual Memory, Visual Spatial Relationships, Visual Form Constancy, Visual Sequential Memory, Visual Figure Ground, Visual Closure and Visual Form Perception. |
| *1.  Visual Discrimination* | The ability to see details that make one object or symbol different from another. | When a learner can differentiate between 'j' and 'i', 'come' and 'came'. Confusing 'e' with 'c', 'run' with 'ran'. <br> <u>Grade R activities</u>: <br> • Learners sort objects according to shape, colour and size. <br> • In a picture of 4 identical and one similar object, the learner must identify the odd one out. <br> • Matching games. |
| *2.  Visual Memory* | The ability to remember exactly what something looks like even though it is not in front of you. | When a learner can write out a non-phonic word from memory, e.g., 'they', 'put', 'you'. <br> <u>Grade R activities</u>: <br> • Discuss a picture with a learner and ask questions about it once it has been removed. <br> • Show a learner a selection of pictures and words, which she must name once it has been removed. The learner must redraw objects/shapes once they have been removed. |
| *3.  Visual Spatial Relationships* | The ability to see that a symbol placed in a different position in fact becomes a different symbol | When a learner understands that when you invert the symbol 'u', you get a different symbol, i.e., 'n'. If you reverse 'b' you get 'd'. <br> • <u>Grade R activities</u>: Ask a learner to compare a symbol made up of two shapes attached to each other in a specific way, with two other symbols, one with the same shapes attached differently, the other has the same shapes attached the same way, but turned so as to appear different. The learner must turn it back in her head to identify it. <br> • Repeat the exercise using similarly shaped letters. |
| **4.  Visual Form Constancy** | The ability to identify a written symbol when it has been written in a different way. | When a learner is able to read and identify written symbols whether they are in printed or handwritten forms. <br> <u>Grade R activities</u>: <br> • Ask a learner to match printed and handwritten letters on a page by drawing a line between them. <br> • Ask a learner to copy printed letters and discuss that they do not need to look exactly the same. |

| | | The ability to see | When a learner can correctly see that the order of letters in 'was' is different from the order of letters in 'saw'. When a learner has to write 'string' from memory and incorrectly spells it "srting". |
|---|---|---|---|
| *5.* | *Visual Sequential Memory* | the order of letters or digits or objects. | Grade R activities:<br>• Ask a learner to place different objects in a specific order to make a pattern.<br>• Ask a learner to copy a specific sequence of coloured beads threaded onto a string. |
| *6.* | *Visual Figure Ground* | The ability to tell the difference between foreground and background. | When a learner has difficulty copying a word because he is distracted by the other words around it. When reading, leaving out words or skipping lines.<br>Grade R activities:<br>• Ask the learner to point out specific objects in a picture.<br>• Ask a learner to colour overlapping picture objects. |
| *7.* | *Visual Closure* | The ability to successfully identify a word, letter or number when a part of it is missing. | When a learner does not read letter by letter but reads in chunks, filling in the details for himself.<br>Grade R activities<br>• Ask a learner to compare a picture of a complete object with 4 other fragments of objects, one of which is a fragment of the complete object. The learner must match the correct fragment with the object.<br>• Repeat the exercise comparing word fragments with a complete word. |
| *8.* | *Visual Form Perception* | The ability to see the difference between forms or shapes of words. | When a learner can differentiate between 'where' and 'were', even though both begin with 'w' and end with 'ere'.<br>Grade R activities<br>• Ask a learner to compare a picture of a shape with 4 other shapes, 3 of which are similar and one of which is identical. The learner must match the correct shapes.<br>• Repeat the exercise comparing a word with 4 other words, 3 of which are similar in shape with similar letters and one of which is identical. The learner must match the correct words (South Africa, 2006). |

The Grade R teacher does not deal with early reading applications of VPS, which are dealt with by the Grade 1 teacher teaching early reading. Instead, the Grade R teacher's subject knowledge of VPS is focused on elementary visual training. This training would enable the learner to apply the specific abilities articulated in the VPS definitions, not to early reading, but to simple visual tasks. Chapters 3 to 5 will seek to analyse and discuss the extent to which the Grade R CAPS curriculum directs the

teacher to teach towards and assess the VPS represented by those definitions, by employing basic visual tasks. The analysis of the CAPS is important as a basic source of subject knowledge of VP for the Grade R teachers themselves, due to their continuous, compulsory exposure to it.

There are other important documents related to VP produced by the WCED which may have useful visual perceptual content, but which are less serviceable to the Grade R teacher because they are peripheral, hardly seen or known about. For example, in 2005 the WCED Provincial Literacy Committee compiled a guide for Learning Support Educators entitled Strategies for Intervention, in which 6 of the prominent VPS profiled in Table 2.1 are discussed in terms of both problems experienced by learners and appropriate activities to assist them (South Africa, 2005). The writers of this document, from less than half the WCED District Offices, drew on VP rich sources like Grove and Hauptfleisch (1976 in English, 1982 in Afrikaans) to produce a valuable remedial guide which could have been of great assistance to Grade R teachers if they had been included as recipients.

The question arises as to the emphasis that has been given to VPS in educational research. This study seeks to shed some light on the matter of whether, according to the research, the applied knowledge of VPS is really so critical for preparation for early reading in particular. The importance of the role that VP plays in the development of visual skills towards early reading has been highlighted by Kenneth Kavale (1982: 42-51) who stated that "visual perception is an important correlate in the complex of variables related to reading achievement" (1982: 51). He did this by employing a wide-ranging meta-analysis of VP drawn over 161 studies in which leverage provided by eight (not the same eight profiled in Table 2.1) VPS upon six reading abilities over three grade levels, including pre-school, was measured (1982: 51). This correlation may appear to be an obvious deduction, but its value arises from the researchers' engagement with various conventional approaches (correlation, comparative and predictive studies) to investigating visual perception as a correlate of reading achievement. The data have been collected inductively, in order to arrive at a conclusion. His meta-analysis, "the analysis of analyses as a procedure for integrating statistically a domain of literature" (1982: 42), leads to the conclusion that, although understanding the relationship between visual perception

and reading ability by means of such approaches has "proved elusive" (1982: 42), their combined empirical evidence proves the reality of the relationship.

The relationship between visual perception and early reading skills has generated some debate. Some researchers have argued against the existence of such a relationship, using the results of the Dynamic Indicators of Early Literacy Skills (DIBELS) and the Motor-Free Visual Perception Test – Third Edition (MVPT-3) (Fazio, 1998: 1375-1383; Pammer & Kevan, 2007: 33-53). Others have sought to argue for the existence of a relationship between VP and early reading skills (Noelker & Schumsky, 1973: 22-25; Coleman, 1968: 26-321). Kavale points out that opposing arguments are largely grounded on "difficulties surrounding the definition of visual perception and its component abilities" as well as on "methodological problems" (1982:42). Nevertheless, the value of what Kavale does is that he helps establish the legitimate expectation that VPS definitely have a positive effect on early reading achievement, in spite of questions about the nature of that relationship.

The interrelation between the different VPS requires that they are developed and assessed as individual skills as well as drivers of complex activities. When individual skills are deficient, the entire interpretive activity of early reading breaks down the way a motorcar does with the failure of a component part (Gates, 1926: 433-445). For example, if visual closure is not working properly, the learner cannot read in chunks but has to decipher letters individually; then reading fluency is severely compromised.

References used by Kavale indicate that the bulk of the earlier body of research on VPS is located between the late 1950s and the mid 1970s. More recently, the emergence of Scientifically Based Reading Research (SBRR) in the early 1990s has boosted the connection between VPS and early reading achievement by exploring visual-cognitive factors such as visual temporal processing (Hood & Conlon, 2004: 234-252) and visual-verbal working memory (Littlefield & Klein, 2005: 363-385).

Due to the abundance of visually oriented communication in our time, the significance of using visual material is heightened; for example, photographs not only develop visual literacy but also reading skills (Britsch, 2010:171-177). In fact, our visually oriented learning contexts demand significant adaptations to teaching methodology without neglecting words and print in "an environment where words and

print are no longer the dominant medium" (Walsh, 2003: 123). For example, the "semiotic" approach to early reading by Hill and Nichols described in Section 2.4 below not only draws on contemporary phenomena of visually oriented communication but also on established findings on the connections between an image or visual pattern, how we see it and what we think about it. Such connections are explored in studies dealing with the psychology of pictorial representation or of decorative art (Gombrich, 1960).

This section has attempted to begin exploring the process that takes place when a learner perceives letters and words seen with the eyes. The retina has to make an accurate image of what has been seen, and the brain has to make use of VPS to process the image and attach a specific meaning to it. The learner uses distinctive VPS such as the following, for recognition, insight and interpretation of what is seen:

- **Visual Discrimination** is the ability to see details that make one object or symbol different from another.
- **Visual Memory** is the ability to remember exactly what something looks like even though it is not in front of you.
- **Visual Spatial Relationships** is the ability to see that a symbol placed in a different position in fact becomes a different symbol
- **Visual Form Constancy** is the ability to identify a written symbol when it has been written in a different way.
- **Visual Sequential Memory** is the ability to see the order of letters or digits or objects.
- **Visual Figure Ground** is the ability to tell the difference between foreground and background.
- **Visual Closure** is the ability to successfully identify a word, letter or number when a part of it is missing.
- **Visual Form Perception** is the ability to see the difference between forms or shapes of words.

The Grade R teacher must know 'how to train' the learner to activate these skills in his mind, using activities which scaffold from concrete to semi-concrete to abstract learning levels. These levels will be referred to in the visual training activities presented in Chapter 4.

## 2.3    Cognitive development

*Jason asks his father to read the words below the name KFC Krushers, designating the flavours: berry, banana, mango etc. He looks at the second word his father reads, at the shape of the word. He thinks back on what a banana looks like, tastes like. What it feels like to peel. He imagines it blended into a frozen milkshake, the creamy yellow colour, the sensation on his tongue, colder and sweeter than a normal banana. His mind is alive to the words:  KFC Krushers, banana.*

As was observed in the previous section, the visual image recorded in the eye must be interpreted by the brain using VPS in particular, but also the whole range of cognitive processes in general. In investigating cognitive development, it is important to gain a better understanding of the interplay between VPS and cognitive processes.

It is necessary to consider cognitive development firstly from the broader perspective of how the mind generally operates; how the mind is stimulated and activated. This perspective includes consideration of the impact the teacher deliberately makes on the mind of the learner. For example, the imparting of new knowledge by teachers, as well as the modifiability of cognitive skills (Feuerstein, 1980), highlight the importance of the foundational subject knowledge base which is first established in the teachers' minds. When teachers understand how pivotal their role is in the learning process, they feel more empowered to embrace their professional challenges, which firstly revolve around their own thoughts before they revolve around developing thinking skills in their learners.  This empowerment process will be examined in more detail in Section 2.5 below.

Feuerstein and others have subsequently sought to explain and update programmes which develop thinking skills (cf. Head & O'Niell, 1999: 122-128); measure cognitive change (Feuerstein *et al.*, 2001: 202-215); and enhance cognitive change via a mediator interposing between the learner and the learning environment, as well as via instruments which sensitise the learner to the learning environment (Feuerstein *et al.*, 2001: 270-278).

Cognitive development also generally involves the collaboration of a broad range of cognitive factors, such as, working or visuospatial memory, vocabulary knowledge, and general or non-verbal cognitive abilities (Bourke & Adams, 2010: 94). These

factors are not only predictive of early reading achievement but also of emergent writing skills (Bourke & Adams, 2010: 94). Studies dealing with the application of cognitive skills are therefore critical for the development of both the literacy and numeracy components of the Grade R curriculum.

Memory is a cognitive factor of particular importance to the early reading process, as memory plays host to the formation of connections within and between visual features and sound values respectively, which facilitate that process. Ehri (2007: 136-137) has attempted to describe the connections formed in the memory to enable early forms of sight word reading, the linkage of "visual properties of the word to its other identities" (2007:136). Two basic types of connections are described: *Grapho-semantic connections* are those between the visual features (e.g., letters, letter patterns, word configurations or length) of words on the one hand and their meanings on the other; in contrast, *Grapho-phonemic connections* are those between spellings of specific words on the one hand, and their pronunciations on the other hand. Separate graphemes are distinguished in spelling and separate phonemes in pronunciations.

In keeping with these multi-directional connections, Ehri's Phase Theory of Sight Word Reading (2007: 140-151) provides a useful breakdown of the mental aspects of the transitions taking place in the process by which young children learn to read. His discussion can be summarized as follows: In the *pre-alphabetic* phase, learners read words by remembering visual cues in the words or contextual cues around them; in the *partial alphabetic* phase, learners remember how to read words by using the sound values of some letters to form connections between spellings and pronunciations; in the *full alphabetic* phase, learners remember how to read words by forming connections between all of the graphemes in spellings and the phonemes in pronunciations; finally, in the *consolidated alphabetic phase*, learners read words by mainly forming morpho-graphic connections (Ehri, 2007: 140-151). Notice how the general flow as what is seen, recognized and interpreted is meshed with what is remembered, heard and reflected on along the way, in the mind.

For the purposes of this study, the pre and partial alphabetic phases are relevant. Regarding the pre-alphabetic phase, there is discussion regarding the importance of moving beyond contextual cues in "environmental print" or brands to "visuographic"

cues in the words themselves, particularly opening letters of personal names remembered as "visual shapes" as opposed to "symbols for sound" (Ehri, 2007:141). This shape recognition is important because learners in this phase do not yet have the "ability to use letter names or sounds to form alphabetic connections" (Ehri, 2007: 142).

The transition to the partial alphabetic phase is precipitated by development of what have been considered the strongest predictors of early reading, namely letter knowledge and phonemic awareness. There is discussion as to which factors provide the greatest impetus to shift from cue to cipher reading, for example, an insufficient memory of visual cues, the commencement of phonics or the emergent writing of letters (Ehri, 2007: 143). Whatever the outcome, there is no doubt that the visual skills required for learning to decode letters and words correctly are absolutely critical if further progress is to be made.

Regarding the partial-alphabetic phase, Ehri makes a case for phonetic cue reading facilitating sight word learning. For example, the phonetic cue for 's' in the letters 'zmr' led children more easily to the word *summer* than the phonetically distant 'vmr' (Ehri, 2007: 146). It follows that those who emphasize phonetic cue reading will be more partial to phonics methods and those who emphasize sight word learning will be more partial to whole-word methods. As visual and sound cues are organically and symbiotically linked, it makes sense to blend both methods. Basically, without the visual skills for visual cues, the sound cues will take longer to latch on in the memory.

The transition from the partial-alphabetic phase to the full alphabetic phase is promoted by giving attention to varied reading capabilities and tasks. This is because of the convergence in the learner's minds of numerous kinds of connections between all of the graphemes in spellings and the phonemes in pronunciations. Reading capabilities and tasks have been described in detail. For example, Juel, Griffith & Gough (1986: 243-255) proposed the following scheme:

**Table 2.2    Reading capabilities and tasks**

| Reading Capabilities | Tasks |
|---|---|
| phonemic awareness | segmentation, blending, substitution |
| exposure to print | level of texts being read in class |
| cipher knowledge | non-word decoding |
| sight word knowledge | recognition of misspellings |

The scheme used in the CAPS Grade R Curriculum will also be analysed with the set purpose of establishing what requisite visual training has preceded exposure to print, cipher knowledge and sight word knowledge.

Although the pre and partial alphabetic phases are directly relevant, it is valuable for Grade R teachers to be familiar with the full and consolidated alphabetic phases as well, as they provide a kind of a road map which orients the teachers' motivations towards the prize which will ultimately be gained as a result of all the visual training and early reading preparation.  Ehri (2007:139) has based this phase theory on an historical breakdown of early reading research which he has represented graphically. It is useful to set out the terms used by researchers to describe the stages of early reading roughly corresponding to his pre and partial alphabetic phases:

**Table 2.3    Descriptions of stages of pre and early reading**

| Stages | Proponents | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *Gough & Hillinger (1980)* | *Mason (1980)* | *Marsh et al. (1981)* | *Chall (1983)* | *Frith (1985)* | *Stuart & Coltheart (1988)* | *Seymour & Duncan (2001)* | ***Ehri (2007)*** |
| **Pre-reading** | *Cue reading* | *Contextual dependency* | *Rote, linguistic guessing* | *Stage 0: Letters/ Book exposure* | *Logo graphic* | *Partial ortho-graphic* | *Pre-literacy* | ***Pre-Alphabetic*** |
| **Early reading** | *Cue reading* | *Visual recognition* | *Discrimination Net guessing* | *Memory Contextual guessing* | *Logo graphic* | *Partial ortho-graphic* | *Dual foundation: Logographic and alphabetic* | ***Partial Alphabetic*** |

It is important for teachers and curriculum developers to be aware of learning challenges encountered by learners when transitioning through the partial alphabetic or early reading stage. Here learners start to realize that text refers more directly to

words and sentences and less directly to the world (or pictures or contexts) (Seifert, 2006:14). A learner reading fluently through memorization may begin to hesitate as unfamiliar decoding tasks are encountered (Seifert, 2006: 14-15). Although this is a Foundation Phase challenge, it is exacerbated by a VPS backlog in Grade R through which many learners have fallen behind during the pre-alphabetic or pre-reading phase. They just don't have enough VPS and cognitive skills to cope with all the new decoding tasks. Seifert (2006: 15) pinpoints phonemic awareness as particularly problematic for such children, as phonemes "are mental categories or groups of sounds, not single acoustic events". As a result, the learner must develop "mental categories in linguistic contexts" (Seifert, 2006: 15). Educational specialists have quite instinctively sought to articulate the full scope of the mental gymnastics involved in the reading process, so that pre-reading or pre-alphabetic phases may be skimmed over too rapidly. It is important to remember that "the thinking processes of interpretation are much the same as those the learner will use later when he actually reads" (Monroe & Rogers, 1964: 115).

The reading process also connects cognitive processes with the physical processes involved. As cognitive processes drive the eye movements that readers use, so the eye movements themselves are being studied as they "provide an excellent window for examining the cognitive processes that readers engage in the process of comprehending text" (Rayner, Juhasz & Pollatsek, 2007: 97). More specifically, visual information is extracted from the text by means of cognitive processes working through VPS related to eye movements. Better eye movements and VPS lead to better visual information extracted cognitively from the text. This highlights the importance of studies on eye movements as outlined in the previous section (Rayner, Juhasz & Pollatsek, 2007:80).

The link between the reading process and the meta-cognitive process, where the early reading child thinks about his own thoughts, is a very important one. Growing self awareness is vividly manifest in such a learner's transition from learning to read to reading to learn, as the brain increasingly interacts with the thoughts awakened and stored through the reading process. In this way, brain development for reading comes full circle, facilitating reading experiences for subsequent brain development. In line with this, brain-based educational practises have sought to highlight the value of early language acquisition; a child's ability to read and acquire language

proactively primes the brain for development. Frey and Fisher (2010: 103-110) argue that neuroscientific theory demonstrates that reading experiences promote neuroplasticity (physical development of neural pathways for new knowledge acquisition) and automaticity, which frees up working memory for comprehension.

The value of such research is also that it provides insight into the cognitive processes involved in the development of visual-perceptual skills, both in their own right and as drivers of early reading. The longer term benefit for young learners is that early reading and learning activities feed back into cognitive development. Seifert (2006:19) states that, "play and literacy also contribute to these cognitive abilities, taking them to new levels of richness and reflectivity". Although teacher knowledge will be treated in more detail below, it is important at this point to highlight the teacher's agency in feeding this meta-cognitive cycle by means of relevant early reading activities, "helping children to bootstrap learning by development, and development by learning" (Seifert, 2006:19).

## 2.4   Early reading

*Jason, aged 5, pages through a book in the book corner entitled 'Fruity Fun with Colours, Shapes and Numbers'. He expects to come across a picture of a yellow, crescent shaped fruit. On a page, a dozen different fruits are displayed in varied quantities. Their names are listed below each illustration. He almost immediately spots the shape and pattern of the word banana, with its opening consonant letter and three identical vowel letters. (He also begins to count them in the picture, arrives at five, and recalls the display on the classroom wall which includes: •••••, 5, five) But he is mainly engaged with the pre-alphabetic nature of pre-reading. He does not yet know the alphabet, or the sounds of the letters in banana, but he has begun to make visual or grapho-semantic connections between them. He is ripe for the partial-alphabetic nature of early reading, where he will learn the letters and their sounds, meshing new graphophonemic connections with the earlier grapho-semantic ones being fixed in his memory. He is finding access to early reading!*

The term *early reading* has been used in this study as it is a more theoretically neutral term than *emergent literacy*, which may be confused with the *emergent* view of how children learn to read (discussed below), as well as the term *Emergent Literacy* in the Grade R curriculum. A critical early-reading research exercise is to locate policies and practices within a historical context in order to validate a

particular programme or instrument (Reid, 2007: 1-29). It is likewise important to locate early-reading research itself within a theoretical context, in order to blend the best elements of theory into relevant instructional and intervention strategies, which in turn can generate improved policies and practises. In view of the latter, Hill & Nichols (2006:153-165) have provided an overview of changing theoretical perspectives on early reading in general, which incorporates the "emergent literacy perspective" (2006:153), as well as their "semiotic perspective" (2006:154). Distinctive theoretical perspectives highlighted in academic circles are described. The basic question is: How do children learn to read? The following approaches to learning to read are summarized below on the understanding that the reading capabilities and tasks they emphasize cannot be properly expedited without the prerequisite visual training. They presuppose the question: How do children *prepare* to learn to read?

The *maturationist* view states that children pass through natural neural ripening stages during which reading readiness can be nurtured by pre-reading activities. The *connectionist-developmentalist* view emphasizes children's learning of the code. Knowledge of this code is based on elements which are connected to each other during pre-reading activities. These elements include letter forms, grapheme-phoneme associations and spelling patterns. The *emergent* view sees children learning to read as those engaged in a dynamic process of acquiring literacy by means of early immersion in print rich environments. In the *constructivist* view, children are considered to already be competent and capable users of oral and written language. In other words, they have latent competencies which enable them to make reasonable sense of the signs and symbols they routinely access through socio-cultural experiences. Dovetailing with the aforementioned view is the learner oriented *critical* view in which efforts are made to find learners in their own context and to assist them to make the transition to the wider literacy context. They are thus assisted to straddle the gap between their own socio-cultural frames of reference and that of the school environment and dominant culture. Our visually stimulating age has precipitated the more forceful articulation of the *semiotic* view in which children are exposed to literacy instruction which builds on traditional print and language codes but which also incorporates codes or symbols derived from oral language, visual imagery, multimedia, numerical symbols and music.

Further research would have to establish the extent to which the promoters of the semiotic view have actually built on more traditional approaches on the one hand, or provided an overview through the theoretical lens of the semiotic view on the other hand. Policies and practices must take cognizance of the full theoretical scope of not only how children learn to read, but how they prepare to do that.

A comparison has been drawn between 'emergent literacy', a term coined by Marie Clay in 1966 and established during the 1980s and 1990s, and 'scientifically based reading research' (SBRR), surfacing in the early 1990s:

> While emergent literacy advocates place heavy value on the social and meaning-based aspects of literacy (engagement with books, forms of print and writing), SBRR has focused more on decoding print and on visual and auditory aspects of the reading process (vocabulary, phonological awareness, alphabet knowledge and print awareness) (Vukelich & Christie, 2009:8).

Vukelich & Christie propose a blend of the two theoretical perspectives on early reading, instead of playing them against one another. This synthesis of perspectives must continue to be extended by incorporating more perspectives; otherwise their blend of only two views becomes myopic in that it excludes other views. An example of ongoing synthesis is that, in line with the SBBR approach, more meta-cognitive insights to early reading have been included in SBBR, as Benjamin does in his Grade R developmental programme (2006). This was touched on in Section 2.3 above. As a result, approaches to reading have increasingly employed the idea that children develop self-awareness and control of their own mental processing, where they increasingly interact with thoughts formed through reading. The mind then decodes texts using prior knowledge and associations. Proponents of such approaches emphasising the pro-activity of the learning child's mind have gone back to the work of chief theorists whose ideas have worn well over time. An example of this is Vygotsky's position that the development of children's learning was a process of moving from other regulation to self-regulation (Vygotsky, 1978: 92-104, 1986).

Another example of avoiding theoretical myopia, similar to Walker's report on the methodological debate between proponents of the whole word and phonics methods, is Snow and Juel's historical analysis of two key debates. The first deals with the unit size employed when teaching children to read (2007: 501-520). Large size refers to words read for meaning and small size refers to letter-sound correspondences. The

second debate deals with the extent of explicit instruction required in order to establish reading capabilities. Snow and Juel go on to demonstrate the necessity for the two approaches to unit size to complement each other. They also warn against the confines of public curriculum policy statements, such as the National Reading Panel (NRP) report, conducted by the National Institute for Child Health and Human Development in 2000. It confined teaching of reading to only five areas, namely, phonological awareness, phonics, fluency, vocabulary and comprehension (2007: 512). As the DoE uses these categories in its CAPS curriculum, it is important for researchers to establish that reading-teaching theory has been adapted and supplemented for the local context. Likewise, when researchers interact with educational policy statements (See Section 2.6 below), they need to evaluate the sources for those statements, being mindful of the pressure faced by researchers involved in policy development: to find a theory to validate and prop up favoured policies, old and new. Policy developers may have personal, financial and political interests, as opposed to purely educational ones, in sometimes changing, sometimes upholding the status quo.

Many proponents of early-reading research invariably find that they need to work back towards applied visual-perceptual theory, as they have to with cognitive development. Their purpose is twofold: firstly, to set developmental markers for young children and, secondly, to motivate the adoption of educational tools which foster early reading skills. Examples of such tools would include: explicit print referencing for print and alphabet knowledge, in which "teachers use verbal and nonverbal techniques to heighten learners' attention to, and interest in, print within the storybook" (Justice, 2009: 68); and block play, which hosts representational play experiences which in turn support cognitive development and literacy learning (Hanline, 2010: 1014). There is the recognition that there needs to be a dynamic interplay between reading tools, tasks and capacities. Hill & Nicholls (2006:163) point out that, "...although emergent reading is currently of great importance, the interrelated tools of writing, drawing, talk and gesture should not be ignored as all feed into and support each other in a dynamic process."

As can be expected, much research has been done on auditory perceptual development as a precursor to early reading. This approach includes, for example: the recording of successful targeting of phonemic awareness in at-risk preschoolers,

so that the impact of learning barriers are substantially mitigated even in limited interventions (Ukreinetz, 2009: 98); and, delineating the most effective phonics programs, such as choosing between traditional synthetic phonics which matches graphemes to phonemes before blending them, as in *'h/a/t-hat',* or analytical onset-rhyme phonics which replaces onset consonants in words while matching the rhyme vowels and consonants which follow, as in *'hat-cat'* (Hines, 2009: 21). Another important body of research combines auditory perception with visual perception as complementary precursors to early reading. The point is made that together they "appear more related to the acquisition of early reading skills than to their subsequent elaboration" (Bruinicks, 1969: 179-186; Birch & Belmont, 1965: 295-305). In other words, the collaboration between VP and auditory perception towards early reading is more critical than their individual functioning. But VP must first be properly understood before being linked to auditory perception. More recently, models of reading have sought to explore the collaboration between orthography and phonology in the process of visual word recognition (Lupker, 2007: 39-60). Listening skills are never far away as backdrops to early reading.

Copious amounts have been written on early reading difficulties and how they should be addressed. So, invariably, much of the research extant reflects the symbiotic relationship between early reading instruction and early reading intervention, exploring the broad range of links between them. Of particular relevance to this study is research that investigates whether an increase of visual-perceptual and meta-cognitive input prior to early reading instruction results in a diminished need for early reading interventions. Such a proactive educational approach can be contrasted with a more reactive approach where early reading interventions are used to compensate for a lack of pre-reading skills at the onset of Grade R (Cooke, Kretlow & Helf, 2010: 137-144). Comparative studies have sought to measure the effectiveness of particular types and timings of interventions. Such information would assist Grade R teachers to do more effective interventions when conducted on a stronger subject knowledge base, making a qualitative difference to the VPS and early reading performances of the learners they teach. However, in this study the focus will be on that subject knowledge base: what teachers know, and what they need to know, in order to promote the development of visual-perceptual skills relevant to early reading, by means of visual training. Related to this focus is the professional support

given to the Grade R teachers themselves, because they deal with children during a critical period of visual perceptual development. It must be stressed at this point that the Grade R teachers' subject knowledge of VP will largely be informed by working documents such as the Grade R CAPS curriculum. Those documents represent policies and practices based on distinctive theoretical perspectives on how children learn to read.

This is why an analysis of the teachers' working documents is so important. We must state explicitly what perspectives are intended to inform teacher knowledge when we analyse that knowledge. Hill and Nicholls (2006: 163) make a call "for emergent literacy researchers to consider the bigger picture, the epistemological parameters of their work. What counts as knowledge in emergent literacy? Where is knowledge located? How is knowledge attained?" These wider questions must be diffused to classroom level where the teacher must know what the learner must know in order to access early reading. The latter narrow question brings us to investigating what exactly it is that the teacher must know.

## 2.5   Teacher knowledge

*Jason is in his Grade R class sounding the letters of the alphabet. Phonics is underway. His Grade R teacher holds up the letter flipchart. She has used her subject knowledge of VPS to do proper visual training with him and knows that he is not only sounding the letters, but is able to start recognizing them, distinguishing them from each other. In Grade 1 he will be able not only to recognize them but also read them correctly in the pattern of letters which comprises the word banana. Later he opens the Fruity Fun book in the book corner again to look for berry and mango. He also knows that KFC Krushers is a brand name referring to a frozen milkshake. He wonders about the ice in the freezer, the milk in his cereal. In his mind, he can still hear the whirring sound of the blender. His teacher finds his curiosity rewarding, even as her own knowledge about his visual training was awakened, informed, supported and rewarded.*

Teacher knowledge is an area of research that has to be driven collaboratively by both academics and teachers, as the latter are in a position to reflect very directly on the links between how learners learn and how they teach (Loughran, 2010:36). The work of the academics on the other hand, is vital for feeding fresh theoretical

perspectives into the knowledge base so that teachers can use it to interrogate their pedagogical activities. For example, if teachers apply a constructivist (pragmatist) principle of learning, that learners construct knowledge by adding new knowledge to existing knowledge, they will modify their teaching practices to facilitate the principle. Their teaching will facilitate that constructivist principle, moving learners to do things such as: Learning by doing; self regulation; building meaning from experience; and collaborative learning (Loughran, 2010: 34).

Teacher knowledge operates within an environment of antithetical or overlapping knowledge-acquisition theories or epistemologies. More recently, it has been recognized that objectivism (realism, instructionism, behaviourism), which sees knowledge as imparted through external reality, is not diametrically opposed to constructionism. For example, cognitivism incorporates "attention to both real objects ... and to the internal processing of learners' minds (Cunningham & Allen, 2010: 487). Cronje places objectivist and constructivist epistemologies on axes on a quadrant grid describing qualities of learning events: immersion (opportunistic) learning; construction learning; injection learning; and integration learning (Cronje 2006: 387-416). Similarly, whereas OBE in its inception was described as constructivist as opposed to behaviourist, learner-centred as opposed to teacher-centred, CAPS has sought to follow the more recent practice of integrating the best elements of established theories of learning. Cunningham and Allen's description of Cronje's "integration learning" could easily pass as a description of the CAPS approach to learning:

> ...the best elements of instructionism and constructivism are combined, with careful attention to objectives, a developmental pathway of skills and sub-skills along with appropriate scaffolding, opportunities for constructing understanding when helpful, and a range of assessments... (Cunningham & Allen, 2010: 488)

This study will not, however, provide a detailed investigation of the theoretical underpinnings of teacher knowledge, but will instead seek to describe specific elements of that knowledge. Nor will this study explore all the practical ramifications of that knowledge, for that would be the subject of an entire collection of studies. Nevertheless, it remains of value, in the matter of teacher knowledge, to come to a general understanding of the nature of the teaching process so as to pinpoint a

workable focus for teacher knowledge in this study. Even though the teaching process is "messy", "problematic", and "complex":

> ...the how and why of teachers' professional judgements matter and those judgements form the foundations for their understanding, development and use of knowledge of practice (Loughran, 2010: 19).

The link between teaching and learning has precipitated thinking about teachers' knowledge in terms of knowledge of practice or Pedagogical Content Knowledge (PCK), used by Shulman (1986: 4-14). As the term is an attempt to fuse theory and practice, approaches to PCK customarily seek to account for both aspects, for example, Loughran's "content representation" and "windows into practice" (2010:45). PCK therefore represents the interface between the theoretical side of teacher knowledge and the practical side as well as the fusion of the two into new teacher knowledge categories.

Post-modern fluidity and relativity in understanding of teacher knowledge has already been described a few decades back as follows:

> All of this amounts to a shift: from a position where scientifically-derived knowledge was deemed superior, to a circumstance in which artistic and intuitive knowledge may be equally appropriate; from an a-priori instrumental view of knowledge about teaching, to one that reflects knowledge as being tentative and problematic (Smyth, 1987: 5).

Foucault has sought to describe the connections between teacher knowledge and political power within education systems. The battle for power is not only vested in the minds of learners but also of their teachers. He stated that "every education system is a political means of maintaining or modifying...knowledge and power (Foucault, 1971: 46). Teacher knowledge has to include broader underlying beliefs that drive practices (Lynch, 2009: 191-203). Such knowledge cannot be dumped on teachers but must be imparted within the framework of a suitable "professional development coaching model" (Wasik, 2010: 621). This study will seek to avoid the problematic nature of these wider discourses by investigating a universal, socio-scientific and relatively neutral aspect of teacher knowledge. For this study to be practicable, it has to settle on a focal point of teacher knowledge that is relatively distinct, but which also accounts for its wider context. So as teacher knowledge is such a broad, developing area of research, it is important, in the interests of the clarity and feasibility of this study, to work with an understanding of teacher

knowledge that is as relevant to the aim of this study as practicable. The table below has been compiled to provide an overview of some categorizations of teacher knowledge which surfaced during the literature study:

**Table 2.4    Proponents of various articulated categories of teacher knowledge.**

| | Proponents | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *Taylor (2013)* | *Reutzel & Sudweeks (2008)* | *Reutzel & Sudweeks (2008)* | *Cochran-Smith & Lytle (1999)* | *Shulman (1986)* | *Brede-kamp (1986)* | *Foucault (1980)* | *De Lissa (1910)* |
| **Categories of Teacher Knowledge** | Subject Knowledge | | | Knowledge-of-practice | | | | Theory |
| | Curriculum Knowledge | Content Knowledge | Inert Know-ledge | Knowledge-for-practise | Content Knowledge<br>General Pedagogi-cal Knowledge<br>Curriculum Knowledge | | Theoreti-cal Know-ledge | |
| | Pedagogi-cal Content Knowledge | Pedagogi-cal Content Knowledge | Inert and Enacted Know-ledge at opposite ends of a conti-nuum | Draw from wider Knowledge-of-practise to stage interroga-tion between Knowledge-for-practise and Knowledge-in-practise to generate new knowledge | Pedagogi-cal Content Knowledge | Develop-mentally Appro-priate Practice (DAP) | Subjugated Knowledge (local 'enter-tained' against theoretical) | "Free-dom to work out our ideals in the best possible manner" |
| | Teacher Com-petence | Pedagogi-cal Knowledge | Enacted Know-ledge | Knowledge-in-practise | Knowledge of Learners<br>Knowledge of Educational Practices<br>Knowledge of Educational Ends | | Local Knowledge | Action |

Of particular value for the resolution of the tension or apparent dichotomy between theoretical teacher knowledge and practical teacher knowledge is Cochran-Smith & Lytle's categories of knowledge. These allow for a process in which theoretical and practical knowledge interact with each other to generate new knowledge (Cochran-Smith & Lytle, 1999: 249-305).

Shulman's coining of the term PCK in 1986 is a landmark attempt to represent the complex interplay between the theoretical and practical aspects of teacher knowledge (Snow et al., 2005: 205). This complexity also impacts not only on what teachers know but how they are developed professionally. New models of teacher development since the mid 1980's may be placed into two broad categories. These are: stage models (expertise continuum); and phase models (chronological continuum) (Snow et al., 2005: 205). The authors, following the National Commission of Teaching and America's Future (NCTAF) propose a fusion of these two models in order to "recognize that learning to teach is a process in which expertise develops over time and is marked by increasing sophistication of and control over a complex and multifaceted knowledge base" (Snow et al., 2005: 206). Aspects of a stage model proposed include, from less to more mature knowledge levels: new declarative; situated can-do procedural; stable procedural; expert, adaptive; reflective, organized, and analysed. Aspects of a phase model proposed include: recruitment, pre-service training, initial intern license, new teacher induction, continuing license, ongoing professional and advanced certification. Under this scheme, a teacher in pre-service training accesses proportionately more new declarative knowledge and an advanced teacher accesses proportionately more reflective, organized and analysed knowledge (Snow et al., 2005: 209). In their discussion about principles of professional development the authors provide a useful summary of salient points raised by the research. Such development must account for (Snow et al., 2005: 2011): Addressing prior knowledge to stimulate new knowledge; skills required for continuous learning; the development of a comprehensive and usable knowledge base; application and contextualization in internships/mentorships; articulation of and integration between subject knowledge and pedagogy; extended practical application as opposed to dabbling in eclectic topics; contextualized rather than generic approaches; analysis of shared best teaching practises; and lead teachers demonstrating the balancing of personal growth trajectories with school improvement plans.

Some of these principles will be picked up in the literature discussions below. Section 2.6 on Grade R policy will, in relation to professional development; contain an overview of current approaches to Grade R professional development in the WCED.

What follows is an explanation of why this study will mainly focus on a theoretical aspect of teacher knowledge. The theoretical side of teacher knowledge is still a broad teacher-knowledge category which requires further subdivision. On the theoretical side of teacher knowledge, Taylor (2013), reporting on *The State of Literacy Teaching and Learning in the Foundation Phase,* has distinguished subject knowledge from curriculum knowledge for two reasons that are directly relevant to this study: To highlight the role of CAPS in "recommending particular sets of strategies to sequence and pace the knowledge in each subject" (Taylor, 2013: 36); and, to highlight the danger that "the strategies set out in (CAPS) may be mistaken for the outcomes of learning, and may even obscure the knowledge capacities they aim to promote" (Taylor, 2013: 36).

Taylor has also distinguished "teacher competence" from PCK: teacher competence is knowledge which: "...draws on all three other knowledge types" (subject knowledge, curriculum knowledge and PCK) (Taylor, 2013: 24); "...is honed by experience, reflection and peer interaction" (Taylor, 2013: 24); and is able to deploy effective teaching strategies as opposed to, in PCK, merely knowing which ones are effective.

This distinction is also relevant as it serves as a reminder of the practical longer term implications possibly arising from this study, that is, competent Grade R teachers deploying effective strategies for visual training which materially improve early reading results in spite of learning barriers and other contextual hindrances.

A related challenge to defining teacher knowledge is that of measuring it. Reutzel & Sudweeks (2008) have raised some pertinent issues connected to measuring teacher knowledge, namely: Who does the measuring, for example, the education department, the training institutions and processes (pre-service and in-service), the instructional leadership (SMT's etc.) or peer reviews such as required in the Institutional Quality Management System (IQMS)? How should the measuring be done, for example, by means of tests, observations, analysis of lesson planning or interviews? To what extent is teacher knowledge an accurate predictor of learner achievements? What may the unintended consequences be of assessing teacher knowledge? For whom would the consequences be, and how serious would they be?

And, does the teacher knowledge enquiry properly account for contextual factors in the cases of teachers, learners and classrooms?

In view of the aforementioned challenges connected to defining and measuring teacher knowledge, the following approach will be adopted in this study:

Firstly, as to the definitive categories of teacher knowledge, this study will work with the specific category of subject knowledge due to the constraints presented by a single study. The focus will therefore be mainly on teacher subject knowledge. The focus will be narrowed even further to the focal point of a description of the subject knowledge of VPS possessed by the teachers in School A.

The related curriculum knowledge, pedagogic content knowledge and teacher competence in Taylor's scheme, should be seen as dynamically interactive with subject knowledge and with each other. In other words, even though the study's focus is mainly on teacher subject knowledge, all of the categories are regarded as important ideologically. It must be stressed that the more practical, applied elements of theoretical subject knowledge, such as PCK and teacher competence, are so inseparable from it, that the practical validates the theoretical. Recommendations regarding capacitation in subject knowledge will inevitably include the application of that knowledge, as teacher knowledge categories adopted in this study are linked to one another in a dynamic cycle.

The idea of employing teacher subject knowledge as a focal point has arisen from the following considerations: Establishing a comprehensive and usable knowledge base in teachers is vital; related to this is the articulation of and integration between subject knowledge and pedagogy (Snow et al., 2005: 2011). The dependence of pedagogy on subject knowledge does not make the latter of prior importance. It simply indicates that it is materially important. Taylor makes the point that:

> We might expect some short-term efficiencies to be generated by improvements in pedagogy...However, any such gains are likely to reach a low ceiling unless a great deal more attention is paid to teacher subject knowledge resources at the same time... (Taylor, 2013: 30).

The discussion around how teacher subject knowledge is to be imparted is only touched on in this study, which basically describes that knowledge. However, the methods of teacher subject knowledge "capacitation" must be guided and driven by a

clear understanding of that knowledge, both on the part of teachers and those who train them. The term "capacitation" (Taylor, 2013: 66) is used here and elsewhere in this study to bracket all that is done to enable the teacher to fulfil her role, by means of professional development spanning both pre and in-service training. The term is preferred by this writer to the term "support" because it speaks more directly to the process by which teacher knowledge is established and reinforced. Taylor appraised the LitNum Intervention (LNI) undertaken by the WCED as having "prioritized *teacher subject knowledge* as the key to more effective delivery of the curriculum." He continues:

> The premise of this focus seems to be that teachers cannot teach what they do not understand very well, and that once they have this understanding, they will be better able to make sense of the *curriculum*, make better *pedagogica*l choices, and consequently be more effective orchestrators of *classroom behaviour* (Taylor, 2013: 65 )(italics mine).

Taylor points out that the impact of this program would require a detailed study (2013: 69). The other difficulty highlighted by Taylor is that "the teacher subject knowledge capacitation model has become firmly lodged in South African educational commonsense, and the same old remedies continue to be applied: afternoon workshops, and add-on programmes by distance and short courses by the universities and NGO's" (2013: 69). It is hoped this study will yield qualitative data to give fresh impetus to the matter of teacher subject knowledge capacitation models to be implemented in Grade R towards early reading.

The second aspect of the approach taken in this study is that teacher subject knowledge will be measured qualitatively not quantitatively, in order to open a descriptive window of insight into a subject-knowledge related educational challenge, namely, visual training towards early reading. The qualitative data are also more suited to accounting for the instinctive and intuitive elements of teacher knowledge, as well as the generation of new knowledge. The process of gaining knowledge should not be over analysed, as competent teachers have intuitively "articulated complex, integrated expertise that was substantiated through detailed observation and theorizing..." (Gibson, 2010:17).

Thirdly, the measuring of teacher subject knowledge will be done by this writer on behalf of both the education department and the training institution.

Fourthly, the measuring will be done without any direct connection being made between teacher knowledge and learner results. Learner results will only be used to add a contextual element to subject knowledge of VPS and to focus the interest of the teachers in the sample.

Fifthly, due care will be taken to ensure that the teachers are not prejudiced in any way and that allowance is made for the influence of complex contextual factors on analysis results, as pertaining to factors in the lives of teachers and learners as well as the classroom, school and community environment.

Finally, it must be stressed that all analysis of data will be undertaken to empower the teachers with a specific body of subject knowledge in order to help them to keep growing in teacher competence.

Teacher knowledge, due to its complexity discussed above, is therefore to be regarded as highly specialized. An outline on the professional requirements of Grade R teachers and practitioners, given below in Section 2.6, raises the matter of specialization. More specifically, the matter of the ratio between general teacher training and specialized Grade-R training. The element of specialization of Grade R means that solution oriented research that is credible cannot be done in a piecemeal, arbitrary way. For example, on the completion of the NEEDU Report it was conceded that, in the examination of the foundations of the South African educational system that:

> While Grade R is formally part of the FP, given the specialist nature of this important pre-school year, it was decided not to evaluate it in 2012 but to make it a special focus at a later date (Taylor, 2013: 11).

This specialization has a bearing on how teachers, particularly Grade R teachers, are to be trained pre-service and in-service. The findings of this study may lead to recommendations in that regard. However, for the moment it will suffice to regard Grade R teaching as a highly specialized enterprise in which the Grade R teachers essentially need capacitation. They need it in order to develop subject knowledge, towards more competent classroom practice, in the matter of visual training towards early reading. Generally, they need this capacitation because they have so many early childhood developmental issues to address over a relatively brief window in the learner's life, such as cognitive, social and emotional issues.

What follows are related matters that need to be born in mind when investigating teacher subject knowledge capacitation. There is the matter of the challenge the teacher faces to consolidate a wide range of developmental skills differing from learner to learner over a 2 to 3 year span. This study applies to teachers dealing with learners officially aged 4 ½ to 6 ½, a period which is critical for visual perceptual development.  However, those teachers need to have a broad understanding of visual perceptual development from its most concrete, elementary aspects to its most advanced abstract aspects.  The reason for this is that researchers dealing with developmental periods try to set relatively broad age-categories for each early childhood developmental category. This phenomenon is due to the uneven and individualized nature of early childhood development (Wood, 2007: 13). Young children do not develop at the same pace.

So Grade R feeds vitally into a developmental continuum effectively spanning the ages of four to seven years old, in a learner's life. In the South African context, Grade R covers a two-year period in the life of children which often straddles a developmental gulf between an absence of structured pre-schooling and formal, compulsory reading instruction from early in Grade 1 onwards. Grade R is thus relied on very heavily to consolidate the visual perceptual developmental milestones covered between the ages of four and seven. This places a premium on the ability of Grade R teachers to intervene in the learner's developmental track and consolidate their various aspects of development.

Related to learner interventions are teacher interventions. Learners and teachers are bound up with one another in a tightly woven collaborative enterprise. This relational connectivity is particularly crucial within the context of early childhood education (Seifert, 2006: 9). When either party falls short of standard educational requirements, how is responsibility apportioned? If a learner does not meet the requirements, what are the contributing factors: learning barriers, contextual factors, inexperienced or demoralized teachers, or gaps in curriculum delivery? For educational service-providers, supporting teacher subject knowledge is a constructive way to make some progress. There is such a wide range of factors that determine learner assessment results that educational management needs to tread very carefully and consider all the issues when balancing teacher interventions with learner interventions (Fidler & Atton, 1999:40). In contrast, proactive teacher capacitation, involving the basic task

of on-the-job training of the teacher to impart a required skill to learners, is relatively straightforward. When it comes to teacher interventions by Senior Management Team (SMT) members, less emphasis needs to be placed on fixing what is wrong with teachers (and learners); more emphasis can be placed on understanding and imparting the teaching task at hand. This does not mean that in teacher capacitation the 'how' of teaching should be pursued at the expense of the 'what' and 'why' (Smyth, 1995:7; Pollard 1997: 65-97). It simply means that a teacher's self-knowledge and subject knowledge mutually support each other as a work in progress, to deliver increasingly effective classroom practice.

Gore and Zeichner (1995: 203-214) have ably demonstrated the value of action research for objective monitoring of teachers' mindsets. For the purpose of this study, the focus will be more directly on what the Grade R teachers have internalized towards visual training in their classrooms. The questionnaires and group discussions will seek to document their own subject knowledge of VP as well as their overarching vision and motivation for their roles. In keeping with the link between mindset and application, much research on contextual aspects of early reading instruction focuses on the teacher's mindset, which in itself will make or break the most robust methods and instruments. An explicit instruction curriculum tailored for pre and early reading skills cannot be assumed but remains indispensable for morale and results (Taylor, 2010: 524-545).

Regarding teacher agency, Vygotsky's educational theory has re-established the concepts that education precedes development (Hofstetter & Schneuwly, 2010: 605-629) and that educational contexts must be broadened from maturational and biological ones to include cultural-historical ones (Agbenyega, 2009: 31-38). These insights lend themselves to the South African educational context where education cannot wait to be driven by development; and where the cultural-historical milieu of young learners has to be not merely accommodated, but pro-actively harnessed by teachers who understand the primacy of their agency over their context.

The necessity of working with contextual factors, that is, classroom learning-environments affecting early childhood development, is essential. Here teachers need a great deal of professional capacitation to enable them to step back from the classroom situation, reflect on where the learners are coming from and then to

develop appropriate teaching strategies. The importance of their pro-active role in mitigating destructive environments is underscored by research indicating the proportionately magnified efficacy of interventions conducted as early as possible (Vadasy, 2008: 51-89; Mesmer, 2008: 280-290), as well as research indicating the heightened importance of fulfilling developmental milestones in at-risk learners (Musti-Rao, 2007: 70-85). If teachers are aware that learning-environmental factors overshadow genetic factors in childhood development (Hayiou-Thomas, 2010: 311 332), they will feel more motivated to provide a quality learning environment. They already know that many learners in greatest need of quality learning environments are least likely to receive them (Cunningham, 2010: 501-507), as they are still outside the Grade R classroom. This general phenomenon arises from the fact that quality education calls for more resources than can be provided by sub-economic households or developing governments. In spite of that, teachers front up to the quality-education challenge. Being aware of uneven resource allocation, teachers may experience that the more commercialized and standardised a reading programme is the more contextualization and adaptation is required for sub-economic settings (Owens, 2010: 112-121). Therefore they need training and capacitation to do the adaptations, not only regarding reading skills, but also regarding visual training to impart VPS towards early reading.

Learning-environmental factors also include the leverage provided by development of the other skills, for example, social skills. According to Wang & Algozzine (2011:100-109), early social skills, which enable learners to relate to teachers, adults and peers, correspond very directly to early reading skills. Wang & Algozzine also demonstrated that teachers are aware of this to the extent that during assessment they betray a bias towards learners with stronger social skills by giving them marginally higher ratings (2011: 100-109). Here teachers need capacitation to grow in their ability to nurture children with weaker social skills. In spite of the threat of bias towards "stronger" learners, the social skills of children need to be positively employed in the learning process. The WCED BtLAB assessment in 2011 in all Cape Winelands District public and independent Grade R classes indicated a 72% average results for social-emotional development, compared to 39% for visual perceptual development and 37% for cognitive development; the assessment therefore

highlights a more developed skill that will provide leverage in improving the weaker developmental areas.

This means that teachers can be guided in plugging both visual training and early reading activities into social or play-based learning activities; for example, labelling objects in the play area with both their common names as well as their brand names. The "soap" in the house corner is "Omo" and the "go-cart" on the track is a "Mazda". The play and socializing use brand names and word-labels as points of contact. In relation to this study, the strong emotional-development results would encourage conscious development of VPS in social-classroom contexts. These possibilities are supported by an emergence of views of literacy as social practice as opposed to primarily as a cognitive practice involving the mastery of perceptual skills (Lynch, 2009: 191-203; Dyson, 2001: 9-39).

Studies that describe broader contextual factors have value for this study insofar as they help to ground it in a particular socio-cultural and geographical setting. The Grade R teachers' understanding of their setting is critical for the effective application of VP subject knowledge in the classroom so that the teacher can complete the construction of the bridge which links the world of the learner with the world of the Grade R curriculum.

Numerous studies seek to demonstrate that teachers' skills and qualifications are more decisive in nurturing learners' reading skills than the nature of the curriculum being followed (Snow & Juel, 2007: 514). However, the present writer wishes to explore the extent to which subject knowledge informed by the curriculum forms a critical component of teacher training for effective visual training towards early reading.

## 2.6 Grade R Policy Framework

> *Jason's teacher is busy with her third-term planner, setting up her work schedule with reference to the Grade R CAPS curriculum document. She also eagerly awaits the BtLAB results due by the end of October, which she hopes to use as a diagnostic assessment for learning which will help her to determine which aspects of visual training, will need to be bolstered the following year. She knows where she wants Jason to be at the end of November, and she has two short school terms to get him there. She is also becoming adept at adapting the content and time frames within the CAPS document to the contexts of her learners, their school and their community.*

Before discussing the working curriculum documents sourced by the Grade R teachers in the next chapter, it is important to become familiar with the broader policy frameworks within which those documents have been developed. The key framework documents will be referenced below at the points at which they have a more direct bearing on this study.

The Grade R admissions policy, as summarized in the Grade R Training Manual (South Africa, 2012c) to be analysed in Chapter 4, envisions the future provision of Grade R facilities in all public schools for all five and six year old learners, excluding children younger than four years and six months on the 1st of January. Furthermore, the plan is to phase in Grade R as compulsory (South Africa, 2012c: 35). It is a long-term plan. The Department of Basic Education (DBE) conducted the Systemic Monitoring and Assessment Policy (SMAP) survey on the 10th school day of 2008 which revealed that in the Western Cape, only one in three Grade 1 learners had been to Grade R (South Africa, 2010:11).

*Education White Paper 5* (EWP5), drafted in 2001, aims to address both the quality of and access to the provision of Early Childhood Development (ECD) services. Five key challenges have been identified, namely, the scope of provision, inequality in existing provision, inequality of access to services, variable quality of services and finally, an incomplete legislative and policy framework resulting in inconsistent and uncoordinated service delivery (South Africa, 2001a). This document is important for policy discussions dealing with the questions such as the factors which can mitigate the negative impact of childhood poverty on school readiness and early childhood education (Ryan, Fauth & Brooks-Gunn, 2006: 323-346). In the WCED, EWP5 is of critical importance; the Chief Education Specialist for ECD has identified the

implementation of this policy document as the Grade R priority for 2013 and 2014, in particular, universal access to Grade R, CAPS resourcing for quality Grade R tuition and the upgrading of the qualifications of Grade R practitioners (South Africa, 2012d: 1-4).

The issue EWP5 raises which is most relevant to the teacher knowledge component of this study, discussed in Section 2.5, is the matter of which resources are needed over what period to roll out compulsory Grade R with suitably trained and remunerated Grade R teachers. For a case study on comparative models of preschool teachers' professional development, see Saracho & Spodek (2006:423-439). Professional development includes pre-service training, encouragement by peers and superiors, in-service training in the form of further studies, workshops and systemic monitoring by the school and educational department. The application of the phase and stage models summarised above, to WCED teacher training policy, would warrant a separate study due to its importance. In this study, some consideration will be given to professional development in terms of best practices.

To provide some context for teacher knowledge in the WCED, a brief overview of teacher training since 1996 will now be provided:

In 1996 a decision was taken by the DoE to broaden the Grade R delivery base by means of the following measures: All departmental Grade R posts would be frozen. That is, only those employed by the department prior to that would continue to receive departmental salaries. Resignation or retirement would lead to the post contract being ceded to the SGBs. The purpose was to spend less on teachers so that more could be spent on infrastructure roll-out of public Grade R facilities to be managed by SGBs.

Grade R training for Grade R teachers would become optional. Those who voluntarily wanted to be trained had two options.

- Option 1: Up until 2000 the Grade R teachers were trained by means of a 4-year HDE including 3 years in Junior Primary followed by 1 year specializing in Pre Primary.
- Option 2: After 2000, Grade R teachers could be trained by means of a 4-year B Prim Ed which included a Pre Primary module. A university pass was

therefore required to access the training. As too few schools could offer departmental posts, most public posts were SGB funded. The lower salaries and optional training attracted fewer highly qualified teachers.

Of particular relevance to this study is a third option which took shape from 2007 onwards, when a National Diploma course was launched in colleges known as ECD. It has 3 streams, ECD 1 (NQF Level 1) for babies (1 year), ECD 4 (NQF Level 4) for toddlers (1 year) and ECD 5 (NQF Level 5) for 4-6 year olds (1 year full-time or via distance learning over about 18-24 months). A school leaving qualification is not required for entrance to ECD 4, but ECD 5 must be either accessed via a school-leaving qualification, or Level 4, or a Higher Certificate in ECD. About half of the assessment is in the form of projects and portfolios and 50% in the form of exams. The ECD 5 facilitates access to NQF Level 6 B Ed (FP) and the NQF Level 6 Diploma in Grade R Teaching. The Diploma in Grade R Teaching is set to be implemented in academic institutions at the start of 2014. ECD 5 addresses ECD Unit Standards, the 7 roles of the educator outlined in the Training Manual in chapter 4, as well as planning and managing a learning programme within the framework of a current national school curriculum. Lecturers in ECD Level 5 in the writer's district have not received CAPS training to date, which suggests that curricular insertion into Level 5 training may be experiencing some lag in certain areas due to the newness of CAPS. Fundamental and Core Unit Standards within ECD 5 do not directly address Grade R literacy learning. However, the Elective Unit Standards include a Grade R literacy component as a Certificate, as well as respective components in which the teacher must be able to identify and assist learners with special needs/barriers to learning and design assessments. EWP5 confirmed the designation of teachers receiving this training as *ECD Practitioners*.

In 2011 the DoE, replacing its *Norms and Standards for Educators* (NSE) document published in 2000, published Government Gazette No. 34467, with the title, *The Minimum Requirements for Teacher Education Qualifications*. In this document, the DoE sought to raise the minimum qualification requirements of Grade R teachers, while drawing them more strongly into the FP domain, with the following statement: "All new entrants intending to become FP teachers (qualified to teach from Grades R to 3), should register for a B Ed (FP) rather than for the Grade R Teaching Diploma, provided they meet the requirements for entry into the B Ed" (South Africa, 2011a:

40). Linked to this is the requirement that "Grade R Teaching qualifications must be designed cognately with the FP B Ed, so as to provide for maximum credit transfers when Grade R teachers continue their studies..." (South Africa, 2011a:40). There is recognition that not all Grade R teachers will have the credits for B Ed (FP), therefore the features of the Diploma in Grade R Teaching are enumerated at length, as the Diploma is the preferred alternative to the B Ed for Grade R teachers. This qualification is set at NQF Level 6. It can be accessed by a school leaving qualification inclusive of a diploma entry-endorsement, or by a "Level 4 or Level 5 Certificate or Diploma in ECD" (South Africa, 2011a:41) carrying sufficient credits. Other important features of this qualification are the requirement that Grade R teachers "must be knowledgeable about, and skilled in the early identification of barriers to learning... curriculum differentiation and adaptation for multiple learning needs" and that they must "specialize in First Language teaching in one of the official languages together with First Additional English Language teaching" (South Africa, 2011a:41). The reason given for the latter requirement is that, "The focus should be on emerging literacy" (South Africa, 2011a:41). This single focus raises the question of the extent to which VP is considered important in the course content, as adequate visual perceptual development is inseparable from equally strong foci on emergent numeracy and life skills. In the prologue (The Nature of Grade R Teaching Qualifications) to the section of Government Gazette No.34467, titled *Qualifications and Programmes for Grade R Teachers*, a multiple focus is hinted at: "The focus of this grade is on learning through play, developing physical coordination, as well as developing spoken language competence and fundamental ideas that will form a basis for the further development of number sense and literacy" (South Africa, 2011a: 40).

The knowledge mix prescribed for the Diploma in Grade R Teaching is as follows: 50% of the content needs to cover Grade R specialist subjects in the areas of disciplinary (foundations of education), pedagogical and practical learning. Another 40% would have to cover general educational subjects in the areas of disciplinary, pedagogical, fundamental and situational learning. The remaining 10% can be used for ECD (pre Grade-R) electives. Practical on-site learning is set at 12-18 weeks over a three-year period (South Africa, 2011a: 41). This qualification has been implemented from 2014 onwards.

In-service training was made available to ECD Practitioners in the form of the CAPS training in mid-2012. At present, all new Grade R practitioner appointments are only arranged by SGB's for a salary of approximately R8000.00 net per month, paid by the education department in non-fee schools only.

Since 2011, systemic monitoring of Grade R teachers has been formalized in the WCED. ECD Educational Specialists have been appointed, one per District Office, to support Grade R Practitioners across the Circuits. They are allocated to approximately 5 designated focus schools in each circuit, which require the most support, based on unsatisfactory Grade 1 results. In the CWD, this means that the coverage by the ECD Educational Specialist is as follows: The CWD has eight circuits, comprising approximately 35 schools with Grade R sites each; at least once per term the Educational Specialist visits only the focus school sites; this works out to about one in 7 of the Grade R sites in the CWD. The Curriculum Advisers and Learning Support Advisers support the remainder of the Grade R sites. The frequency of these general purpose support visits is also once per term on average. With such sparse coverage, it is difficult to sustain effective in-service training for all the Grade R sites.

The roll-out of resources has comparatively better coverage than monitoring. The Grade R Learner Workbooks have also been rolled out for Grade R, as has a substantial stock of apparatus referred to as Learner Teacher Support Material (LTSM). Due to the confines of this study the education department's Grade R Learner Workbooks will not be included in the documentary analyses in the next chapter.

From 2014 the following has been proposed by the DoE: Grade R training must be compulsory, the two available options being (1) the B Ed (FP), and (2) the Diploma for Grade R Teaching, requiring a school leaving qualification endorsing a diploma for entrance, but not a Bachelor degree pass, and, providing access to Grade R posts only. However, sufficient credits under the Diploma (Grade R Teaching) will provide access to the B Ed (FP), which is what is ideally wanted by the education department as the definitive Grade R teachers' qualification. In the meantime, most Grade R teachers are Grade R Practitioners with ECD Level 4 and 5 qualifications.

*Curriculum and Assessment Policy Statement* (CAPS) introduces subjects to Grade R. A subject is defined as a "field of knowledge, with skills and values, which has unique features" (South Africa, 2012c:35). The three subjects in Grade-R are, Home Language, Mathematics and Life Skills. The guideline of requirements and expectations provided for the subjects will be analysed in Chapter 3 below. From January 2012, all Grade R to 3 classes were required to implement CAPS. The Grade R Work Schedule for Home Language was introduced as a WCED provincial resource which teachers did not have to use, although it could be used to support CAPS implementation. More detail will be provided on CAPS in Chapter 4.

*The National Policy Pertaining to the Programme and Promotion requirements of the National Curriculum Statement Grades R-12* (NPPPPR) (South Africa, 2012a) provides a general framework for the assessment process. No formal assessment tasks are required for Grade R, all assessment is school based. In other words, learners are observed rather than tested. Promotion requirements are Adequate Achievement (Level 4 of 7) in Home Language and Moderate Achievement (Level 3 of 7) in Mathematics. Related to the school-based assessments, is the Barriers to Learning Assessment Battery (BtLAB). BtLAB is the only external assessment of Grade R. The validity and reliability of departmental results for target setting is the subject of ongoing debate, as it has been in the UK pertaining to Standard Assessment Tasks (SAT's) (Guest & Lee, 2008:82). Test results remain open to either correct interpretation or misinterpretation, precipitating either constructive or destructive changes to the educational system. Whatever the systemic outcomes may be: BtLAB and other external assessments are valuable for diagnostic and formative assessment for learning, primarily to the teachers themselves, but also for educational specialists within the department.

Another important aspect of assessment policy is what is often referred to as "norms and standards". The analyses of the assessment instruments in Chapter 4 will seek to clarify how each instrument has answered the following question: "How well has the learner done compared to what?" (Halliday, 2010: 372) There are two possible ways to answer this question: Criterion-referenced assessment compares performance with a written statement setting out what the learner should be able to know or do; and, norm-referenced assessment compares performance with the average of all those taking the same assessment.

Regarding progression and promotion requirements, a learner may not spend more than four years in the Grade 1-3 programme. When learners spend two years in Grade R due to a young entry age, or a more severe learning disability or barrier, the extra year or two are not included in the four year maximum allotment, as will be seen in the site school for this study. Assessment in Grade R remains important however, because Grade R teachers are required to base their planning on the CAPS assessment process (South Africa, 2012: 36). This process will be described in Chapter 4.

*Education White Paper 6* (EWP6) promotes Special Needs Education (SNE) by means of an inclusive approach to education in both mainstream and special schools. Efforts are made to provide learning support to both learners with disabilities (approximately 3% of South African learners) and learners with barriers to learning (approximately 30% of South African learners) (South Africa, 2001b:15). It is critical to research the longer-term challenges of inclusive education encountered by developed educational sectors, for giving direction to our developing Grade R sector. Areas of research may include curriculum development for children at risk of failure (Chambers, Chueng and Slavin, 2006: 347-359) and teacher beliefs and attitudes towards inclusion (Ostrosky, Lauman and Hsieh 2006: 411-424).

## 2.7   Conclusion

It now remains to provide a summary of what has been investigated, in sections headed as follows: Visual Perception, Cognitive Development, Early Reading, Teacher Knowledge and Grade R Policy.

*Visual Perception* is the capacity to interpret what is seen. The section focused on the importance of VPS within the domain of teacher subject knowledge of the same. On a more basic level the Grade R teacher must be familiar with the definitions of the different VPS. On a more advanced level, the Grade R teacher must be able to provide the learner with some visual training by means of simple learning tasks and activities which target specific VPS. This lays a foundation for whichever method of early-reading teaching is used by the Grade 1 teacher. Other aspects of VP relevant

to applied teacher knowledge discussed included aspects which will help the Grade R teacher to appreciate the importance of her input prior to reading teaching in Grade 1: Practical aspects such as the period when VPS will operate during a fixation while reading; the distinction between visual perceptual deficiencies preventable by visual training and sight problems cured medically; theoretical aspects such as the positive relationship between VPS and early reading performance, as well as between VPS and early-reading teaching methods geared for modern, visually oriented communication.

*Cognitive Development* is the development of thinking skills. In children, this development requires an understanding of emerging thought processes. In relation to motivating education in general, this developmental activity involves the modifiability of cognitive skills and imparting of knowledge. In view of the specific motivation of the Grade R teacher to prepare the learner for early reading, the section focused on cognitive development which contributes to early reading achievement. Three aspects were highlighted: Firstly, memory which facilitates connections between visual features of words and their meanings, as well as connections between spellings of words and their pronunciations. Secondly, in developing the memory aspect, recognised phases of sight word reading must be employed to scaffold learning activities, firstly for visual training and secondly for early-reading teaching. In particular, the pre-alphabetic phase must be understood, where children read words by remembering visual or contextual cues; and, the partial-alphabetic phase must also be understood, where they remember how to read some words by using sound values of letters to connect spellings with pronunciations. Thirdly, meta-cognitive development was highlighted. Here the early-reading learner thinks about her own thoughts. Learning to read becomes reading to learn, precipitating subsequent brain development.

*Early Reading* refers to the partial-alphabetic phase of reading. However, in relation to VPS for early reading, it has been important in the discussion to bear the pre-reading, or the pre-alphabetic phase, in mind. This section considered early reading on two levels: Primarily, how Grade R teachers learn how children prepare to learn to read. Secondarily, how Grade R teachers teach children to prepare to learn to read. The study is focused on teacher agency, the primacy of what the teacher learns and knows. The purpose of these discussions is to inform the investigation in

Chapter 3 of what kinds of subject knowledge of VP the curriculum and BtLAB provide to the teachers in the sample, about how *their* learners prepare to learn to read. In considering this challenge, a brief overview was provided of distinctive early-reading learning perspectives highlighted in academic circles: to indicate the potential levelling influence of visual training for all of those perspectives. In relation to how teachers learn how children prepare to learn to read, the point was made: teacher subject knowledge capacitation, and the working curriculum documents, must interact with the full theoretical scope of how children learn to read. To illustrate this, examples were provided of perspectives blended with one another as well as perspectives which account for visual perceptual, cognitive and auditory development. Reference was also made to the importance of research on early reading interventions: for showing us in hindsight what visual training can do to prevent reading difficulties.

*Teacher Knowledge* was discussed in this section with the aim of adopting a teacher knowledge category which is workable within the confines of this study. In this regard, the epistemological background to teacher knowledge was discussed, including the connection between how learners learn and how teachers teach. Then different teacher knowledge categories related to the teaching process were discussed, including links between those categories. It was pointed out how the teaching process has yielded valuable data for approaches to teacher training. The complexity of the teaching process also required some comments on the issues involved in measuring teacher knowledge. The bulk of the section on teacher knowledge was taken up by the rationale for focusing this study on a specific aspect of teacher knowledge, that is, subject knowledge. Currently, teacher subject knowledge capacitation is a critical challenge in South African educational reform. It is also foundational for the operation of the other categories of teacher knowledge. It is hoped this study will yield qualitative data which can give impetus to that enterprise in a highly specialized and specific area, that of visual training towards early reading in the Grade R sector. The rationale for this study focus was also applied to related aspects of the approach taken.

Finally, the section was concluded with a few brief discussions of relevant aspects of teacher subject knowledge capacitation, such as: developmental consolidation where it was stressed that the Grade R teacher is relied upon heavily to consolidate

VP developmental milestones reached by children between the ages of four and seven; teacher intervention, where it was pointed that, in the context of various factors leading to underperformance in learners, teacher capacitation must empower teachers to build skills more than to repair deficient ones. The importance of teacher mindsets was discussed, where it was indicated that giving them a positive mindset and assured self-knowledge is as critical as giving them subject knowledge, if they are to achieve best practices in the classroom; teacher agency was discussed as influential, because education preceding development underscores the primary role of teachers in the learning process. In regard to teacher subject knowledge capacitation, contextualization challenges were also discussed briefly, such as the importance of the classroom learning-environment in relation to other contextual factors such as domestic and genetic ones; teachers' use of other developmental skills, such as social skills, to provide leverage for VPS, was also discussed.

The *Grade R Policy Framework* was briefly surveyed in order to better understand how the Grade R sector is intended to cater for all South African children from the age of four and a half years in January each year. The admissions policy document, as well as EWP5 and EWP6, are designed to facilitate access and inclusion into an educational mainstream. It is intended to be a rapidly flowing stream; the promotions policy places pressure on both the Grade R teachers and the Grade R curriculum to be able to immediately move children into Grade 1. This section includes a brief overview of the professional development of Grade R educators within the WCED. Chapter 3 will seek to explore the relationship between the curriculum outcomes (related to the both Emergent Literacy of the subject Home Language and Emergent Numeracy of the subject Mathematics) and the teachers' subject knowledge of VPS.

The findings in the literature provide for a theoretical background for this study according to the following logic: VPS must be defined and categorized in such a way that their roles in cognitive development, pre-and early reading are properly understood. After that, VPS can then be more readily discerned in the different terms under which they appear in the CAPS Curriculum for Grade R and the BtLAB, and how they are to be progressively transferred via visual training. Finally, the Grade R teachers' subject knowledge of these VPS can be analysed, described, enhanced and implemented towards more effective visual training for early reading in future

# CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

## 3.1 Introduction

Under the title, *Grade R teachers' subject knowledge of Visual Perceptual Skills for early reading,* this study seeks to answer the following research question: *What subject knowledge of Visual Perceptual Skills is possessed by the Grade R teachers in School A?* The research design for the investigation of this question will involve a mixed methods approach based on pragmatic knowledge claims; and the design will involve mainly qualitative analysis. The data to be analysed will arise from both existing research as well as the data collection instruments used in this study. The reason for using such a wide range of data sources is to provide sufficient validation of both the methodology used and results obtained when answering the research question. The presentation of the results in Chapter 4 must be relevant to both the local contexts of site and sample, as well as the broader theoretical and systemic contexts. This relevance is essential in the interests of identifying challenges and seeking solutions.

In Section 3.2 the chosen site and sample will be profiled. Section 3.3 will explain how the general research framework of pragmatism is related to the teacher subject-knowledge directed research aim. In line with this, Section 3.4 will provide an overview of the particular approach taken to the research, that is, mixed methods. Section 3.5 will explain how the discourse analysis of the teachers' responses to questionnaires and group discussions will describe the teachers' subject knowledge of VPS. Section 3.6 will seek to show that documentary analyses of both the curriculum and a diagnostic assessment instrument are important for clarifying related aspects of teacher knowledge in addition to teacher subject knowledge, namely curriculum knowledge and pedagogic content knowledge. Linked to the value of the document analysis, Section 3.7 will seek to explain the use and value of the other data-collection instrument, namely the statistical analysis. Section 3.8 aims to provide more particulars of how the data will be analysed once collected. The chapter is concluded by a discussion dealing with how the research will be validated

in Section 3.9. Section 3.10 will suggest what limitations are connected to the research.

## 3.2  Site selection and sampling

The site, that is, School A, has been selected as a suitable example of a rural Western Cape public school incorporating more than one Grade-R class, grappling with a low literacy success rate at school level and with gaps in curriculum delivery at district level. It must be stressed that as there are so many factors affecting success rates and curriculum delivery, this study has no intention of specifically identifying all those factors, but rather of bolstering the capacitation received by the Grade R teachers who are pivotal to the educational process.

The sample involves the four Grade R teachers in school A. The Grade R teachers have been selected because their application of subject knowledge of VPS, found in the CAPS-curriculum and diagnostic assessments such as Barriers to Learning Assessment Battery (BtLAB), via regular classroom practice, is foundational for pre and early reading instruction. All four teachers are involved as a sample so that a teamwork dynamic between them can be perpetuated and a broader range of data can be obtained via the data collection instruments. The question arises as to why BtLAB is included in the research. The BtLAB is a diagnostic assessment of Grade R learners usually conducted each September and October by Learning Support Advisors and Educators in order to help the education department identify and address any significant developmental barriers in the transition to Grade 1. In connection with this, the Grade R teachers' experience of BtLAB will need to be examined more closely to gain a better sense of its importance.

The site was initially chosen after a comparative analysis of 2011 Systemic Grade 3 test data arising from selected schools in Circuit 7 in the Cape Winelands District (South Africa, 2011b:12). The selected schools all conform to a Western Cape rural public school setting which include a Grade R facility. The relatively low Grade 3 pass rate in School A (20.4%), at 10% below the provincial average (30.4%), did not indicate proof of dysfunctional Grade R and Grade 1 setups. Neither did the fact that two of the Grade 3 classes delivered literacy pass rates of 10.3 % and 3 % respectively, a 15% drop from the previous year. Instead, the Grade 3 pass rate at

School A was reflective of results across Circuit 7(20.9%) and the Cape Winelands District (24.0%). However, it must be stressed that the sample is more of a focal point to this study than the site in the sense that curriculum delivery begins with teacher subject knowledge of VPS, as indicated in Chapter 2. I would also maintain that the Grade R literacy pass rate of 20.4% is asking for more than a Grade 1 reading intervention. Such a low pass rate is asking for solid Grade R curriculum delivery orientated towards visual training for early reading.

The site's Foundation Phase results provide a backdrop to the statistical analysis discussed in Section 3.7., as the site is a school setting inclusive of Grade R. In 2012, School A appeared in the top quartile on an annually and internally circulated list titled *Top 200 Repeaters.* This list features 200 of the WCED schools with the highest proportion of Grade 1 "repeaters" in a given year. The statistics on the list, once again, are not referred to in order to indicate a dysfunctional Grade 1 setup. They simply aroused interest in the Grade R setup because 57 of the 149 Grade 1s (almost 40%) enrolled in School A in 2012 did not pass, and about 80% of all those Grade 1s constituted the school's own cohort of Grade Rs in 2011. The statistics invite intervention that will be of value firstly to the Grade R teachers in School A. Therefore the statistical analysis discussed will not include data from the broader sweep of Foundation Phase results, but will focus on Grade R results relevant to Grade R teacher subject knowledge of VP.

Furthermore, the site has heightened significance as a focus school in the circuit and as a pilot school for BtLAB in the WCED. Focus schools require knowledgeable intervention, not labelling or blame. The teachers in the sample are dedicated workers. Relatively low FP results are not automatically indicative of gaps in curriculum delivery. Instead, they suggest a range of contextual factors which affect early reading achievement, which are not included in this study. The results are given in order to cast the need for workable solutions into sharper relief. Subject-knowledge driven teacher capacitation is and should be proactive, not reactive, as reflected in the solution-oriented nature of this study.

The immediate challenge to such curriculum delivery is that the Grade R teacher has to address a wide range of developmental and learning barriers in order to ensure that early reading skills, including VPS, are in place at the onset of Grade 1. The

necessary time, skill or resources to do this rely heavily on systems which support the professional development of the teachers, of the curriculum and of suitable learning environments.

A further challenge to curriculum delivery is the bottleneck created in a school when too many learners have to repeat a year. Here the school and department have to collaborate in the implementation of policies designed to manage such contingencies. It has been observed that in School A there are many Grade 1 learners who fail Grade 1 for the second time and who, due to curriculum policy, are put through to Grade 2. A 2013 WCED policy calls for a 90% Grade 1 pass rate. Learners who progress due to policy as opposed to ability usually still carry a literacy and/or numeracy backlog. This backlog has been aggravated by the withholding of interventions, also according to policy, until the second year of Foundation Phase, for Grade 1 repeaters or struggling Grade 2s.

Another study would have to thoroughly document the actual effects of the development of VPS before the start of early reading instruction on the Foundation Phase in a specific educational district. This study will limit itself to the aim of describing teachers' subject knowledge of VPS with reference to VPS content in the Grade-R CAPS curriculum, the Grade-R diagnostic BtLAB and recent Grade R assessment results. It will focus on teachers' subject knowledge of VP as a key factor in developing grassroots turnaround strategies for Grade R and the remainder of the Foundation Phase in School A and in many schools like it.

## 3.3   Research design: Pragmatism

The general framework for the research design of this study is based on pragmatic knowledge claims. In the case of pragmatic knowledge claims, knowledge is obtained by asking: What is the urgent challenge and what practical solutions can be applied to it? The challenge may also be termed the research problem. A pragmatic framework lends itself to a pluralistic approach to deriving knowledge about the problem (Creswell, 2003:11). The immediate educational challenge this study seeks to address is the question of what the sample of teachers know about VPS. Varied analyses and fields of enquiry will be used to understand the challenge. The

underlying motivational logic towards a practical solution is this: The teachers can only impart what they know. Once it is known what they know, then they can be capacitated further. The specific outcome of such support is that they will be enabled to use the curriculum and potentially, the diagnostic assessments, as effective tools for both assessing and imparting VPS to learners towards early reading.

The priority of teacher capacitation invites the examination of specific matters which this study aims to address, namely, the description of Grade R teachers' subject knowledge of VPS related to the coverage of VPS in the Grade R curriculum (CAPS) and the Grade R diagnostic BtLAB. It is important to understand why VPS as set forth in CAPS are relevant for teacher subject knowledge. Examining all the Grade R developmental skills is beyond the scope of this study. However, knowledge of a specific skill can contribute to addressing other skills shortages too. For instance, VPS are of pivotal importance for cognitive development towards early reading. These skills must find their starting point in the modified Grade R curriculum (CAPS). Implementing curriculum changes involves rectifying deficiencies in two areas, namely, in both the curriculum itself and in its delivery by teachers. VPS development by means of visual training must be carried through from the curriculum to the classroom. This would reduce learner interventions in Grade 1, particularly reading interventions.

It is also necessary to investigate why the coverage of VPS in BtLAB is relevant to teacher subject knowledge. BtLAB is a diagnostic assessment, aimed at early identification of learning barriers among learners with a view to intervention in Grade 1. When these diagnostic assessments are well set up and run, they do not merely have value for Grade 1 learner interventions (in schools inclusive of Grade R) by identifying learning barriers needing to be remedied. They also have value for the Grade R CAPS curriculum and teacher subject knowledge capacitation in any ECD Centre or Grade R class: by confirming normative subject knowledge benchmarks for VPS.

In Chapter 2 the connection between VPS and early reading was explored. But in order to investigate how Grade R teachers can receive relevant capacitation, it is necessary to address a more fundamental challenge than learner visual perceptual proficiency, that is, teacher visual perceptual knowledge-proficiency, or, teacher

subject knowledge of VP. Grade R teachers are required to diagnose and treat early childhood developmental maladies, not only by intervening, but by normal curriculum practice. It is essential therefore, in order to determine what capacitation teachers need, to find out what they already know about VPS and how they are currently implementing VPS development in the classroom. Only once it has been established what their subject knowledge is of VPS for early reading, will it be possible to offer effective assistance. In this way, the solution to the urgent challenge, or research problem, of teacher subject knowledge of VP, is sought by analysing the sources of that teacher subject knowledge. Improving and applying those sources is a critical starting point for solving the problem by means of relevant teacher subject knowledge capacitation.

## 3.4    Pragmatism related design: mixed methods approaches

The research design must not only fit the research aim embodied in the research question. The research design of this study must also be compatible with the pragmatic knowledge claims discussed above. This requirement has invited an enquiry into the suitability of mixed methods approaches to research.

In mixed methods approaches to research, the choice of methods is dominated by solving a problem or addressing a challenge (Creswell, 2003: 11). These approaches involve a certain degree of pragmatism as the researcher has to reconcile existing educational paradigms with her own while choosing ways of collecting and analysing data which will actually be useful in effecting change (Harrits, 2011: 150). Feilzer argues that pragmatism itself is actually a suitable paradigm for mixed method research because it can enable the best elements of contrasting paradigms to be brought out by the variety of data collected (Feilzer, 2010: 6). For example, a teacher-centred behaviourist paradigm, which formerly used mainly quantitative data, can now interact with a learner-centred constructivist paradigm, which formerly used mainly qualitative data. So now, in the collection of data, the question can be investigated: "Did the teacher impart knowledge to the learner before, during and after assessments?" This could have been a behaviourist-quantitative question. But now it is synthesized with what could have been a

constructivist-qualitative question: "What did the teacher know and feel about the VPS and the learner, which activated the learner to access early reading in a meaningful way?" The resultant research will not fit neatly into an established paradigm because it may highlight certain strengths and identify some weaknesses of the dominant operative paradigms; those primarily in the teachers' and learners' minds and secondarily, in the educational system's policies. Although the focus is on teacher subject knowledge of VPS, the teachers' interest in this study would be sustained by the sense and satisfaction that such knowledge was truly imparted to the learner. The limited quantitative data which will be presented briefly in Chapter 4 simply serve to focus the teachers' attention on the outcomes of the teaching process. Those same outcomes are used by the teachers to reflect on the source of the teaching process, that is, their own knowledge. Teachers use the results to reflect on both learners' performance and on their own practice. It is also important to point out that results of learners' performances are not received impassively by teachers but are actively corroborated by their classroom experiences and practices. Loughran points out that "through reflection on experience, teachers' knowledge of practice is developed and enhanced in ways that help to inform and shape their expertise" (2010: 183).

Feilzer highlights the pragmatic mixed-method research phenomena of "a continuous cycle of...reasoning while being guided primarily by the researcher's desire to produce socially useful knowledge" (Feilzer, 2010: 6). This relationship between the cycle of reasoning and the object of desire suggests the value of "procedures for mixed methods strategies of enquiry" (Cresswell, 2003:16) which are concurrent. In keeping with this, the method of enquiry in this study will involve a mixed methods approach involving concurrent procedures:

> "in which the researcher converges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem...the investigator collects both forms of data at the same time during the study and then integrates the information in the interpretation of the overall results" (Creswell, 2003:16).

In the case of this study, mixed methods do not only refer to the dynamic between different kinds of data (methods of enquiry), but to the number and variety of fields of enquiry and data collection instruments. However, it must be stressed that teacher subject knowledge of VP was employed as a basic theme which regulated the

selection and arrangement of data. Research reviewed in Chapter 2 concludes that VP has an elusive but real and positive impact on early reading and that Grade R teachers' subject knowledge of VP is critical for the same. Therefore this narrative has driven the data collection and analysis process. Qualitative data analyses have been used because they provide for a realistic textual description of the visual perceptual content of the working documents, that is, the Grade R CAPS curriculum and Barriers to Learning Assessment Battery (BtLAB), as well as of what has been internalized and applied by a specific sample of teachers. This data will be employed to articulate a teacher subject knowledge focused solution to the low VPS and low early reading results. The latter results will be represented by the presentation of a limited selection of quantitative, statistical data recently published within the WCED's Cape Winelands District (CWD). The quantitative data arises from the results obtained from the CAPS and BtLAB assessments in School A, and the CWD, between September and November 2012. In Chapter 5 the CAPS and BtLAB results will be put into context by means of comparison with each other, with special attention given to visual perceptual components of the results.

Social, domestic and regional contextualization lies beyond the scope and focus of this study, which is focused on teacher subject knowledge, not learner performance. However, learner performance is factored into teacher subject knowledge in the sense that teachers use the learner performance to help in assessing their subject knowledge; and to hone their subject knowledge in order to more effectively address developmental gaps revealed by the results.

This quantitative data has been selected to speak to teacher subject knowledge as it represents to teachers an indication of their subject knowledge of VP applied in classroom practice and imparted to the learners. In short, if an educational challenge is to be addressed, the solution, drawn from the qualitative data collected in the study, can be made to speak relevantly to the problem, represented partly by a limited selection of available quantitative data. This dialogue between the two aforementioned sets of data calls for a concurrent procedure of data collection.

Another issue that has bearing on the conversation between these two sets of data is the matter of the validity of the assessment criteria and results of both the CAPS and the BtLAB. Basically, the issue is whether what is assessed, and what results

are obtained, will really make a difference in the lives of the "end users", that is, the children themselves. The actual impact of the presence or lack of VPS on early reading is not merely tested by assessments deemed valid according to "quantitative reports of construct validity, content validity and concurrent validity" (Kramer, 2011: 52). Kramer goes on to make a case for the use of mixed-methods of research to unearth new perspectives on assessment validity which also account for the qualitative data associated with those assessments. This data, in Kramer's view, would account for the presence of more abstract phenomena benefiting those assessed, such as "credibility, authenticity, or transferability" (Kramer, 2011:52). Halliday points out that assessment "should include considerations of justice, the ethics of evidence and acceptable levels of tolerance in applying results..." (Halliday, 2010: 377). Essentially this means that the dynamic between the qualitative and the quantitative data may generate fresh insights into the different elements of teacher subject knowledge of VP. The teachers instinctively know that CAPS and BtLAB are meant to permanently and actually benefit the children assessed; otherwise they become fruitless and meaningless exercises. This wider and deeper concept of assessment validity is termed "social validity". In the context of this study for example, the teachers would be asked to indicate whether the assessment is conducted in such a way that the Grade R learner can meaningfully participate, as well as learn from follow-up reinforcement of a VP concept in visual training. It is important to know whether the assessment moved from concrete to semi concrete to abstract and whether the response to the developmental gaps indentified got the learners back on track. The Grade R teacher employs formative assessment for learning on an ongoing informal basis; but the CAPS and BtLAB assessments represent structured opportunities for the teacher to reflect on the assessment process itself to confirm her own confidence in its validity. She has a pivotal role to play in responding meaningfully to the results and interpreting those results for the parents and their children. She has to shield the children in particular from becoming demoralized by unsatisfactory results, by directing them towards the next level, step by step, scaffolding their learning in realistic increments. How exactly must she do that? These questions are for the teachers to ask and answer. And the answers need to be informed by teacher subject knowledge.

Although the theoretical underpinnings of this study have a bearing on how the research is conducted, the reasoning must remain rigorously inductive. Care must be taken not to set up the easily toppled cardboard cut-out figure representing a study engineered to confirm a preconceived conclusion. Therefore the research design must be congruous with a specific research aim and question inviting a practical solution to a significant educational challenge. A mixed methods approach was chosen because it is most likely to yield the various kinds of data required to represent teachers' subject knowledge of VPS.

An overview of the procedures this study will involve can be represented graphically as follows:

**Table 3.1     Overview of procedures for research components**

| Concurrent Research Components | Methods of Enquiry | Field of Enquiry | Data collection | Expected Outcome |
|---|---|---|---|---|
| 1(primary) | Qualitative Analysis | Sample of 4 Grade R teachers, in School A | Discourse analysis of questionnaires and group discussions | Evaluation of the subject knowledge of VP of 4 Grade R teachers in School A |
| 2(secondary) | Qualitative Analysis | Grade R component of CAPS | Documentary analysis | Evaluation of the validity of visual perceptual subject content of Grade R CAPS |
| 3(secondary) | Qualitative Analysis | Diagnostic BtLAB in School A | Documentary analysis | Evaluation of the validity of visual perceptual subject content in BtLAB |
| 4(secondary) | Quantitative Analysis | Grade R assessment results in the CWD of the WCED, particularly School A | Statistical analysis of performance data | Presentation of the data as indicative of the challenges to be addressed by the teachers of School A, the CWD, CAPS and BtLAB. |

## 3.5   Primary enquiry: discourse analysis of the sample

A qualitative discourse analysis of a sample of four Grade R teachers in School A will be conducted, using questionnaires and recorded discussions, as well as classroom observations. This will be done in order to evaluate the completeness and clarity of the teachers' subject knowledge of VP. Related to their subject knowledge are their knowledge of the curriculum and their PCK. These kinds of knowledge are directed towards how the teachers implement what they know in the imparting of visual perceptual developmental skills to the learners through visual training, that is, towards teacher competence. This latter kind of knowledge in turn feeds cyclically and dynamically back into the former kinds of knowledge. In other words, it informs these other kinds of knowledge.

All these processes must happen in the Grade R class managed by teachers who have to function as both general practitioners and educational specialists. They are the primary agents of the learning process. Learners will always bring their barriers, but motivated, knowledgeable and skilled teachers should always have the power to work around and over barriers to learning. It is critical to get a clear and detailed picture of what is going on in their minds and hearts, if they are to be capacitated in imparting VPS via visual training towards early reading.

Discourse analysis of the data collected in the sample will be used because classroom-related conversation and instruction is a fundamental tool by which teachers articulate and impart their subject knowledge. The discourse analysed involves texts arising from both oral and written sources so as to account for teacher preferences and to accommodate the social dynamics which inform both discourse analysis and teacher knowledge (Florio-Ruane & Morrell, 2004:50).

Another reason for adopting discourse analysis of the data is the potential that discourse has, not merely to reflect teacher knowledge, but also to *construct* it (Foucault, 1981). This arises from the integration of "prior knowledge with the information in the text" (Goldman & Wiley, 2004: 85) to construct new knowledge. Although such analysis yields both qualitative and quantitative analyses, the emphasis in this enquiry is on qualitative analysis which, without too detailed codification, describes both the similarities and differences between the subject

knowledge in the teacher's mind and that in the curriculum and diagnostic documents. It can be expected that the discourse analyses of the sample may be directed by a-priori subject knowledge concepts but that it also may result in modifications to those concepts. This is because, "Discourse analysis is a process that successively approximates ways to capture systematicity and variance across written (*or oral*) texts and draw inferences about knowledge and learning" (Goldman & Wiley, 2004: 86, parenthesis mine). The questions used in both the questionnaire as well as the focus-group discussion were designed according to the following "maxims" for creating authentic discourse events (Florio-Ruane & Morrell, 2004:58): run the discourse event on site, in the "natural" environment; work with locally meaningful units of analysis or terms of reference; clarify both task and questions for respondents by illustrating explanations with stories and anecdotes; account for varied interpretation of the same questions; and, be alert for disconfirming evidence and discrepant cases.

Such data arising from this limited survey can point towards a larger or a multiple sample from which generalizations can be made to a wider population. Stake (2000: 435-454) described such a case study approach as "collective" in that the redundancy of cases can make for a more compelling argument. The approach to the sample in this study is not collective, but "instrumental", in that an attempt is made to shed light on an issue. Here "the case moves to the background of interest, for it is being used to understand something else" (Barone, 2004: 9). Having said that, this writer maintains that this case study is also of "intrinsic value" (Stake, 2000: 435-454), in that even if it proves inconclusive in building a theory, the nature of Grade R teacher knowledge discovered is likely to be of absorbing interest in its own right, both to teachers and to those who train them within that sector.

## 3.6   Analyses of secondary and related fields of enquiry

It is important to understand why it was considered necessary to conduct qualitative documentary analyses of two other fields of enquiry related to the subject knowledge of VP held by the teachers in the sample, namely, the CAPS and BtLAB documents. Taken together, these are standardized tools which can: *inform* Grade R teachers'

theoretical and practical knowledge; *integrate* teachers' theoretical with their practical knowledge and; *interrogate* one another.

The CAPS documents are critical for investigating teacher knowledge because most Grade R teachers don't have access to workshops and literature required; they rely on the CAPS documents as a primary source of information. The document also determines assessment criteria for visual perceptual concepts which teachers teach both from and towards. Furthermore, instructional leadership uses the document for professional development and system planning in schools. Finally, the department uses the document as a primer for policy development.

The BtLAB documents are also critical for teacher knowledge, even though originally designed for use by Learning Support Educators. For example, at School A, BtLAB has revealed to teachers the importance of early identification of barriers experienced by children who are slightly young for Grade R. They were able to respond with better pedagogical choices. The school was able to respond with better policy choices. The BtLAB documents are therefore potentially valuable to teachers because: they can reveal to teachers how effectively their subject knowledge has been imparted to their learners; they can provide three-dimensional, objective assessments of teacher, learner and curriculum performance; and, they can facilitate assessment and reflection that is free from the dictates of reporting and accountability.

In short, the CAPS and BtLAB documents help to determine both what teachers know as well as the identity and effectiveness of the sources which inform that knowledge. Furthermore, they have a vital role to play as a resource in teacher subject knowledge capacitation and training by HODs, Grade Heads, Curriculum Advisors and Learning Support Advisors.

## 3.7 Data collection rationale

The instruments for data collection that provided information for qualitative analysis of the subject knowledge of the teachers consisted of a questionnaire and a recorded group discussion. Part of the data collection entailed that the teachers were

each sent a written questionnaire to read personally and discuss with one another beforehand. They were also invited to participate in a recorded discussion around the matters raised in the questionnaire. Regarding the discussion, they were encouraged to arrange with each other who would like to respond to which questions. The different ways of responding allowed for the possibility that some teachers are more comfortable responding with written media and others with verbal media. In addition to this, the recording of both more deliberate written responses and potentially spontaneous verbal responses can give a more complete picture of the teachers' internalized knowledge.

The unobtrusiveness of the process of inquiry was promoted by:
(1) Allowing respondents to first attempt the questionnaire privately, before discussing amongst peers, and finally in the group discussion.
(2) Promoting a more accurate reflection of teacher knowledge by employing the written-verbal media in the teachers' Language of Learning and Teaching (LOLT), that is, Afrikaans - which was then translated into English to intersect with the literature review and fields of enquiry in particular.
(3) Not taking any notes during group discussions. Instead, recordings were made and transcribed, with the permission of the teachers.
(4) Explaining to the teachers the importance of obtaining accurate data that would not be misunderstood or misconstrued and
(5) Downplaying the positionality of the researcher as a Learning Support Advisor in the department by stressing that the exercise was related to private academic research as opposed to official monitoring.

The written and oral responses were compiled in summary form in respective textual and recorded formats, transcribed, translated and then presented in Chapter 4. The motivation for collecting data as discreetly as possible was so as not to be perceived as trying to interrogate teachers. Instead, in the interests of authenticity, real teacher knowledge could be articulated by teachers in their own words, via their preferred media, in a comfortable environment. Above all, real teacher knowledge was seen as that which had been meaningfully embedded in their personal classroom practice.

The data collection instruments dealing with qualitative analysis of the CAPS curriculum and the diagnostic BtLAB consisted of document analyses developed

according to normative VPS developmental requirements. The data collection instrument dealing with the quantitative analysis of the available Grade R CAPS and BtLAB assessment results involved statistical analysis of performance data.

The performance data had been collected according to what would be relevant to teachers' subject knowledge of VP towards early reading, in the sample. It must be stressed again that performance results could not tell the whole story of what happened within the classroom as well as what was in the minds and hearts of teachers and learners. However, the BtLAB results provide a useful jump-off point for calm reflection and discussion, particularly because they were conducted independently from the formal Grade R assessment program within CAPS, where Grade R learners only repeat the Grade if their age and parents allowed it.

Given the extent of the Grade R challenge, the quantitative and qualitative data should have encouraged solutions which were both broad and narrow, in the correct sense: broad in terms of being broad minded, allowing room for other solutions; narrow in terms of narrowly focused, aiming at well-defined targets. For example, on the regional front, the summative, November 2011 Grade R success rate was 87% in the WCED. The BtLAB success rate was 29% in the WCED BtLAB pilot schools and 20.4% in the Cape Winelands District (CWD) BtLAB pilot schools, two months previously.

This disparity of about 60%, between the respective summative and BtLAB success rates in the WCED suggests the following: allowing for interventions between September and November, and different standards between the two assessments: a majority of the learners who were promoted to Grade 1 from Grade R in 2012 may not have been developmentally ready for Grade 1. If it is taken that approximately only one out of every three Grade 1s did Grade R, in real terms this means that potentially an even greater majority of learners who entered Grade 1 in 2012 may not have been developmentally ready for Grade 1. The data for examining this problem would arise from various sources and role players, and could have many applications. However, in the case of this study it had to be harnessed, made to do duty, in a narrow application: teacher subject knowledge of VPS. Although the variety of data collected was broad, the application had to be narrow to effect change in a specified area.

## 3.8    Data Analysis

With the aforementioned considerations in mind, the following methodology for data analysis was followed in this study:

Component 1 (primary)

A qualitative analysis of responses from a sample of three Grade R teachers in School A was conducted, using the discourse analysis of written responses to a questionnaire and transcribed recordings of group discussions, primed by private and informal peer conversations. The questions in both cases were the same. Furthermore, in the group discussions, the questions were orally asked in the mode of a semi-structured conversation in order to generate more in-depth qualitative data (Baumann & Basson, 2004: 288). On the other hand, the open orientation of the questionnaires still encouraged the focus on qualitative data, even though the responses may have been more structured and deliberate. In the case of both textual and oral data, a critical discourse analysis was conducted involving a "fusion of larger social questions with (mainly) smaller scale analytical questions" (Florio-Ruane & Morrell, 2004: 56).

The questions used in the questionnaire and recorded focus-group discussions were developed according to the following considerations:

(1) How do teachers articulate their own subject knowledge of VP and curriculum knowledge of CAPS?

(2) What strategies do teachers use to practically implement subject knowledge of VP by means of visual training using CAPS teaching strategies?

(3) What do they understand about the role of diagnostic assessments, such as BtLAB, in the classroom?

(4) How do teachers describe their vision and motivation for fulfilling their role as Grade R teachers?

(5) What kinds of capacitation do they require to stay on track?

The questionnaire is included below:

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Written-Response Questionnaire and Focus-Group Discussion Points

1. Briefly describe the type of pre-service training you did and how you experienced it.
2. Can you remember where you learned something about visual perceptual skills?
3. How would you define visual perceptual skills in your own words?
4. In what way do you think visual perceptual skills can help a child get ready to read in Grade 1?
5. Give an example of apparatus which you use to teach visual perceptual skills in your class.  Describe how you use that apparatus in a concrete way.
6. In what way do you think the CAPS training file has helped you to teach the children in your class.
7. Describe your experience of the CAPS training. What do you think CAPS sets out to achieve?
8. In what way does CAPS help you to teach visual perceptual skills?
9. What kind of assessment do you do? In what way was it changed in the past to improve it?
10. What do you think the purpose was of the BtLAB?
11. What was the value, if any, of the BtLAB to you and to the children?
12. What kind of feedback did you receive from the Learning Support Educator or the District Office after the BtLAB was conducted?
13. How would you describe your basic role as a Grade R teacher? What would you say motivates you the most to fulfil that role?
14. What kind of support do you receive from your school and from the education department?
15. Would you like to teach Grade R in the long term? If so, why?

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Component 2 (secondary)

A qualitative documentary analysis was made of the Grade R CAPS curriculum, based on a set of considerations that assess the comprehensiveness, clarity and applicability of the curriculum's subject content of VP, according to prominent VPS listed in Table 2.1. The rationale for analysing CAPS is that it is the basic source document for teacher subject knowledge and educational practice in South African schools. If the subject content of VP is not clear and valid, the implementation of VPS development will be compromised.

The documentary analysis was developed according to the following basic considerations:

(1) How explicit and comprehensive is the VP subject knowledge contained in the document, in accordance with recognized VP subject knowledge?

(2) What subject knowledge of VP does the document provide the Grade R teacher with in order to teach and assess visual training towards early reading?

(3) What subject knowledge of VP does the teacher still need to acquire, in order to effectively use the curriculum-document for visual training?

Component 3 (secondary)

A qualitative documentary analysis was made of BtLAB assessments used in School A, using a set of considerations which determined how VPS were assessed. The site had been designated a focus school by the district office and a BtLAB Pilot school by the WCED. As a result, in 2012 the BtLAB assessment instrument was administered to each Grade R learner individually by a Learning Support Educator. The relevance to this study lies in the fact that the instrument could potentially form part of the learner's profile for use by teachers afterwards. Therefore, they would need to have teacher subject knowledge of the concepts the instrument contained in order to address the skills gaps identified.

The BtLAB was analysed because it was a diagnostic assessment done externally to the classroom assessment process, and was disconnected from the compilation of progress reports. This gave it an objectivity and neutrality that greatly assisted teacher reflection on the actual VPS of the learners. As the focus was on teacher and not learner knowledge, the learners' results were not analysed in detail but used to highlight the challenges and stored for possible future research.

The documentary analysis of BtLAB, specifically Section A, was developed according to the following basic considerations:

(1) How explicit and comprehensive is the visual perceptual subject knowledge contained in the document, in accordance with recognized VP subject knowledge?

(2) What subject knowledge of VP would the teacher still need to acquire, in order to prepare a learner for BtLAB, or to effectively use the document for early identification and intervention pertaining to VPS gaps in Grade R?

<u>Component 4 (secondary)</u>

A quantitative analysis was made of the first Grade R CAPS assessment results in the CWD of the WCED and School A in 2012 and of VP related BtLAB results of the CWD of the WCED and School A in the same period, by means of the statistical analysis of performance data. As this quantitative analysis is not the central or extensive thrust of the study, the CWD cohort of 2968 learners sufficed for our purpose, compared to the WCED cohort, which, at the time of writing comprised 60158 Grade R learners in ordinary public schools and 15933 Grade R learners in private pre-schools. Some contextualization will be provided as follows: The CAPS results will be compared to the BtLAB results to consider the scientific and social validity of both.

## 3.9   Validation and Ethics

It was essential that all participants in the research were aware of the nature and extent of the research in which they participated.  Permission for the research was therefore firstly obtained from the Cape Peninsula University of Technology, Cape Winelands District Office, the WCED Research Directorate, the Principal of School A, the School Governing Body (SGB) and participating teachers. The research data and procedures were handled with due sensitivity and confidentiality. The name of the school, as well as the names of teachers or learners, were handled confidentially and are not made known in the thesis. The trustworthiness of the research is based on ethical compliance, which is achieved in this study be means of adhering to the guidelines set out by CPUT's Faculty of Education and Social Sciences as well as Education Faculty Ethics Committee (EFEC) ethical clearance procedures. The following aspects of the research were dealt with according to the ethical guidelines:

- Recruitment for voluntary participation: Participants were recruited by personal invitation. The Consent Form (see Appendix A) was discussed with each participant individually and privately. They were issued with a copy of the document and were given a reasonable amount of time to consider whether it was in their interests to participate. They were free to consult with one another during the interim. During a follow-up visit each, privately, had opportunities to

indicate their decisions. There was no coercion or exit polling. Those who voluntarily agreed to participate, with accurate knowledge of what the research involved, were asked to sign the Consent Form as a safeguard to both parties.

- Continuous feedback to participants: The aims of the data collection activities such as analyses based on research questions, questionnaires, and focus group discussions were explained to participants while those activities were taking place, using the Consent Form as a reference point. In the same vein, the results were forwarded to participants as soon as they had been processed. Participants were also given sufficient opportunities to reflect on the data coming out and to add their own comments either orally or in writing.

- Participants' knowledge of their rights: The participants' understanding of their rights was confirmed by discussing the rights outlined in the Consent Form prior to it being signed.

- The data collection instrument had to be congruent with participants' rights. In the case of this study, the instruments by which the quality of the knowledge of the participants was measured were employed in a neutral, non-judgemental setting. Once the curriculum and diagnostic test documents had been analysed, the instrument could be developed accordingly and forwarded to the supervisors for their approval.

- Harm-risk management: The participants' privacy, dignity, confidentiality and anonymity were upheld throughout the research process. So was that of the research site. All data was stored in locked files. The research was a-political and non-departmental in that it was not critical of policies but instead sought to describe human resources for their enhancement. Critiques of scholarship were tentative, acknowledging such scholarship as an indispensable springboard for further research. Care has been taken to cite other research comprehensively and to acknowledge the limitations of this study. Interactions with supervisors and committees for research and ethics safeguarded the interests of the University.

- Permissibility of the research: The Department of Education, of which the writer is an employee, has given her permission to engage in research when she is on site as a Learning Support Advisor, provided that it can be demonstrated that the research will add value to both learning and curriculum support in the Foundation Phase (See Appendix B).

- Researchers' qualifications: As a Learning Support Advisor who has experience in working with multi-disciplinary teams and exercising consultative leadership, the writer is confident that she has worked in a just and fair manner with all persons and institutions that are party to the research.

## 3.10   Limitations of the study

The limitation of an analysis such as that undertaken for this study is that it cannot provide an objective set of data applicable to a wider population of sites, samples and time frames. Another study using empirical, quantitative analysis of data obtained from such a population would be called for. The data used in the quantitative aspect of this study simply serve to focus teacher reflection on the urgent need to find a solution to the challenge of low results and related contextual factors. That solution lies with suitable teacher subject knowledge and capacitation. It must therefore be stressed that this study is about opening a window of insight into an educational challenge, as opposed to addressing that challenge via a proposed redesign of the educational superstructure. The question remains whether another researcher using the same methods and sample would achieve a similar set of results. This question can be answered in two ways in order to minimize the threat of bias:

Firstly, the foci of the study involve areas of enquiry that involve relatively limited informational domains: recognized VPS and visual training related to specified curriculum and diagnostic documents. This study has focused on data pertaining to one category of teacher knowledge, that is, subject knowledge. Some of that data has been applied incidentally to related categories of teacher knowledge, such as

curriculum knowledge, PCK and teacher competence. However, this has only been attempted when the latter aspects of teacher knowledge make significant contributions to subject knowledge. Another researcher would have to analyse the same limited quantity of data, making misinterpretation less likely. Again, the data was drawn from a variety of sources, but they have limited foci and a narrow application. Hence the narrow application of the research relates not only to teacher subject knowledge of VP but also to the specific application of visual training for early reading. It is within the scope of the research to delineate all the applications of VPS in early child development, particularly in the Grade R curriculum context. This study, however, focuses on the connections between VPS and early reading only, while referencing relevant aspects of cognitive development. Therefore it only includes limited research on the many and varied connections between VPS, emergent numeracy and life skills; the latter two subjects are briefly analysed in Chapter 4 in terms of relevant VPS content. The scope of data represented by VPS content applied in the numeracy and life skills components of the curriculum would go beyond the confines of a single study. A further study would be needed to investigate the importance of VPS for the application of the bulk of the Grade R curriculum.

Secondly, the methodology proposes a non-threatening environment for the reflection of the teachers in the sample on their subject knowledge. Steps were suggested which minimized teachers' responses conditioned by deferring to perceived seniority on the part of the researcher. These steps include the open-endedness of the questionnaire, the non-directive style of the focus-group discussion and the explicitness of the supportive, non-judgemental nature of the research purpose.

Another limitation of this study is that the discourse analysis drew data from the Afrikaans language as an orthographic system (a read-written language) and the Language of Learning and Teaching (LOLT) of 86% of Grade R learners in the CWD cohort. This data was transposed to English language equivalents for the purpose of clarity in the interaction with the English research literature, as well as documentary and statistical analyses. A separate study would be needed to compare the two languages as orthographic systems representing varied consistencies of relationships between letters and sounds, so as to establish whether the Afrikaans translation of CAPS has taken cognizance of the orthographic profile of Afrikaans as

deeper or shallower, that is, having less or more consistent letter-sound relationships (Frost, 2007: 272-295). This is important to clarify, because it has been demonstrated that visual and auditory degradation, or defects, are more prevalent in relation to deeper orthographic depth (Frost, 2007: 283).

## 3.11   Conclusion

The aim of this chapter has been to set forth the procedures that were employed in the investigation of the subject knowledge of VPS possessed by the Grade R teachers in School A. In Section 3.2 the circumstances and considerations determining the choice of the site and sample were outlined, with emphasis put on the honour and integrity of the teachers who comprised the sample. Section 3.3 on pragmatic knowledge claims related to the aim of this study, justified the use of a mixed method approach to the research, which was outlined in Section 3.4. This section called for a concurrent fusion of mainly qualitative and some quantitative data - for results of both scientific and social value. In Section 3.5, the primary role in the research of the discourse analysis of the teachers in the sample was described. An account was given of the interplay between the main document pertaining to teacher subject knowledge and assessment results, namely, the Grade R CAPS curriculum and the diagnostic Barriers to Learning Assessment Battery (BtLAB), in Section 3.6. After this, in Section 3.7, an explanation was provided of the thinking behind the choice of data collection instruments, including: (1) The discourse analysis of the Grade R teachers in the sample on site. (2) The document analyses of CAPS and BtLAB. (3) The statistical analysis of some performance data arising from Grade R assessments.

After this, the components, procedures and considerations involved in analysing the data were discussed in Section 3.8. In Section 3.9 an account was given of the procedures being followed in order to secure the social and scientific validity of the research supporting this study. Finally, in Section 3.10, the limitations of this study were treated, in terms of the validity and reliability of the research, based on the minimized application of the data and on the neutralized positionality of the researcher. The operative linguistics of the data collection and analysis was

explained in terms of the relationship between the language of the discourse analysis, Afrikaans (as the LOLT) and that of the documentary and statistical analyses, that is, English.

In Chapter 4 the findings of the study will be presented.

# CHAPTER 4: PRESENTATION OF THE DATA

## 4.1 Introduction

In this chapter, the discourse of a sample of Grade R teachers collected by means of a questionnaire and related focus group discussion is analysed in Section 4.2, with particular reference to subject knowledge of Visual Perception (VP). Documentary analysis of the Grade R component of the Curriculum Assessment Policy Statement (CAPS) follows in 4.3, with attention given to the validity of VP subject content by means of some considerations arising from Chapter 3. In Section 4.4 a documentary analysis of the Barriers to Learning Assessment Battery (BtLAB) will be made based on similar considerations as above. The Grade R CAPS and BtLAB documents will be analysed because of their relevance and value as potential or actual sources of teacher subject knowledge of VP. In 4.5, a brief statistical analysis of CAPS and BtLAB assessment results pertaining to core VPS relevant to teacher subject knowledge will be made. That knowledge can be used by teachers both to assess their own subject knowledge and to hone it for the purpose of more effectively addressing developmental gaps revealed by the results.

It is important to stress that the data collection instruments to be featured in this chapter have been chosen with a view to yielding mainly qualitative data. This data should be serviceable for the discourse and documentary analyses below, which are expected to shed some light on the research question: *What subject knowledge of Visual Perceptual Skills is possessed by the Grade R teachers in School A?* It is expected that the analyses in this chapter will generate categories of information about VP, which will reveal the connections between the sets of data, to be discussed in Chapter 5. Although the bulk of the data collected are qualitative, some quantitative data have been selected in the statistical analysis, which speak to teacher subject knowledge as they represent the results of visual training imparted to learners which may require modification.

## 4.2   Grade R teachers' discourse analysis

The data collection instruments are a survey questionnaire and a focus-group discussion based on the same. As discussed in Chapter 3, the sample and site of four Grade R teachers from School A was in a favourable position to yield suitable data about Grade R teachers' subject knowledge of VPS.

After the teachers and principle were briefed on the nature and scope of the research, they signed the consent forms on 8 October 2013 and received the survey questionnaires to complete on their own. A week later, on 15 October 2013, they had their completed questionnaires in front of them during the focus-group discussion based on the same. At the onset of the discussion the teachers were somewhat nervous about verbalizing answers to the questionnaire. They were set at ease when it was pointed out that that the discussion was an informal one in which, at each point, each individual was free to comment or to refrain from commenting.  It was pointed out that the purpose of the discussion was not to place undue pressure on the teachers to elaborate on their written responses. Rather, it was an opportunity for them to confirm their written responses, elaborate spontaneously if they wished to add or clarify something, as well as to respond, if they wished, to other verbal responses. The discussion lasted forty-five minutes, during which the teachers demonstrated great enthusiasm for growing in their profession.

The data arising from the discourse analysis has been set out in the following way: Written responses to the survey questionnaire were translated into English and are found in Appendix C. The original Afrikaans text is also included in the Appendix as linguistic elements may illuminate or substantiate the English text. Translation into English is as literal as possible. Where the original sense may be lost through a literal translation, a dynamic equivalent is used. The verbal responses in the focus-group discussion are only recorded in detail in the Appendix when they supplement the written responses or are materially different from them. In the Appendix, the four teachers are represented under (a), (b), (c), and (d), in order to record individual contributions and well as interpersonal dynamics. In the paragraphs below, the content of both the survey questionnaire and focus-group discussion is summarized

and commented on under the following headings, grouped according to the themes represented by the 15 survey questions:

(1a)  Training: pre-service and in-service (Questions 1, 2).

(1b)  Working knowledge of VP (Questions 3-5).

(1c)  Understanding of CAPS (Questions 6-9).

(2)  Understanding of BtLAB (Questions 10-12).

(3)  Grade R teacher self-awareness (Questions 13-15).

**(1a) Training: pre-service and in-service (Questions 1, 2):**

*Question 1: "Briefly describe the type of pre-service training you did and how you experienced it."* All four teachers did two years of ECD training (ECD Level 4 and 5) at Boland College for FET in Worcester. One teacher did further studies with UNISA. The ECD training was experienced as enjoyable and instructive by all the teachers. It excluded an intensive Grade R focus. VP content was mainly touched on when different learning styles were covered, namely, auditory, visual and kinaesthetic. *Question 2: "Can you remember where you learned something about visual perceptual skills?"* In-service training covered aspects of VP and was conducted by both a psychologist and a learning support advisor by means of workshops and courses. Classroom application was emphasized.

The pre-service training of the majority of the teachers in the sample consists of a diploma course known as ECD Level 4 for 1 year (Toddlers) and ECD Level 5 for 1year (4-6 year-olds). The second year, Level 5, included a partial Grade R focus. The teachers would thus be designated as Grade R Practitioners.

**(1b) Working knowledge of VP (Questions 3-5):**

*Question 3: "How would you define visual perceptual skills in your own words?"* All the definitions of VP given were clear and accurate, accounting for visual observation, interpretation and mental processing. The definitions appeared to be internalized as they were given in correct logical terms. They were also linguistically different from each other.

*Question 4: "In what way do you think visual perceptual skills can help a child get ready to read in Grade 1?"* The application of VP towards early reading was described in terms of enabling the learner to progress from concrete to semi-

concrete to abstract perceptual tasks, physically gathering information and cognitively processing it.

*Question 5: "Give an example of any apparatus which you used to teach visual perceptual skills in your class. Describe how you use that apparatus in a concrete way."* The apparatus used for teaching VPS in a concrete way included: blocks, shapes, a ball and play dough. Semi-concrete apparatus such as themed posters and pictures were also mentioned. There was good all round understanding that each apparatus serves to help the learners to: sort according to shape, size and colour; identify similarities and differences; identify patterns; and distinguish the shapes of own name and specific letters.

The definitions of VP given by the teachers were accurate and well internalized. The concrete use of apparatus revealed a basic understanding that: sorting (visual discrimination), identifying similarities/differences, name/letter shapes (visual form-constancy and form-perception) and identifying patterns (visual sequential memory) are foundational visual-training activities directed towards semi-concrete visual training and abstract early reading.

**(1c) Understanding of CAPS (Questions 6-9).**

Question 6: "*In what way do you think the CAPS training file has helped you to teach the children in your class?"* One teacher remarked that the three CAPS subjects, namely, English Home Language, Mathematics and Life Skills, facilitated the integration of the learners' developmental areas. Two teachers pointed out that the resource (training) file greatly assisted them in setting up new concrete resources and learning areas on an ongoing basis, according to what learners must learn and be able to do week by week. They indicated that there was a flow of new ideas which stimulated "thinking out of the box". One teacher reported that the input from the CAPS training file had produced a visible improvement in the learners' abilities to recognize, name and write letters.

Question 7: "*Describe your experience of the CAPS training. What do you think CAPS sets out to achieve?"* Two teachers pointed out that CAPS has clear guidelines for what teachers are expected to teach and learners are to learn. One teacher described CAPS as a play-based approach which facilitated holistic development. Two teachers indicated that CAPS, with hard work, is able to enable learners from various contexts, with varying abilities, to make constructive progress.

Question 8: "*In what way does CAPS help you to teach visual perceptual skills?*" The teachers indicated that CAPS provided a more concrete and practical way for developing learners comprehensively. One teacher generally observed that specific visual perceptions were being addressed on a week by week basis. Another indicated that visual perception was not explicitly referred to in CAPS.

Question 9: "*What kind of assessment do you do? In what way was it changed in the past to improve it?*" All the teachers indicated that CAPS Grade R assessment was more informal, continuous and practical than pre-CAPS assessment.

The teachers confirmed that the CAPS curriculum was very useful to them, in fact, that its use was producing material improvements to the teaching-learning process in Grade R. They found the training-file to be a valuable resource which enabled them to teach and assess in a more adaptable, holistic, practical, scaffolded (taxonomic) and purposeful manner - balancing formal structure with informal freedom. There was an indication that although the curriculum did not cover VP explicitly, that it did enhance early reading tasks such as recognizing, naming and writing letters.

**(2) Understanding of BtLAB (Questions 10-12).**

Question 10: "*What do you think the purpose was of the BtLAB?*" One teacher said the purpose of BtLAB was to test school-readiness. In similar vein, another teacher said the purpose was to see whether the learners were able to apply what they had learned. One teacher indicated that the idea was to identify weaker children. Another teacher said it was not about testing the learners so much as to "establish whether the system is working". Two teachers indicated that they did not really understand what BtLAB was about, as they were not involved in the testing process. One indicated that BtLAB would have greater value at the start of the year, to which another added that this would make it possible for them to address learners' identified developmental gaps.

Question 11: "*What was the value, if any, of the BtLAB to you and to the children?*" Most of the teachers expressed the opinion that BtLAB had no value for either them or the children. Reasons given were as follows: The learners were not tested by the teacher but by the education department. Then they were all promoted by the education department according to age, without any reference to their learning

barriers. Because of this, as well as the timing of the testing near the end of the year, the teachers did not have the opportunity to do any focused interventions. On the positive side, one teacher indicated that the teachers could potentially use the results to modify their teaching or project areas for early intervention the following year. Another added that better Grade R results would be obtained if more tests like BtLAB were done.

Question 12: *"What kind of feedback did you receive from the Learning Support Teacher or the District Office after the BtLAB was conducted?"* The teachers were unanimous that in 2012 the only feedback received from the District Office was the statement that the learners performed poorly and the only support received was a pledge of support from the LSE. In 2013 a comprehensive list of individual learner results was provided.

The teachers agreed that the potential value of BtLAB was lost on them personally, as they were not directly involved in the testing process, and could only use the results for retroactive, general interventions as opposed to early and specific ones. They also hinted at the fact that, as the department also did not use the results for intervention, as far as they could tell, and automatically promoted the learners anyway, BtLAB was essentially like a Grade R systemic test.

**(3) Grade-R teacher self-awareness (Questions 13-15).**

Question 13: *"How would you describe your basic role as a Grade R teacher? What would you say motivates you the most to fulfil that role?"* All the teachers described their roles in terms of being prepared to provide suitable learner-centred learning experiences. This included understanding the learners' different contexts, making useful resources, using a play-based approach and accounting for different learning styles. One teacher added that her role was also linked to fulfilling the purpose of the curriculum.

Question 14: "*What kind of support do you receive from your school and from the education department?"* Teacher capacitation from the school was described in terms of moderation and ideas exchanged with the HOD and collaboration between the grade and subject heads. One teacher indicated that it seemed as though Grade R classes were sometimes sidelined and not considered important. Support from the

education department was described in terms of regular practical workshops as well as visits by the subject advisor.

Question 15: "*Would you like to teach Grade R in the long term? If so, why?*" All the teachers responded to this question with an enthusiastic affirmative, substantiated by various motivations, as follows: the strategic importance of Grade R, the challenge of achieving school-readiness, sheer enjoyment of the work, tangibility of the results of the work, natural and parental empathy and the appreciative responsiveness of the learners. One teacher was channelling her high level of motivation to further educational studies through UNISA.

The teachers' morale appeared to be good, accounting for challenges but enjoying sustained progress and long-term commitment. This high morale stemmed from a workable understanding of their roles and how to fulfil them. They indicated acceptable levels of in-service training and capacitation, in spite of the sense that Grade R work could be more highly prioritized at school and departmental level.

## 4.3    Grade R CAPS Documentary Analysis

### 4.3.1 Background to CAPS

As part of the ongoing curriculum review process, the NCS Grades R-12 was brought into effect in 2011 to replace the NCS Grades R-9 (2002) and the NCS Grades 10-12 (2004). This was in response to the concerns about the manifested educational realities becoming more strident: The ANAs, school and regional results, international tests and WCED diagnostic tests continued to confirm substandard levels of competency in Literacy and Numeracy. Teachers were also complaining about the complexities of the NCS Grades R-9. Education Minister Angie Motshekga appointed a ministerial committee to identify challenges and pressure points in the implementation of the NCS and to use findings and recommendations as a basis for the development of the NCS Gr. R-12 (CAPS). The NCS Gr. R-12 actually has three components, that is: (1) CAPS (2) National Policy Pertaining to the Programme and Promotion Requirements (NPPPPR) (South Africa, 2012a). (3) National Protocol for

Assessment Grades R-12 (NPA) (South Africa, 2012b). The implementation programme for CAPS is as follows, including teacher-training in the year pre-ceding each implementation year: Grades R-3 and Grade 10 in 2012; Grades 4-6 and Grade 11 in 2013; Grades 7-9 and Grade 12 in 2014. Therefore in 2011 the WCED published a modified Grade R curriculum under the CAPS, provided teacher training in the same year and implemented CAPS in Grade R in 2012. For the Assessment Component of CAPS, see the discussion on Grade R classroom assessment in the analysis of the CAPS Resources file below. After the head-spinning rounds of curriculum review since the replacement of the behaviouristic National Christian Education (NCE) curriculum with the constructivist Outcomes Based Education (OBE) curriculum, there has been the sense amongst role players that CAPS, in fusing the previous paradigms, has produced a material, sustainable, long-term improvement of them. The balancing act in the CAPS is not only between knowledge and skills but also between local knowledge and global insights, while retaining the values of a just, free and inclusive society. The matter of how Grade R CAPS can potentially improve Grade R teaching is very closely linked to how well Grade R teachers can be trained to use it. For example, a teacher must be trained to get behind the content frameworks to the subject knowledge needed: to understand what VPS must be imparted and why; and to therefore make the actual concrete and semi-concrete visual training activities presented in CAPS, work for the learners in the classroom. The 'how' becomes vacuous if not built on the solid, in-depth subject knowledge of the 'what' and 'why'.

The Grade R CAPS curriculum is being analysed because it is the curriculum currently still being implemented in Grade R; it has been well received and has better prospects for longevity and stability. However, all curricula are subject to teething problems at or after implementation as well as reviews, revisions and updates further down the line. One of the difficulties presented by the implementation of a new curriculum for all the Grades is the isolation of or focus on changes which are relevant to Grade R in particular. For example, now that Grade R shares the same three Subjects and the BL approach with the rest of the Foundation Phase, the Grade R teachers must not be distracted from viewing visual training for early reading and emergent numeracy as a highly specialized field requiring detailed

teacher subject-knowledge. The education they provide may be more "elementary", but the knowledge and skill required to transmit it is not.

## 4.3.2 Analysis of the CAPS Resource File 2012 for Grade R

The documentary analysis was developed according to the following basic considerations:

(1) How explicit and comprehensive is the VP subject knowledge contained in the document, in accordance with recognized VP subject knowledge?

(2) What subject knowledge does the document provide the Grade R teacher with in order to teach and assess visual training towards early reading?

(3) What subject knowledge does the teacher still need to acquire, in order to effectively use the curriculum contained in the document for visual training?

The overall structure of the Resource File is as follows: The WCED's Grade R CAPS Curriculum documents of 2012 are packaged in a file of 805 pages containing the following 7 publications in A4 format:

1. Training Manual by the WCED in 2012 (121 pages).
2. National Curriculum Statement (NCS) for English Home Language (HL) by the Department of Basic Education (DBE) in 2011 (134 pages). The Afrikaans equivalent document contains 73 pages.
3. NCS for English Mathematics by the DBE in 2011(271 pages).
4. NCS for English Life Skills by the DBE in 2011 (67 pages).
5. Work Schedules for English HL by the WCED in 2011 (101 pages).
6. Work Schedules for Mathematics by the WCED in 2011 (40 pages).
7. Addendum A, Recording Assessment in Grade R, WCED Provincial Exemplars, 2012 (71 pages).

For the purposes of this study, the following 6 publications totalling 765 pages will be analysed, omitting only the Work Schedules for Mathematics. The same recurring information in subsequent publications will not be commented on more than once unless its recurrence is of significance.

1. Training Manual
2. NCS for English HL
3. NCS for English Mathematics
4. NCS for English Life Skills
5. Work Schedules for English HL
6. Assessment Exemplars

### 4.3.2.1 Training Manual

The Training Manual (South Africa, 2012c) is billed as Guidelines for implementing CAPS in Grade R. Its stated purpose is "the training of Grade R Teachers and Grade R Practitioners in the WCED". For that reason it is used as the standard tool for Grade R CAPS training.

The contents of the Training Manual are described and analysed below:

The Training Manual consists of ten modules. Module 1 is titled: *"The rationale for Grade R. Where are we now? Where would we like to be?"* It contains the following three items: (1) A description of the rationale for Grade R and the benefits of ECD. (2) A Case Study involving Education White Paper 5 (EWP5) and ECD provision. Both the 1995 EWP1 and EWP5 definitions of ECD include respective "cognitive" and "mental" components but not perceptual or visual perceptual components. (3) A 2009 report tracking the Grade 3 results of "Grade R Schools". The charts in the 2009 reports indicate no significant differences between the Grade 3 results of respective Grade R and No-Grade R schools.

Module 2 is titled: "*Knowing the Grade R learner. The Role of the Practitioner / Teacher.*" It contains the following three items: (1) Activities exploring the development of children under EWP1's ECD categories: emotional, social, cognitive, moral and physical. The cognitive component includes reference to "similarities and differences" (visual discrimination). "Can remember, interpret and classify" also refers indirectly to VP proficiency. (2) An explanation of how children learn via progression from concrete (3-Dimensional) to semi-concrete (2-Dimensional-pictorial) to abstract. The abstract stage of learning includes "able to understand a symbolic representation of a...word", and, "...learns that letters have meaning". (3) A

description of the 7 roles of the "Grade R teacher / practitioner". This includes "learning mediator", "interpreter and designer of learning materials", "scholar, researcher and lifelong learner", "assessor" and "subject specialist". The high-level roles attributed to "practitioners" raises the matter of the depth and extent of the training that will be required of them.

Module 3, titled *"What does policy say?"* contains an outline of Grade R policy, already detailed in Chapter 2 above.

Module 4 is titled *"A basic orientation towards Curriculum and Assessment Policy Statement (CAPS)"*. The activity comparing "traditional teaching methodology" with OBE, that is, "understanding the 2 philosophies of education", does not reference any synthesis of behaviourist and constructivist approaches, which is what happens in CAPS.

Module 5 is titled *"The CAPS: 3 subjects in Grade R".* There is a chart comparing NCS with CAPS for Grade R in terms of similarities and differences. However, CAPS is an educational strategy currently modifying the format and knowledge content of NCS. The details for NCS on the chart involve the old NCS Grade R-9(2002) terms such as Learning Programmes and Learning Outcomes, which have been removed from the 2011 version of NCS after the 2009 review. However, the impression given by the chart may be that CAPS has replaced NCS, as opposed to being subsumed under NCS.

Module 6 is titled *"Emergent Literacy and Emergent Numeracy. The Balanced Language Approach"*. It contains the following two items: (1) An exploration of Emergent Literacy, which includes the beginning of understanding "that print is a form of communication". In this module it refers to copying letters, reading pictures, engagement with rich text environments, verbal/vocabulary ability, curiosity about words and letters and phonological awareness. The following aspects are not referenced: visual training in specific VPS, the role played by cognitive skills and the movement from pre-reading to early reading. The exploration-knowledge is covered in half a page of text and one group activity (2) An exploration of Emergent Numeracy, which indirectly references the importance of VPS in the inclusion, in the

definition, of sorting, patterns, and shapes. The exploration-knowledge is covered in half a page of text, one group activity and one paired activity. (3) A summary of the Balanced Language (BL) Approach which "balances various approaches in the teaching of reading". These include phonics, look and say, shared reading, scaffolding, variegated learning styles (visual, auditory etc.), fusion of learner and teacher centred activities, fusion of reading and writing activities, variegated text types, reading for meaning and assessment follow-up. Balancing various approaches to teaching reading is applied in Module 7 below.

Module 7 is titled *"How to use the CAPS"*. It contains instructions on how to apply CAPS to play-based and structured learning as well as the Balanced Language (BL) Approach to English Home Language. As the BL approach is at the heart of teaching English HL, more detail could be provided on the "emergent literacy examples" which tell "how you can use" the following 8 listed reading methodologies: Listening and Speaking, Shared Reading, Guided Reading, Group Reading, Reading Aloud, Independent Reading, Word and Sentence Level Work and Writing. Word and Sentence Level Work, as in visual training, needs to be broken up into more prominent categories for Grade R, further up the reading methodology list, as it is so foundational for the others. Also, teachers who are not party to the discussions and activities may have difficulty filling in the details, particularly as pertaining to Grade R applications of concepts.

Module 8 is titled "*Planning a Daily Programme*". It contains guidelines for planning a daily programme that is consistent with CAPS and developmentally appropriate for the Grade R learner. Contact time is 23 hours per week, English HL (10), Mathematics (7) and Life Skills (6).

Module 9 is titled "*Assessment in Grade R*". It covers the following aspects: (1) An introduction to assessment policies, including the National Policy Pertaining to the Programme and Promotion Requirements (NPPPPR) (South Africa, 2012a) of the NCS and the National Protocol for Assessment (NPA) (South Africa, 2012b). (2) A rationale for assessment which includes provision of feedback to learners and diagnosis of learning barriers. (3) The assertion that Grade R assessment is 100% School Based Assessment in which informal assessment (for learning, formative)

informs formal assessment (of learning, summative) in Grade 1. It has to be done continuously to reveal gaps and inform the planning of relevant lessons. A clear flow-diagram of the assessment process is provided which includes planning, compilation of a programme of assessment, identifying the forms and methods of assessment, development of assessment tools, recording and reporting. This complex design process would certainly require extensive in-service training. (5) A description of the types of assessment, which include: Baseline, Diagnostic, Formative, Summative and Systemic. (BtLAB assessment is mainly diagnostic and could be more formative) The CAPS assessment could involve all types of assessment apart from systemic. The year-end assessment is mainly summative but could also be baseline for Grade 1. (5) Home Language Assessment is to be recorded in 3 "components", namely Listening & Speaking, Emergent Reading & Phonics and Emergent Writing & Handwriting. When assessed, each component must be broken down into Content (Skills & Knowledge), Activity and Criteria. (6) A discussion of Codes and Descriptors used to indicate learner achievement. More details of descriptors will be given in discussion of Assessment Exemplars below. (7) A discussion of progression requirements: Grade R learners are excluded from the promotion requirements of a maximum 4 years spent in FP. However, the policy provides a guideline for a learner's progress in Grade R. (8) A discussion of criteria for school/Grade 1 readiness. (9)  A confirmation of the admission age: In January of Grade R year, minimum 4y, 6 months; maximum 6 years, 0 months.

Module 10 is titled "*How do I evaluate Grade R Learning and Teaching Support Material?*" (LTSM) and contains considerations of the same.

A discussion will be necessary in Chapter 5 to establish whether the Training Manual does in fact provide the Grade R teacher with sufficient teacher subject-knowledge of VP towards visual training for early reading. The preliminary observation is that it appears to be written more as an orientation manual than as the comprehensive training manual required.

### 4.3.2.2 NCS for English HL

The main value that this publication adds is that it provides a detailed 22 page, term by term description of Grade R English HL Requirements, under the three "component" headings, namely: Listening & Speaking; Emergent Reading & Phonics; Emergent Writing & Handwriting. Each section has a suggested checklist below it which can be used an assessment instrument. The Grade R English HL Requirements per term are represented in the form of activities integrated in the daily programme and used in the Grade R "rings" or "circles" which include music, movement, science, language, news, show and tell, story as well as creative activities. The activities are introduced with the following rationale: "In Grade R perceptual work is extremely important because it underpins and prepares the foundations for future learning. Make sure sufficient time is spent building these perceptual skills daily..." (31).

The publication also contains a very detailed list of recommended "texts/resources" for the year which adequately covers Learner Teacher Support Materials (LTSM) and Apparatus needed for concrete, semi-concrete and abstract activities.

A selection of required activities most directly related to VPS is indicated in the table below. Although auditory perception is not covered in this study, activities related to phonological/phonemic awareness have been included with reference to their overlap with VP activities. The difficulty in view of this study is that although visual training concepts are omnipresent, they are not grouped, highlighted or profiled in such a way as to enable the teacher to measure, according to a checklist or rubric, whether a learner has achieved a functional level of VP proficiency in a specific aspect of VP. This is needed so that afterwards the assessment data can be used to set up visual training that will target specific developmental gaps. The following table seeks to indicate how conceptual content corresponding to or related to VPS has been articulated within the "Content/Concept/Skill" parameters of CAPS, in the NCS Requirements for English HL. The full range of VP related content is represented in Appendix D. (Items included in the assessment program are shaded and in italics)

**Table 4.1    VP in CAPS in the NCS Requirements for English HL**

| VP Skill | Definition | Examples of a corresponding or related "Content/Concept/Skill" within CAPS, articulated in the NCS Requirements for English HL |
|---|---|---|
| Visual Perception (VP) | The capacity to interpret or give meaning to what is seen. | Not articulated or defined as a stand-alone concept. (See Ch. 5) |
| *Visual Discrimination* | The ability to see details that make one object or symbol different from another. | -*"Identifies and describes similarities and differences"* <br> -*"Matches things that go together, and compares things that are different"* <br> -"Matches pictures and words using word-picture puzzles" <br> -*"Matches words to words on objects and named items"* |
| *Visual Memory* | The ability to remember exactly what something looks like even though it is not in front of you. | -"Remembers what the eyes have seen in a memory game" <br> -*"Looks carefully at pictures and talks about common experiences,* uses pictures to predict content of stories" <br> -"Uses memory skills to recall items seen such as letters, shapes or concrete objects" |
| *Visual Spatial Relationships* | The ability to see that a symbol placed in a different position in fact becomes a different symbol | -*"Solves and completes  jig-saw puzzles"* |
| Visual Form Constancy | The ability to identify a written symbol when it has been written in a different way. | -*"Forms letters in various ways using the whole body* and a variety of writing tools: *finger painting, sand trays, paint brushes, wax crayons*, pencils, chalk, pegboards, elastic boards" <br> -"Forms some lower case letters correctly, starting and ending in correct place" |
| *Visual Sequential Memory* | The ability to see the order of letters or digits or objects. | -"Sequences pictures of a story" <br> -"Copies patterns onto pegboards and copies patterns, words and letters onto paper" <br> -"Copies short sentences and words written by the teacher" |
| *Visual Figure Ground* | The ability to tell the difference between foreground and background. | -*"Recognizes and points out common objects in pictures"* <br> -"Perceives objects in the foreground and background" <br> -*"Finds an image in a detailed picture"* |
| *Visual Closure* | The ability to successfully identify a word, letter or number when a part of it is missing. | -*"Identifies parts from the whole* in 2 and 3 dimensional formats" <br> -*"Solves and completes  jig-saw puzzles"* <br> -"Completes a visual picture such as building puzzles" <br> -"Identifies a letter or a space between words in print: own names or familiar words or in a book" |
| *Visual Form Perception* | The ability to see the difference between forms or shapes of words. | -"Distinguishes between shapes of different letters and words by sorting  identical objects, sequencing nearly identical pictures, picking out the one that is different and explaining why" <br> -"Recognises own name and the names of at least five other children" <br> -*"'Reads' high frequency words in the community*" |

A preliminary observation of the NCS requirements for English HL is that VPS content is fairly comprehensively covered. Chapter 5 will include a discussion dealing with the matter of Grade R teachers' conscious knowledge of this coverage.

### *4.3.2.3 NCS for English Mathematics*

The NCS divides Grade Mathematics into five Content Areas, namely: (1) Numbers, Operations and Relationships. (2) Patterns, Function and Algebra. (3) Space and Shape (Geometry). (4) Measurement. (5) Data Handling. In the chart below, examples are provided of specific topics or activities which pre-suppose VPS to be operative. Assessments for learning are recommended and represented at weeks 10, 20, 30 and 40. The entire week is intended to be used "to attend to conceptual weaknesses and/or identified barriers to learning" (DBE, 2011:104). This assessment programme is summed up in the section titled Exemplar Checklists of Formal Assessment for Grade R (p. 266-271) which assumes continuous, informal, formative assessment.

The purpose of the chart below is simply to illustrate the comprehensive, although not explicit coverage of VP in the NCS Grade R for Mathematics. Where coverage was not represented in the Grade R Overview (p 41-59), it was picked up in the Content Clarification Notes with Teaching Guidelines (p 60-263), for example, the items on visual closure. (Items included in the assessment program are indicated with shading and italics)

**Table 4.2        VP in CAPS in NCS for English Mathematics**

| VP Skill | Definition | Examples of a corresponding or related Topics and activities within CAPS, articulated in the NCS Grade R for Mathematics |
|---|---|---|
| Visual Perception | | Not articulated or defined as a stand-alone concept. (See Ch. 5) |
| *Visual Discrimination* | The ability to see details that make one object or symbol different from another. | -*"Recognises and identifies number symbols and names: 0-10, Semi-concrete with number picture/dots cards"* <br> -"*Money: identifies similarities and differences between coins and notes, sorts according to colour and size*" <br> -"*Describes/ sorts/compares 3-D objects and 2-D shapes and letters according to size/colour/shape*" (use matching card games) <br> - "*Collects and sorts objects*: Sorts learners name cards according to the number of letters in each name, birthday month, mode of transport etc. Represents graphically in columns or with a pictograph. *Reads and interprets/analyses* data and graphs by counting, questioning and concluding" |
| *Visual Memory* | The ability to remember exactly what something looks like even though it is not in front of you. | -"2-D shapes: uses 5 2-D shapes to play 'Which one is missing?'" <br> -"Shows a learner a picture, remove it, learner must describe as much detail as can be remembered" |
| *Visual Spatial Relationships* | The ability to see that a symbol placed in a different position in fact becomes a different symbol | -*"How to build puzzles: variety of puzzles daily, up to 24-piece puzzle by the end of term 4"* <br> - "Constructs a picture by pasting different shapes" |
| Visual Form Constancy | The ability to identify a written symbol when it has been written in a different way. | "*Geometric shapes: Conservation of shapes (Form constancy): identifies known shapes in common objects* -uses twigs or matchsticks to 'write' numbers and 'draw' shapes" |
| *Visual Sequential Memory* | The ability to see the order of letters or digits or objects. | -*"Describes, compares and orders (sequences) numbers in familiar contexts and 0-10*: plays number card games, compares collections of objects" <br> -*"Understands ordinal numbers: first, second, third..., sixth"* <br> -*"Copies, creates and extends simple geometric patterns: using objects and pictures, shapes and coins"* <br> -"*Copies a building block construction from a construction example, then a design or picture card*" |
| *Visual Figure Ground* | The ability to tell the difference between foreground and background. | -"2-D shapes: Figure-ground perception:  sorting, matching and grouping activities: identifies specific objects in pictures, building of puzzles, playing picture dominoes" <br> -*"Knows position of two or more objects in relation to each other: In front of, behind"* <br> -*"Can distinguish between objects in the foreground and background"* |
| *Visual Closure* | The ability to successfully identify a word, letter or number when a part of it is missing. | -*"How to build puzzles: variety of puzzles daily, up to 24-piece puzzle by the end of term 4"* <br> -"Can complete pictures with parts cut off" |

| | The ability to see the difference between forms or shapes of words. | -*"Recognises, identifies, compares and names 2-D shapes* in classroom and in pictures: labels with teacher's and learner's names<br>-*Recognises his and peers symbol, class name"*<br>-*"Recognises number names"*<br>-"*Time: Weather Chart: determines name of day/date/month with labels and symbols on a calendar"*<br>*(Likewise Seasons Chart and Birthday Chart)* |
|---|---|---|
| *Visual Form Perception* | | |

There is a preliminary question arising from the analysis of the NCS for Mathematics: Are Grade R Practitioners sufficiently trained to understand and apply the VP content in the NCS for Mathematics in a comprehensive, conscious and integrated way? This will be discussed in Chapter 5. In the light of the symbiotic relationship between Literacy and Numeracy in their shared reliance on VP competencies: it would be interesting to study the mutual impact Literacy and Numeracy have on one another, in terms of the level of visual training in each. This impact would further be determined by both the level of VP subject knowledge of Grade R teachers and the complete absence of Grade R education for the majority of Grade 1's.

### 4.3.2.4 NCS for English Life Skills

Life Skills in Grade R is divided into four study areas, namely, Beginning Knowledge, Personal and Social Well-being, Creative Arts and Physical Education. The value of Life Skills in the curriculum is stressed by the claim that it is "a cross cutting subject that should support and strengthen the other core...subjects" (p 8). Soon after this there is a paragraph entitled *Perceptual Skills* in which it is recommended that the development of these should be focused across all four study areas and all core subjects (p11). Of the 14 key perceptual skills listed, no less than six of those within the ambit of this study are listed and accurately described, namely, visual perception, visual discrimination, visual memory, (visual) figure ground perception and (visual) form perception (constancy); the visual memory definition includes the concept of visual sequential memory. The first three of these are the first three on the list of 14 perceptual skills. It is also very interesting to note that the definition of visual perception states that "accurate visual perception enables the learner to read, write and do mathematics" (p11) Due to this last affirmation it was considered all the more

necessary to explore the articulation of VP in the NCS for English Mathematics above.

### 4.3.2.5. Work Schedules for English HL

These Work Schedules are introduced as a WCED provincial resource which is not compulsory for use but optional. Nevertheless, they are declared to be useful for supporting the implementation of CAPS. This is because they collectively cover all "concepts, content areas and skills" in the CAPS. The suggested activities are appropriate for Emergent Literacy and BL approaches.

Their main value lies in the fact that they provide teachers with a simple way of covering the CAPS curriculum comprehensively: 2 hours per day, 5 days per week, 10 weeks per term and 40 weeks per year. For example, day 1 of week 1 provides a teacher with an average of two to three "Concept/Content/Skill" based activities for each of the following six general English HL categories: Shared reading and Writing; Listening and Speaking; Word and Sentence-level Work; Group, Guided and Independent Reading and Writing; Writing; and Handwriting.

The CAPS Work Schedules are in overview format and do not provide explicit detail for the setting up of the activities or their flow from concrete to semi concrete to abstract. Also, they are not directly linked to an assessment instrument such as a checklist in the way the CAPS NCS Requirements are.

### 4.3.2.6 Assessment Exemplars

The exemplars in this publication are not prescribed by policy but provided by the WCED as a guide to schools and teachers, setting a minimum standard to follow. The assessment process outlined may be summed up as follows: (1) Step 1: Gathering evidence using assessment tools such as observation sheets, checklists, rubrics and the journal. (2) Step 2: Recording learner performance using the record book/sheet. (3) Step 3: Reporting learner performance/achievement using the report card.

This represents a simpler design process than that outlined in the Training Manual above. The exemplar checklists are linked to those checklist outlines in the CAPS NCS Requirements, but have only been set up until the end of Term 2. This provision of a sample appears to be in keeping with a constructivist approach in which teachers design checklists with learners' prior knowledge in mind. The downside is that teachers need to be sufficiently well trained to be able to modify their assessment checklists around the "end users". For the sake of the a large proportion of Grade R teachers and practitioners, it would probably have been worth the extra printing costs to provide all of them as then they could be directly used by teachers without any further writing and formatting. This may not be in keeping with a constructivist approach but, if it is set up according to a constructivist approach, it may make it possible for some teachers to see and use such an approach until they are able to understand and design one of their own. The exemplar rubric provides basic descriptors linked to learner achievement. Using some detail from Module 9 of the Training Manual, a chart can be set up summarizing descriptors of learner performance/achievement and linking them to the CAPS rating codes, assessment tools, assessment records and the final report:

**Table 4.3     Descriptor types or options and rating codes in CAPS**

| CAPS Rating Codes | Descriptor types or options within CAPS | | | | | | BtLAB descriptor |
|---|---|---|---|---|---|---|---|
| | a | b | c | d | e | f | g |
| **7** | Outstanding achievement | All aspects of all content, concepts attained | Brilliant | All 10 correct | Competent | Successful | Functional |
| **6** | Meritorious achievement | Close to all aspects of all content, concepts attained | Very impressive | Any nine correct | Competent | Successful | Activities and Sub-activities: Functional |
| **5** | Substantial Achievement | Key aspects of all content, concepts attained | Good effort | Any seven to eight correct | Competent | Successful | Activities: Barrier Sub-activities: Functional |
| **4** | Adequate Achievement | At least half of the content, concepts attained | Average | Any five to six correct | Competent | Successful | Activities and Sub-activities: Barrier |
| **3** | Moderate Achievement | Less than half of the content, concepts attained | Fair | Any three to four correct | Partially Competent | Un-successful | Barrier |
| **2** | Elementary Achievement | A basic amount of content, concepts attained | Very basic | Any two to three correct | Partially competent | Un-successful | Barrier |
| **1** | Not achieved | An insignificant amount of content, concepts attained | Cannot do | Any one correct | Non competent | Un-successful | Barrier |

Column 'a' represents the standard CAPS descriptors linked to the rating codes, for reporting purposes, whereas columns 'b' to 'f' represent options for other forms or occasions of assessment. For example, column 'e' is taken from the Exemplar Checklists. Assessment tools include observation sheets, checklists, rubrics, journals

and the actual work of learners. Assessment records involve record books or sheets. Assessment reports involve a report card.

A record-sheet format is provided which can be used to summarize results of the entire class for Home Language, for a specific term, on which a CAPS rating code is assigned to each of the following six categories: Listening; Speaking; Phonics; Emergent Reading; Emergent Writing; and Emergent Handwriting. A column for entering the average rating for all these categories combined is also included, as well as "Comments for support purposes". One difficulty with this record-sheet format is that the six general English HL categories differ somewhat from the respective six or three general English HL categories contained in the other documents provided:

**Table 4.4**      **General English HL categories in CAPS documents**

| The three general English HL categories in NCS Requirements | The six general English HL categories on Work Schedules | The three general English HL categories on Assessment Exemplars | The six general English HL categories on Record Sheet |
|---|---|---|---|
| (1)Listening and Speaking | (1)Listening and Speaking | (1)Listening and Speaking | (1)Listening (2)Speaking |
| (2)Emergent Reading (includes Word and Sentence-level work, Phonics, Shared Reading and Independent Reading) | (2)Word and Sentence-level Work (3)Shared Reading and Writing (4)Guided and Independent Reading and Writing | (2)Emergent Reading & Phonics | (3)Phonics (4)Emergent Reading |
| (3)Emergent Writing (includes Handwriting) | (5)Writing (6)Handwriting | (3) Emergent Writing | (5)Emergent Writing (6)Emergent Handwriting |

The general English HL categories in the NCS Requirements, Work Schedules and Assessment Exemplars (Terms 1 and 2) all reflect a BL Approach which involves a fusion of reading and writing as well as approaches to teaching reading and writing. The Record Sheet, on the other hand, separates reading and writing for a simpler recording process, but not necessarily a simpler assessment process. This is because the teacher is required to design assessments which are able to make the jump from fused activities to separated results. Such a complex assessment design process presupposes both competent teacher subject-knowledge and curriculum content knowledge.

## 4.4 Grade R BtLAB documentary analysis

### 4.4.1 Background to BtLAB

The WCED, Specialized Education Support Directorate identified a need to develop a diagnostic assessment instrument which would help with early identification of barriers to learning in Grade R. An instrument was sought which could be used in group or individual settings, not taking more than 30-40 minutes to carry out. The result was an assessment battery published in 2009, consisting of 46 response exercises (screening activities) arranged in 17 assessed learning-reception areas which are possible barriers to learning. The maximum size for a group screening was set at 5-8 learners. It is stressed that BtLAB is a battery test for learning barriers, not a psychometric instrument. This nature and purpose of BtLAB is important to bear in mind in connection with the purpose of this study: BtLAB is intended to give an indication what are considered to be fundamental developmental gaps in Grade R learners, the critical barriers to learning how to read, write and calculate.

### 4.4.2 The BtLAB in 2011

In November 2011 a Grade R Pilot test using BtLAB as its assessment instrument, was run by WCED in the Cape Winelands District (CWD) in 200 public schools and 50 independent sites (South Africa, 2011b:9). Enrolled were 9347 learners whose formal Grade R success rate at that time was 87.6%. The Pilot test's success rates for specific skills were as follows:

**Table 4.5       BtLAB Pilot test success rates**

| Skill | Pass rate (%) |
|---|---|
| Motor Development Skill | 48 |
| Visual Perceptual Skill (VPS) | 39 |
| Auditory Perceptual Skill | 30 |
| Cognitive Development | 37 |
| Emotional Development | 72 |

What was immediately evident was the discrepancy between the Pilot test's success rates and the formal grade R success rates for the same cohorts.

The Report on the BtLAB results included observations related to what was referred to as significant gaps in curriculum delivery, namely, the difficulties experienced by learners in performing cognitive developmental items, and the dearth of visual and auditory perceptual skills development (South Africa, 2011c). The favourable comments by the Grade R teachers themselves regarding the BtLAB, indicated their recognition of the value of such support. Internal departmental recommendations were mainly concerned with developing learner intervention programmes for Grade R and Grade 1, as opposed to teacher capacitation or curriculum modification. After the approval of the Grade R/1 Turn-Around Plan in December 2011, BtLAB assessments were one of the main activities of this plan. As a result, the purpose of the BtLAB in this context has mainly been to assess the developmental readiness of learners for Grade 1. In other words, the early identification of gaps in learning skills is intended to facilitate focussed interventions at school and systemic level *after* Grade R.

### 4.4.3 The BtLAB in 2012

The BtLAB in 2012 was preceded by the Grade R Baseline Experiment in March the same year. VP related skills tested included Shapes, Concept, Colours Concept, Number Concept, Visual Memory and Analysis & Synthesis, 5 out of the 14 items. Effectively, the weighting of marks related to VPS was a maximum of 15 out of 64, that is, approximately 23 %. The basic limitation was that curriculum advisors did not advise the teachers sufficiently on the early identification purposes of the test. The test was not perceived as useful and therefore was not rerun the following year.

The following account will specifically track Grade R Assessments using BtLAB in the Cape Winelands District in the WCED. This process proceeded with training of LSA's, LSE's, and the CA and IMG manager for ECD on 22 August 2012. The testing period ran between 3 September and 14 November with some extensions due to localized factors. A total of 17536 learners in the province were assessed by WCED officials from Learning Support, ECD and Curriculum components. Note that the Cape Winelands District constituted by far the largest rural cohort with 2968 learners present. The summary of results concludes with the following observation

that the aspects which learners performed poorest at were visual and auditory perception. It was also proposed that learners who did not succeed in passing had the opportunity with the parents' permission to repeat Grade R while receiving support to address the developmental backlogs and barriers experienced.

The WCED Grade R Turn-Around Plan report of 2012, using BtLAB, contained recommendations which include the following pertaining to teacher subject knowledge: (1) Application of CAPS document and training in use of the document. (2) Focusing on knowledge and skills of teachers in terms of standards required of learners and the quality assurance of their training. Whereas teachers are usually qualified at ECD Level 5, the recommended provincial minimum requirement was set at ECD Level 6. Level 5 training was also set for those still below Level 5. (3) Attendance by teachers at workshops and training sessions. (4) Ensuring that assessment identifies developmental gaps early on and accurately determines school readiness. (5) Collaboration between Grade R and Grade 1 teachers to strengthen transition of learners between grades and support a seamless linkup with the LitNum Strategy of the WCED.

### 4.4.4 The BtLAB Section A

The documentary analysis of BtLAB, specifically Section A, was developed according to the following basic considerations: (1) How explicit and comprehensive is the VP subject knowledge contained in the document, in accordance with recognized VP subject knowledge? (2) What subject knowledge would the teacher still need to acquire, in order to prepare a learner for BtLAB, or to effectively use the document for early identification and intervention pertaining to VPS gaps in Grade R?

As has been stressed, the focus of the analysis is the VP related content of BtLAB, specifically Section A. Section B, which tests areas of functional learning such as eyesight, balance and dominance, is optional but recommended, and the assessments need to be verified by referral to an OT or psychologist, or need to be recorded by the teacher in the learner's profile. In the instructions it is stated that the BtLAB can be successfully administered by using Section A only. For the sake of the

verification of what is assessed for the overall pass requirements, as reflected in the statistical analysis below, activities not directly related to VP have still been included in the background on the table. Overall, "The learner should score 14 or more correct responses *(out of 17)* in Section A and 18 or more correct responses in Section B to be deemed functional" (South Africa, 2013:38, parenthesis mine). These correct responses apply to the successful completion of the activity as a whole.

The table below aims to provide a basic overview of learning-reception areas tested in BtLAB Section A, with particular reference to areas related to VP (which are printed in bold) as reflected in Annexure A: Scoring Guidelines Grid (South Africa, 2009: 35 & South Africa  2013 :38):

**Table 4.6      VP categories in BtLAB Section A**

| Assessed Area | Exercise Key | Assessment/ Screening Guidelines | |
|---|---|---|---|
| | | **Barrier (B)** (Weighted according to maximum number of sub-activities responded to correctly) | **Functional (F)** (Weighted according to minimum number of sub-activities responded to correctly) |
| Body image | A1 | 5 or less | 6 or more |
| Laterality, directionality, spatial orientation | A2 | 1- | 2+ |
| Fine motor co-ordination and integration | A3 | 4- | 3+ |
| **Visual figure ground discrimination** | A4 | 1- | 2+ |
| **Shape recognition** | A5 | 1- | 2+ |
| **Visual discrimination** | A6 | 1- | 2+ |
| **Visual analysis and synthesis** | A7 | 3- | 4+ |
| **Visual closure** | A8 | 1- | 2+ |
| **Position in space** | A9 | 1- | 2+ |
| **Visual short-term memory** | A10 | 1- | 2+ |
| Visual long-term memory | A11 | 1- | 2+ |
| Auditory discrimination | A12 | 1- | 2+ |
| Auditory closure, analysis, synthesis, association | A13 | 1- | 2+ |
| Auditory memory | A14 | 2- | 3+ |
| Auditory Sequencing | A15 | 1- | 2+ |
| **Numeracy** | A16 | 1- | 2+ |
| Literacy | A17 | 1- | 2+ |
| **TOTALS** | **17** | **27** | **42** |

What is immediately apparent in the overview of assessed areas is the following: not only have VPS been given significant coverage in terms of proportion of activities and of the stringency of the success requirements, but also in terms of the clarity of

articulation of VP concepts. The following items of BtLAB in Section A were not included under VP: "Laterality, directionality, spatial orientation", as it is more related to visual tracking and motor-visual skills not included in this study's selection of VPS. The activities testing the items designated "visual long-term memory" and "literacy" are more directly related to cognitive than to VPS, even though visual long-term memory can and has been subsumed under visual memory (South Africa, 2005: 2). The "numeracy" item was included as it tests visual discrimination and visual sequential memory. Visual analysis and synthesis was included because it still appears in the VP sources, and in CAPS, albeit not frequently enough to make the list of prominent VPS enumerated in Table 2.1.

'Literacy' and 'Numeracy' are only awarded one item each in the battery test as the intention is to address problems in the "learning-reception areas" which lie *behind* literacy and numeracy, which facilitate them. In this regard it is significant that VPS proportionality within BtLAB Section A is about 47% of the content, as 8 out of the 17 learning-reception areas tested are based on VPS.

A representation is made in the table below of VPS activities within BtLAB Section A. This table covers data contained in both the Assessment Manual (South Africa, 2009) used by the LSE's in 2012 once they were trained by ECD Education Specialists and the Screening Manual (South Africa, 2013b), used in 2013 by the LSA's to train the LSE's:

**Table 4.7        VP activities in BtLAB Section A**

| VP Skill | Definition | Concept labelled in BtLAB Section A | Corresponding activity/exercise in BtLAB Section A |
|---|---|---|---|
| *Visual Discrimination* | The ability to see details that make one object or symbol different from another. | *'Visual discrimina-tion'*<br><br>*'Numeracy'* | Learner looks in a book at a picture of a castle and looks at the three pictures of the same to its right. The learner must identify the one which looks different to the others by drawing a line through it. Repeat with pictures of birthday presents and playing blocks. Also under Numeracy: Learner , looking in a book, must be able to identify the picture dot square amongst four picture dot squares, which has seven dots on it, by drawing a line through it. |
| *Visual Memory* | The ability to remember exactly what something looks like even though it is not in front of you. | *'Visual short-term memory'* | Learner looks in a book at sequence of four pictures for four seconds. Then three of the four pictures are displayed twice on flashcards, in any sequence, for three seconds at a time. The learner must indicate which of the original four pictures was not shown on the flashcards by drawing a line through it in the book. Repeat with two more sequences of pictures. |
| *Visual Spatial Relationships* | The ability to see that a symbol placed in a different position in fact becomes a different symbol | *'Position in space'* | Learner looks in a book at a picture of two shapes. Then the learner must study three pictures containing the same two shapes, to its right, in which the shapes are either inverted in different positions or attached to each other in different places. The learner has to indentify by drawing a line through it, the picture which can be turned in the mind to look exactly like the original, without flipping it over. Repeat with two more sequences of pictures made of shapes. |
| *V. Form Const.* | | *(None)* | |
| *Visual Sequential Memory* | | *'Numeracy'* | Learner looks in a book at a picture of a sequence of seven boots. By drawing a line through it, the learner must indicate the fourth boot, also indicating an understanding of the ordinal number. |
| *Visual Figure Ground* | The ability to tell the difference between foreground and background. | *'Visual figure ground discrimina-tion'* | Learner looks in a book at a grid with a number of pictures of reindeer and starfish spread randomly, some of which are placed behind the grid, others in front of it. The learner has to study the picture for 10 seconds, and indicate by drawing a line through them, the reindeer in front of the grid. After another 10 seconds, the learner must indicate the star fish which are behind the grid. |

| | | | |
|---|---|---|---|
| *Visual Closure* | The ability to successfully identify a word, letter or number when a part of it is missing. | *'Visual closure'*<br><br>*'Visual analysis and synthesis'* | The learner looks in a book at a picture of a fish and studies three pictures of a single fragment of each of various objects to its right. By drawing a line through one of the three pictures the learner must identify which one is a fragment of the fish picture. Repeat with pictures of a grilled chicken and a watermelon.<br>(The learner looks in a book at a picture of a pumpkin and studies three pictures of all the fragments of each of various objects to its right. By drawing a line through one of the three pictures the learner must identify which picture contains the fragments of the pumpkin picture. Repeat with pictures of the sun and a fish.<br>Then repeat the exercise with the fragmented picture of a shoe on the left and three whole pictures of footwear on the right, one of which is the sum of the fragments. Repeat with pictures of a pig and a sea shell.) |
| *Visual Form Perception* | The ability to see the difference between forms or shapes of words. | *'Shape recognition'* | Learner looks in a book at a picture of a shape and looks at the four pictures various shapes to its right. The learner must identify the one which looks the same as the others by drawing a line through it. Repeat with two more sequences of 2D shapes. |

The learning levels of the BtLAB activities are primarily semi-concrete (2-Dimensional) In other words, they are pencil and paper activities, as opposed to ones requiring learners to work with concrete (3-Dimensional) learning apparatus such as blocks, moulded shapes and letters as well as scaled-down versions of real objects.

The success requirements according to correct responses in the 17 activities of Section A are 14 or more correct responses. The required success rate for the BtLAB for an individual learner is therefore 82%. The bar appears to have been set at a high level with Grade 1 proficiency in mind. It is important to note that, as will be borne out by the statistical analysis below, the results emphasised by the WCED/CWD are more directed to success rates within specific learning-reception areas assessed as opposed to within schools or circuits.

The required success rate for most of the individual learning-reception areas is about 66%, that is, the learner typically has to successfully complete two out of the three learning activities in each. So, unsuccessfully completing two out of the three activities would indicate a possible learning barrier. This data could be useful for early identification and intervention focussed on specific Grade R learners' particular

barriers. However, the data are not used in this way. They are primarily used for interventions by school and departmental role-players dealing with Grade 1.

## 4.5 Statistical analysis of CAPS and BtLAB results

A brief quantitative analysis can now be made of the first Grade R CAPS assessment results in the Cape Winelands District (CWD) and School A in 2012 and of the BtLAB results of the CWD and School A in the same period, by means of the statistical analysis of performance data. In a wider analysis of this nature, contextualization could be provided by Grade R-1 results from the previous and subsequent years, and from the other cohorts comprising the WCED. The compulsory promotion of Grade Rs according to age, as well as the fast-tracking of developmentally unready learners through Grade 1, by a 2013 WCED policy that requires a compulsory Grade 1 pass rate of 90%, further increases the importance of including a broader sweep of FP data in another study. In Chapter 5 below, the CAPS results will be compared to the BtLAB results with reference to their social-scientific validity.

Due to the brevity of the statistical analyses, only the composite and not the individual success rates are considered in relation to BtLAB. Composite success rates involve the total proportion of functional (successful) BtLAB results in a school or region. For example, the success rate of the 122 learners in School A, who scored functional results in visual closure, in the 2012 BtLAB, is 89%. Or, the success rate for the same cohort in Section A as a whole was 69%. Individual success rates on the other hand, involve the results of individual learners in a cohort or class, who are successful or unsuccessful in the entire BtLAB test, according to the requirements: a minimum of 14 functional results in Section A (out of 17) and minimum of 18 functional results in Section B. Composite success rates are important for highlighting the skills gaps in schools and regions. Individual success rates are important for highlighting both the skills gaps in specific learners as well as in their Grade-1 readiness profile. The following table represents composite success rates of specific areas of learning-reception in the context of the site of this study:

**Table 4.8      Selected VP results in BtLAB in the CWD and School A**

| Specific VP results in BtLAB 2012 in 34 focus schools in Cape Winelands District: Composite Success Rates | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of learners tested | visual figure ground discrimination | | shape recognition | | visual discrimination | | visual analysis and synthesis | | visual closure | | position in space | | visual short term memory | | numeracy | |
| b=barrier f=functional | | b | f | b | f | b | f | b | f | b | f | b | f | b | f | b | f |
| Site: School A learner totals | 122 | 64 | 58 | 32 | 90 | 79 | 42 | 24 | 43 | 79 | 109 | 38 | 83 | 43 | 79 | 29 | 93 |
| Site: School A success rates(f) | | 52% | **48%** | 26% | **74%** | 65% | **35%** | 20% | 35% | 65% | **89%** | 31% | **69%** | 35% | **65%** | 24% | **76%** |
| District: CWD learner totals | 2968 | 1835 | 1133 | 1018 | 1950 | 1705 | 1263 | 771 | 909 | 2059 | 2337 | 1244 | 1724 | 909 | 2059 | 835 | 2133 |
| District: CWD success rates(f) | | 62% | **38%** | 34% | **66%** | 57% | **43%** | 26% | 31% | 69% | **79%** | 42% | **58%** | 31% | **69%** | 28% | **72%** |

These results suggest that the gaps with visual figure ground and visual discrimination require both regional-systemic and learner-school based interventions at the onset of Grade R.

The composite success rates for the BtLAB in School A and the CWD in 2012 may be summarized as follows:

**Table 4.9      Summary of VP results in BtLAB in CWD and School A**

| | | Section A | | 8 VP Items | |
|---|---|---|---|---|---|
| **Site: School A** | Learners | 122 | | 122 | |
| | barriers/functional | 38 | 84 | 49 | 73 |
| | Composite Success Rate(f) | **69%** | | **60%** | |
| **CWD** | Learners | 2968 | | 2968 | |
| | barriers/functional | 1039 | 1929 | 1128 | 1840 |
| | Composite Success Rate(f) | **65%** | | **62%** | |

The aforementioned results indicate that, particularly in comparison to the CAPS success rate of 79% for the same cohort and period at School A, BtLAB 2012 presented the school's teachers/LSE (and the district officials) with a clear intervention target in the area of VP, not only for the Grade 1's of 2013, but also the Grade R's of 2013. When these results are discussed in Chapter 5 below, the CAPS and BtLAB results will be put into context by means of comparison with each other, with special attention given to VP components of the results.

## 4.6   Conclusion

The discourse analysis of the sample of Grade R teachers, which is the primary focus of the data collection, revealed the following in what they said in relation to subject knowledge of VP: This subject knowledge is heavily reliant on in-service training for its extension and intensification; CAPS curricular and training material is valuable for overall structure, strategy and content towards early reading; BtLAB has potential for early Grade R intervention; and, morale is high but more support would be appreciated.

The secondary foci of the data collection involved documentary analyses of the VP subject-knowledge sources relevant to the teachers in the sample, mainly the CAPS and potentially the BtLAB. Regarding the analysis of CAPS, the next chapter will contain discussion of the level of subject knowledge of VP which teachers may derive from CAPS, and the level of the same they need to use within CAPS: to be able to effectively drive visual training towards early reading, via CAPS as the required method.

The documentary analysis of BtLAB revealed a mixed result in connection with teacher subject knowledge of VP. On the positive side, BtLAB is well endowed with VP assessment content, albeit in semi-concrete form. Furthermore, there is the sense that it could be serviceable as a handmaiden to the conscious assessment of VP in CAPS by the teachers themselves. The challenge is to investigate the possibility of developing a mainstream BtLAB: straddling concrete and semi-concrete learning-reception; accessible by Grade R teachers; and instrumental in Grade R, in

both early identification of learning barriers and routine assessment for learning connected to visual training for early reading.

The limited statistical analysis of a few basic results from CAPS and BtLAB was intended to illustrate the contribution such results can make towards teacher subject knowledge of VP: in terms of targeting the areas where the conglomerate of VPS is compromised by the malfunctioning of one or two components, for example, in the case of the site, visual figure ground and visual discrimination.

The issues raised above represent categories of data which will be made to interact with each other in Chapter 5 below, so that not only the challenges of teacher subject knowledge of VP can be clarified - workable solutions may be expedited by the recommendations.

# CHAPTER 5: INTERPRETATION OF FINDINGS

## 5.1   Introduction

In this penultimate chapter the findings presented in Chapter 4 are discussed. The general approach is as follows: Each section seeks to provide an interpretation of the findings, in order to identify the challenges arising from each theme. The identification and formulation of these challenges will lead to recommendations in the next chapter which will generate solution-oriented discussion and issues for further investigation.

Section 5.2 will seek to enumerate the salient points of the discourse of the Grade R teachers in the sample, according to the themes represented by the 15 survey questions. These themes are: (1) training: pre-and in-service working knowledge of VP and the use of CAPS, (2) understanding of BtLAB and, (3) Grade R teacher self-awareness. These themes frame the answers to the research question: *What subject knowledge of Visual Perceptual Skills is possessed by the Grade R teachers in School A?* In Section 5.3 the documentary analysis of the CAPS curriculum will be discussed in terms of the VP subject knowledge content of its key publications, such as the Training Manual and the NCS Requirements for English HL. The analysis of VP subject knowledge contained in BtLAB, will be dealt with after that, in Section 5.4. In conclusion, Section 5.5 will cover some basic issues raised by the analysis of performance results arising from both CAPS and BtLAB assessments conducted at the end of 2012.

## 5.2 Discussion arising from analysis of Grade R teachers' discourse

(1) ***Training: pre-and in-service working knowledge of VP and the use of CAPS***. The discourse began by exploring what subject knowledge of VP the teachers had obtained from pre-service training at college, that is, ECD Levels 4 & 5. The teachers spoke about VP subject-knowledge input in terms of understanding different learning

styles (such as visual and kinaesthetic learning), as opposed to specific VPS. Overall, the pre-service training was considered valuable by the educators in the sample. However, the lack of explicit VP content may result in insufficient VP subject knowledge required to do outcome-based visual training of Grade R learners. Such training must comprehensively apply recognized VP concepts in a flow from concrete to semi concrete and eventually to abstract learning. Such a flow is needed to scaffold, or progressively develop, a learner's progress from pre-reading to early reading competencies, as discussed in Chapter 2. For example, the pre-reading, pre-alphabetic learner has to learn visual sequential memory. Three blocks are set out displaying letters on them in the sequence: 's', 'a' and 'w', or, the "blocks" are the letters in 3-D moulded plastic or carved wood. Copying the sequence at first, the learner will need to draw on as many senses as possible; the learner will want to identify, select, feel, and place new blocks in the same sequence. Eventually the learner can move from this concrete, 3-D visual training activity to a similar one on paper or a laminated board with loose, cut-out letters. This 2-D, semi-concrete format requires less sensory but more cognitive work. The learner is "pre-reading" the letters sequenced to spell 'saw'; crossing the bridge to early-reading; to partial-alphabetic, more abstract learning. Now the learner will begin to remember the order of 'saw', with the aid of phonics, sight-word learning, etc., particularly in Grade 1. The Grade R teacher must understand the importance of all the visual training on a concrete learning level to properly establish a VP skill as a decoding tool. This is working knowledge or teacher competence, knowing how to impart specific VPS to learners by means of visual training. This study has mainly examined the subject-content knowledge of VP held by Grade R teachers. However, the application of that knowledge during the process of visual training presupposes Pedagogical Content Knowledge (PCK) leading to teacher competence. PCK knows which teaching strategies will work; teacher competence knows how to deploy those strategies. The challenge is to provide Grade R teachers with training which establishes a thorough and effective working knowledge of VP. Such training would essentially have to integrate theoretical and practical knowledge if the Grade R teacher is to be equipped to do the same in the classroom.

The accurate definitions of VP the teachers articulated, were obtained from limited in-service training, and included the use of 2-and 3-D apparatus to move learning

from concrete to semi-concrete levels of learning. This enabled the teachers to do visual training which imparted the following VPS to learners: visual discrimination, visual form constancy, visual form perception and visual sequential memory. This VP knowledge imparted to the teachers represented mainly incidental learning, in that, (a) this VP knowledge was not necessarily covered in the foundational pre-service training; (b) the teachers recalled a limited range of VP concepts because of the atomized, brief nature of the in-service training insert, and (c) the teachers, working in a departmental-circuit focus and BtLAB Pilot school, are more accessible than other teachers, to Learning Support Advisors and other Educational Specialists. Moreover, these specialists may impart VP knowledge, or they may not.

Such incidental learning is vital in the process of integrating new knowledge with existing knowledge and even creating new PCK. The ability of the Grade R teachers in the sample to impart four VPS to their learners was strengthened by incidental learning arising from an in-service training insert. One way to promote this kind of learning is to include in-service training in the Grade R teacher accreditation continuum, as discussed in the next chapter. However, if too much teacher-knowledge acquisition is left to incidental learning, it may become piecemeal, leaving important gaps in content. This was the case in the sample, where the four other VPS profiled in the study were not consciously imparted. More systematic, comprehensive forms of knowledge acquisition are needed to provide the framework within which new or incidental knowledge can be included.

The value of CAPS for VP, as understood by the Grade R teachers, was directed at the ability of CAPS to direct and integrate learning from concrete to semi concrete levels of learning. For them, the concrete learning activities laid a suitable foundation for the actual early-reading tasks their learners began to perform, such as recognizing, naming and writing letters. However, the challenge is that learning from concrete to semi concrete levels was again, as with teacher training above, not comprehensively and explicitly applied to mediating specific VPS, during the process of visual training. To remedy this, a progressive model of professional development would have to use workshops or other training inserts to conduct extended practical applications over longer periods (see Table 5.1).

(2) ***Understanding of BtLAB***. The value of BtLAB testing for VP, as understood by the Grade R teachers, is a potentiality; they were not directly involved in this diagnostic test. However, there is a desire amongst the teachers for early identification of skills gaps at the onset of Grade R. A BtLAB linked to CAPS-based work using concrete apparatus, could be a suitable tool to achieve this. The challenge is that the BtLAB testing process does not allow for the direct participation of the Grade R teachers, so as to be serviceable to them in the teaching-learning process.

(3) ***Grade R teacher self-awareness***. As the teachers in the sample have high levels of motivation, good morale and a clear understanding of their purpose, they desire more intensive and extensive teacher subject knowledge capacitation in general. They are not only aware of how much they could still learn, they also find the possibility of being denied the opportunity to learn more, to be something insufferable. It is likely that they are not alone in this ambition, but share it with the wider corps of Grade R teachers. They do not feel that their expectations should be limited in any way by their designation as *Practitioners*. They intuitively know that just as theory without practice does not work; practice without theory will also not work in their case. The challenge is that they want specific, useful subject knowledge capacitation which will empower them to be more skilled Grade R teachers. This capacitation can only be more fully realized by a progressive model of professional development, in which best practices are applied to Grade R specialization during pre and in-service training. A proposal for a progressive model of professional development for Grade R teachers would require a separate study due to the volume of literature that would have to be reviewed. Below is an illustration of how best practices, based on an overview (Snow et al., 2005: 2011), might be applied to a model of professional development of Grade R teachers:

**Table 5.1    Examples of best practices applied to a model of professional development of Grade R teachers**

| | Best Practices Principle | A Grade-R pre-service training application | A Grade-R in-service training application |
|---|---|---|---|
| 1 | Addressing prior knowledge to stimulate new knowledge. | Recognition of prior learning (RPL) bridging training. | Revision of stable-procedural expertise. |
| 2 | Skills required for continuous learning. | Modules in lifelong learning and research methods. | Workshops in adaptation and reflection. |
| 3 | The development of a comprehensive and usable knowledge base. | Balance between Grade R specialist and general education subjects. | In-house or external coverage, over an extended period, of the full range of subject and curriculum-content knowledge. |
| 4 | Application and contextualization in internships/mentorships. | Holistic assessment of Grade R practical internship. | School-based or regional mentorship network involving Grade-R heads, Grade-R lead teachers, ECD educational specialists and academic specialists. |
| 5 | Articulation of and integration between subject knowledge and pedagogy. | Assessment of application of VP subject knowledge to appropriate, scaffolded visual training activities. | School or circuit-wide year, term and lesson preparation workshops as well as preparation of Learning-Teaching Support Materials. |
| 6 | Extended practical application as opposed to dabbling in eclectic topics. | Run teaching practice or pedagogy concurrently with other modules. | Departmental workshops to cover the practical application of specific curricular requirements over an extended 2-3 year period. |
| 7 | Contextualized rather than generic approaches. | Modules in socio-cultural, ECD and learning barriers, contextualization and differentiation. | School-based diagnostic assessment and community based cross-sectional studies to inform teaching practice. |
| 8 | Analysis of shared best teaching practices. | Literature review of research covering best Grade R teaching practises worldwide. | Development and regular application of a best Grade-R teaching practices checklist. |
| 9 | Lead teachers demonstrating the balancing of personal growth trajectories with school improvement plan. | Direct involvement of lead teachers in pre service training modules and credits. | Use an IQMS customized for Grade R as a template for linking a Grade R teacher's personal growth plan with the Grade R section's improvement plan. |

The question therefore arises as to what must be included in the overall framework of the subject knowledge that Grade R teachers must be capacitated with. This brings us to the next section, dealing with the curriculum itself.

## 5.3 Discussion of Grade R CAPS documentary analysis

The CAPS may well continue to provide a source of guidance for teachers for the foreseeable future; however, there is room for the enrichment and clarification of subject knowledge content within CAPS. This is particularly necessary in the Grade R component of CAPS. Such revisions are important for facilitating the specialist nature of Grade R teaching. They are also important for the seamless transition of teaching-learning processes from Grade R to the remainder of Foundation Phase; Grade 1 teachers and specialists are ideally suited to give feedback on what CAPS competencies they want Grade R teachers of CAPS to impart more strongly.

Generally, a curriculum document will be analysed both to understand it better and to use it more effectively. Only once this process has reached a certain point, will changes be suggested. The documentary analysis in this study was more concerned with the effective use of the curriculum than revision, which would be premature without due process. However, some tweaking of a reputable curriculum statement might result in a material improvement without casting the curriculum in a negative light, without shaking its foundations or undermining confidence in it. This is why, due to the comparative youthfulness of CAPS, a specific aspect thereof was analyzed, which may lead to a limited recommendation not without merit. To recap, in this study, the analysis of the CAPS Resource File for Grade R was conducted with a view to addressing the following considerations:

(1) How explicit and comprehensive is the VP subject knowledge contained in the document, in accordance with recognized VP subject knowledge?

(2) What subject knowledge of VP does the document provide the Grade R teacher with in order to teach and assess visual training towards early reading?

(3) What subject knowledge of VP does the teacher still need to acquire, in order to effectively use the curriculum-document for visual training?

Six key publications within the CAPS Resource File needed to be analysed to deal with the aforementioned considerations thoroughly. This analysis revealed the following:

(1) In the Training Manual teachers are briefed on the progression from concrete to semi-concrete and abstract levels of learning. The Emergent Literacy discussed covers early-reading categories but not pre-reading ones. It also does not cover the need for progression from one set of competencies to another according to the levels of learning it summarizes. The discussion of the Balanced Language (BL) approach also does not clearly reference any pre to early reading type of progression, even though scaffolding is mentioned. Emergent Numeracy has some VP content in the reference to sorting, patterns and shapes. The closest possible reference to pre-reading visual training is the category, 'Word and Sentence Level Work' but as it is quite far down a list of early-reading learning categories, it would be understood to be an early-reading activity. So the Training Manual is valuable as an extensive overview and orientation. However, it does not provide a substantial or detailed enough teacher subject knowledge content framework for VP and visual training.

(2) In the NCS Requirements for English HL, the VP and visual training concepts are comprehensively covered by learning activities. But none of these activities are explicitly identified as activities which impart VPS or represent visual training. There is no mention of VP, the prominent VPS profiled in this study, or of visual training in general. As a result, the Grade R teachers are likely to do and assess visual training incidentally, and are more likely to leave gaps. Apart from comprehensive pre-service training, a comprehensive in-service "curriculum" would have to be applied to fill the gaps, as recommended in the next chapter. This study, being qualitative, with a narrow sample, is not in a position to differentiate the precise origin of VPS developmental gaps in the case of the sample. This study can also not make pronouncements about whether the School A and CWD gaps in visual discrimination and visual figure ground are related to teacher subject knowledge, or contextual issues, or systemic-curricular issues. This study says that if the gaps are there, they may have originated in the teacher training or the curriculum. It would also be expedient to address the matter simultaneously at teacher knowledge and at curricular levels as they feed off one another. Much of learning is incidental, but incidental teaching only works if it is embedded in a rich knowledge base which

intuitively covers all the ground, for instance, all of the prominent VPS highlighted in this study. The model of professional development recommended in the next chapter is intended to develop such a knowledge base.

(3) The NCS for English Mathematics is a more valuable document than the NCS for English HL. It provides a 203-page long document entitled 'Content Clarification Notes with Teaching Guidelines' which has essentially the same purpose as the 22-page equivalent for English HL discussed above: the guidelines document explains the curriculum content in detail.  It also applies that content to a variety of learning activities flowing from concrete to semi concrete to abstract levels of learning. It is therefore not surprising that it contains more explicit VP and visual training categories and, a more substantial base of concrete activities using suitable apparatus. However, teacher subject knowledge does not simply cover detailed learning activities; it also involves the synthesis of knowledge categories. Such a synthesis is needed for the design of teaching and assessment strategies which provide learning activities with well-defined outcomes. Both ECD Level 5, and the Training Manual module covering Emergent Numeracy summarized above, must be able to train teachers to set up learning programmes according to the new curriculum. Grade R teachers need high-level, field-specific training to effectively utilize something like the 'Content Clarification Notes with Teaching Guidelines'. The CAPS training itself, with its workshop and best practices approach, needs to be able to do that, by demonstrating how the curriculum guidelines shape the learning-programme activities from concrete levels upwards. For every concept-content-skills learning requirement in the curriculum, principles or considerations for designing appropriate, scaffolded visual-training activities should be provided. The challenge is that more in depth pre and in-service training in the use of the curriculum itself is needed.  Not in-depth in the sense of the application of CAPS-based learning activities, but in the sense of the *design* of CAPS-based learning activities.

(4) The NCS for English Life Skills is the only one of the three subject statements of CAPS curriculum content which explicitly explains most (6) of the prominent VPS profiled. It also makes the direct and foundational connection between VP and reading, writing and mathematics. Again, without more detailed information, Grade R teachers are here required to do the visual training incidentally.

(5) The Work Schedules are intended to support Grade R teachers' implementation of the CAPS. However, they contain too brief guidelines to clearly delineate where activities would be placed in the flow from concrete to abstract levels of learning. They emphasise the BL approach and coverage of all the concepts, content areas and skills which comprise CAPS. "Visual development" as a concept-content-skill is placed more frequently with "Group, guided and independent reading and writing" as opposed to "Word and sentence level work". This suggests that the approach to visual training in more closely related to immersion in a rich text environment than activities which explicitly promote specific VPS. Another feature is that the introduction contains a suggestion to conduct two weeks of baseline assessment at the start of the year parallel to the teaching of new concepts, without any instrument being provided for such an assessment.

(6) The Assessment Exemplars, although containing a simpler assessment design process than the one in the Training Manual module on assessment, place greater demands on general teacher subject knowledge. This is because a more simple design presupposes a deeper knowledge base from which teachers can interpret the design elements and fill in the spaces between them.

The findings of the analysis of the CAPS Resource File 2012 for Grade R raise concerns about the level of explicit, VP subject knowledge coming out of the document, and the need for the same to be included in the document, for visual training towards early reading. The challenge is that too little explicit VP comes out of CAPS, and too much must still go in, in order for anyone but the most highly trained Grade R teacher to use CAPS for effective visual training towards early reading. Although this concern is here applied to early reading, the analysis of the NCS for English Mathematics suggests that it is relevant to early numeracy as well.

Another vital matter that has arisen from analysing the delivery of pre-service training and of CAPS in close proximity to one another is the issue of exactly how much of CAPS is covered in pre-service training. To what extent has the recent implementation of CAPS resulted in the revision of aspects of the pre-service training streams tasked with preparing teachers to deliver CAPS? These issues lie outside the immediate focus of this study, but the challenge is to ensure that curricular-

training alignment is deliberately and continuously pursued as a matter of departmental-academic policy.

It is significant that the WCED did not call upon Grade R CAPS to diagnose its own delivery based on its midyear results. It called on BtLAB to do that based on year-end results. BtLAB is a diagnostic instrument that is external to the standard curriculum; its assessment reporting promises to carry some objectivity and neutrality. The discourse analysis revealed some teacher knowledge about BtLAB and its potentiality. The connection between teacher subject knowledge of VP and visual training, and BtLAB, needs to be explored. This brings us to the analysis of BtLAB itself.

## 5.4 BtLAB documentary analysis

This diagnostic assessment instrument was developed for the early identification of gaps in learning skills in Grade R's. Its immediate goal was to identify learning barriers in the assessment of the developmental readiness of Grade R learners for Grade 1. Consequently, the assessment results were ultimately intended to be used for interventions in Grade 1, not Grade R. The WCED's Grade R Pilot test using BtLAB in 2011 excluded Grade R teachers from administering the tests. Even with the less formal, Grade R baseline experiment in March 2012, mentioned in Chapter 4, Grade R teachers were excluded. This trend continued with the BtLAB towards the end of 2012. One reason why the Grade R teachers were not entrusted with the testing was because it fell under Specialized Education Support. This meant that LSAs and LSEs were expected to administer it themselves without giving thought to equipping Grade R teachers to do it. So by the time the discourse analysis took place, the Grade R teachers were being excluded for the fourth time running. The Grade R educators in the sample therefore positioned themselves as observers, not participants. If the WCED intends to increase the value of BtLAB, it should ensure that grade R teachers are trained to administer this instrument themselves. One Grade R teacher in the sample hinted at this when she said her learners would be more responsive to her than to a "stranger" from the department. Although the WCED focus was mainly Grade 1, the recommendations made in departmental

evaluations of the test increasingly turned to Grade R-teacher related reasons for low results: insufficient training for use of CAPS in its first year of implementation; the level of teacher subject knowledge; and the qualification level of Grade R teachers/practitioners. Since the gazetted proposed minimum qualification of Level 6 for Grade R teachers in 2011, this latter issue has frequently surfaced in such evaluations. These training and curricular considerations have already been touched on in the previous two sections.  However, the curricular considerations provide an important backdrop to the documentary analysis of BtLAB, as BtLAB has been tasked with testing and diagnosing CAPS delivery. But the delivery of specific skills or outcomes must be tested. Therefore, the focus of this study at this point is on the VP subject knowledge content of the BtLAB itself, particularly Section A.

To recap, the immediate considerations guiding the documentary analysis of BtLAB were:

(1) How explicit and comprehensive is the VP subject knowledge contained in the document, in accordance with recognized VP subject knowledge?

(2) What subject knowledge would the teacher still need to acquire, in order to prepare a learner for BtLAB, or to effectively use the document for early identification and intervention pertaining to VPS gaps in Grade R?

The analysis of the document revealed that 7 of the prominent VPS profiled were covered. They were clearly articulated and applied in suitable learning-reception assessment activities, albeit on mainly semi-concrete learning levels. The testing of these VPS made up 47% of the content of the compulsory Section A. This proportion of the content reveals the high value placed by BtLAB on VPS.

The success requirements of about 66% for specific learning-reception areas, or 82% (14 out of 17 learning-reception areas) for the whole of Section A, are quite stringent. This also places a high value on the VPS tested, as the harder it is to succeed at something, the more important the effort to succeed at it becomes. The issue which immediately arises concerns the training the Grade R teacher would need in order to acquire sufficient subject knowledge of VP to do the visual training required to impart those VPS to the learner. The learner will need to be able to apply 7 VP related decoding tools to successfully deal with 47%, almost half, of Section A. The previous two sections would once again suggest that neither pre-service ECD

Level 5 training or in-service CAPS training resources would have adequately prepared the teacher: to prepare the learner to succeed at the VPS tested by the BtLAB.

As the learning levels of the BtLAB activities were generally pegged at semi-concrete levels, Grade R teachers would require considerable visual-training insight to make the connections in their minds: between the concrete activities they did or did not employ to impart a specific VP skill, and the deployment of those activities' semi-concrete BtLAB equivalents to assess that same VP skill. This prevalence of semi-concrete activities in BtLAB may be related to the timing of BtLAB towards the end of Grade R, where a six-year old has to be primed for the abstract elements of Grade 1 work. However, many of the learners, who are still 5 at the time of testing, would be more successful if concrete, 3-Dimensional activities were substituted for the existing ones. In other words, the barrier may simply have arisen from a too rapid jump from concrete to semi-concrete.

The young age of some learners, or the suddenness of the jump to semi-concrete activities, are contextual factors which would only have compounded the existing hindrances to successful results. It therefore makes sense, if BtLAB is to yield better results, to give due attention first to what Grade R teachers know. But better results are a longer-term aim, not the immediate aim.

The immediate aim of BtLAB is to identify learning barriers more accurately so that those barriers can be more effectively addressed. The Grade R teachers in the sample also questioned the value of BtLAB because learners with significant barriers, even more than the maximum allowed of 3 out of 17, were promoted by the department anyway, with no guarantee that such learners would in fact receive effective interventions in Grade 1. Does CAPS not encourage the Grade R teacher to do early, diagnostic assessments and remedial interventions? Yes, it does, but does it empower and equip the Grade R teacher to do so? For CAPS to do that, it must provide the Grade R teacher with neutral, objective assessments which can diagnose specific VP deficits. Once the Grade R teacher has identified those, teacher competence is needed to design suitable visual training activities; these activities must be customized to address VP deficits in a flow from concrete to semi-concrete learning. The findings of the documentary analysis of BtLAB highlight the

argument that BtLAB tests and results could be put to better use. Given its value as a neutral, diagnostic assessment instrument that is rich in explicit VP content, it is regrettable that BtLAB, or a version integrated with CAPS, is not yet fully incorporated into mainstream schooling.

Changes to curriculums or assessments can be positive or negative, depending on how performance results are understood and interpreted. This calls for a knowledgeable analysis of the results themselves, for the correct purpose. However, this study, in analysing selected assessment results, has had a limited purpose. The purpose was simply to find out what kind of knowledge such results can impart to teachers about VP subject content.

## 5.5   Discussion of CAPS and BtLAB statistical analysis

One basic issue in connection with the statistical analysis of CAPS and BtLAB assessment results is how they are supposed to compare with each other. VP results derived from to CAPS assessments cannot easily be compared to VP results derived from BtLAB assessments. Comparing results from two such divergent assessment program-designs is like comparing apples with pears. In short, CAPS assessment of VP is too vague (see section 5.3) and BtLAB assessment of VP is too semi-concrete (see section 5.4).

The emphasis of CAPS assessment in Grade R is towards formative assessment for learning so as to be functional and successful. As progression is compulsory, even not being able to reach the minimum CAPS rating of 4 (50%) does not cause alarm bells to go off in Grade R. A learner who scores such a rating is absorbed into a cohort where a two-thirds majority have no Grade R results or have had no input. Moreover, the entire cohort is being coaxed by departmental policy towards the desired progression rate of 90% at the end of Grade 1. On the other hand, the emphasis of BtLAB assessment is towards diagnostic assessment of learning barriers so as to identify those barriers. Although progression is also de facto compulsory, the individual learner's required success rate is high at 82%. To succeed the learner has to be functional in 14 out of the 17 learning-reception areas assessed. Therefore a learner with significant learning barriers is quickly detected.

The prevalent barriers in a class or cohort are also quickly detected. These barriers are detected through the composite results (see Chapter 4), where required success rates of specific learning-reception areas and activities are typically around 66%. The learner has to succeed at two out of the three activities which comprise each learning-reception area assessed. Therefore BtLAB success rates in assessing VP will always be significantly lower than CAPS success rates in assessing Emergent Reading. The higher the requirements are, the lower the success rate is.

The comparative value of the two sets of results, that is, CAPS and BtLAB assessment of VP, do not lie in assessing exactly the same thing. It lies in CAPS and BtLAB looking at the VPS developmental challenge from different angles. CAPS seeks to take a continuous look at VP-related skills in order to establish them for early reading by the end of the Grade R developmental continuum. BtLAB takes a late look at the VPS which should have been established early in the Grade R developmental continuum towards early reading outcomes. In short, the CAPS is mainly formative but could also be more diagnostic if it incorporated BtLAB early in the year. The diagnostic BtLAB could also be more formative if used early in the year.

Another connection between CAPS and BtLAB results surfaced in 2013. Whereas the 2012 BtLAB was directed at entire cohorts of Grade R learners, in 2013 BtLAB was specifically directed at Grade R learners who achieved a Code 3 or below (less than 50%) for English HL and/or Mathematics in the June CAPS exam. The stated assumption was that a Grade R learner with a Code 4 or higher in June should be ready for Grade 1 at the end of the school year. This development also supports the integration of CAPS and BtLAB assessment design discussed in the previous section, in the interests of the social and scientific validity of both sets of results being more mutually relevant.

What the CAPS and BtLAB assessments do have in common though, is the lack of influence they both exert on Grade-R learner progression. Grade R learners may only repeat a year on the basis of age or parental consent. Another study would be required to track exactly what is done with the Grade R CAPS and BtLAB results in Grade 1. As it is, the WCED Baseline Assessment formerly conducted over the first two weeks of Grade 1 has now been replaced with CAPS teaching, learning and

assessment. This brief statistical analysis is simply intended to make a case for the desirability of results, whether derived from formative, diagnostic or summative assessments, which inform teacher subject knowledge of VP. The results inform that knowledge by providing accurate feedback on the efficacy of specific visual training activities in inculcating specific VPS. If BtLAB had stated that visual figure ground and visual discrimination were concerns in the CWD in May 2012, then CAPS could have designed and implemented a concrete to semi-concrete visual training solution by November 2012. And the beneficiaries could have been better prepared for the abstract interpretation of symbolic presentations of pictures, words and numbers in Grade 1 in February 2013. Potentially, the Grade R teachers' subject knowledge of VP could have positioned them as the designers of the visual training solutions, thereby saving crucial development time.

## 5.6   Conclusion

The core challenge for which solutions have been sought in this study, has been the improvement of Grade R teacher in-and-pre-service training. Addressing this challenge has focused on ensuring that Grade R teachers have sufficient VP subject knowledge for the provision of visual training for early reading.

This study sought to answer the following research question: *What subject knowledge of Visual Perceptual Skills is possessed by the Grade R teachers in School A?* The findings show that the Grade R teachers in School A know and practise the concrete visual training needed to impart visual discrimination, visual form constancy, visual sequential memory and visual form perception to their learners. Their levels of motivation and morale are high.

Had these teachers been given clearer, more specific subject knowledge of visual memory, visual spatial relationships, visual figure ground and visual closure; the visual-training design would more completely bridge VP developmental gaps. Capacitation in theoretical subject knowledge of VP has been inseparable from the practical application of that knowledge via the teacher competency of visual training design. These Grade R teachers would therefore benefit immensely from more capacitation in VP subject knowledge, as well as the competencies needed in order

to provide their learners with visual training towards early reading - visual training that is less incidental and more comprehensive and progressive. The recommendations in the following chapter are therefore framed with these Grade R teachers in mind.

# CHAPTER 6: RECOMMENDATIONS

## 6.1  Introduction

This study has been titled: *Grade R teachers' subject knowledge of Visual Perceptual Skills for early reading*.

At the outset of this study, in Chapter 2, I furnished an overview of literature pertaining to visual perception (VP), cognitive development, early reading, teacher knowledge and Grade R policy. It was revealed that, universally, VP as an explicit concept dealing with the cognitive interpretation of text seen with the eyes is not optional. It is not optional to Grade R teacher subject knowledge capacitation towards visual training for early reading. It is not possible to do proper visual training for early reading without comprehensively imparting all the core VPS to Grade R learners.

After the literature review I sought to expound the necessity for a pragmatic approach to the research in Chapter 3. Such an approach allowed for various forms of data collection and analysis. These could describe what the teachers in the sample know about VP with sufficient clarity to identify challenges and to seek solutions.

In Chapter 4, the analysis of the data was presented, with the expectation that the discourse and documentary analyses would generate categories of information about VP. It was expected that these categories would reveal how the sets of data are related. The connections between the data that were explored had mainly to do with the quality of VP content: in the realized or potential sources of teacher subject knowledge of VP. These sources included what the teachers already know about VP, related to the curriculum, the diagnostic tool and to a limited extent, the performance results.

The findings of the research were then interpreted in Chapter 5, according to themes relevant to qualitative VP content in the sources required for the capacitation of

Grade R teachers in VP subject knowledge. The following themes were framed by the discourse: what the teachers know about their training, about VP, about CAPS, about BtLAB and about their self-awareness.

The interpretation of the findings in the previous chapter sought to identify the challenges arising from each theme. The identification and formulation of these challenges has led to the recommendations below which will generate solution-oriented discussion and investigation. Therefore Section 6.2 will discuss Grade R teacher training related to pre-and in-service establishment of a working knowledge of VP and CAPS. Section 6.3 will discuss Grade R teachers' understanding of BtLAB. Finally, in Section 6.4, Grade R teacher self-awareness will be covered. The recommendations arising from these discussions are given as general strategies for ensuring higher quality teacher subject knowledge capacitation pertaining to VP, based on the findings of this study.

## 6.2   Training: pre-and in-service working knowledge of VP and the use of CAPS

The discourse analysis presented the challenge of how Grade R teachers can be trained to have a more thorough working knowledge of VP. The recommendation is that appropriate VP subject knowledge, and visual training strategies, need to be given more prominence in the design of (NQF) Level 5 pre-service and an in-service training. Training design would need to account for VP and visual training in terms of best practices such as those applied to Grade R specialist training in Table 5.1. It would need to lead the Grade R teacher beyond the theoretical subject knowledge of VP and PCK which knows which visual training strategies will work, to the practical teacher competence which knows how to deploy those strategies. This integration of theoretical VP knowledge and practical visual-training knowledge requires training which is inclusive of mentorships and extended applications, among other features. Another study with documentary analyses of (NQF) Level 6 *BEd (PF)* and Level 6 *Diploma in Grade R Teaching* course-content would be required to examine the quality of their VP knowledge content within the Grade-R specialist component of the knowledge mix of the course. In the meantime, the recommendation below seeks to

address the current reality that the bulk of incoming Grade R teachers are Grade R *Practitioners* with Level 4 and 5 qualifications.

***Recommendation 1: That more VP can be put into training.*** *VP and visual-training content in Level 5 training for Grade R needs to be improved. This can be done by ensuring that VP subject knowledge and the design of relevant visual training strategies are properly covered in Level 5 pre-service and in service training.*

The discourse analysis revealed that the teachers' imparting of VPS via the Grade R CAPS curriculum, from concrete to semi concrete levels of learning, was done incidentally. The challenge is that this multilevel learning must be comprehensively and explicitly applied to mediating all the specific VPS during the process of visual training. The analysis of the Grade R CAPS curriculum presented a related challenge: Too little explicit VP comes out of CAPS, and too much must still go in: for anyone but the most highly trained Grade R teacher to use CAPS for effective visual training towards both early reading and early numeracy. The recommendation therefore is that *Visual Skills* can be included as a subset of the "Emergent Reading" general English HL category in CAPS/NCS. *Visual Skills* as a concept is ideologically significant enough as a stand-alone language-acquisition category. It is indispensable for meaning-making during early reading. Such a conceptual-content insertion into the curriculum must be explicit if the Grade R teacher is going to be deliberate about imparting it. It must also be comprehensive. Grade R teachers would then be able to design visual training activities under *Visual Skills*, in which at least all of the prominent VPS profiled in this study are imparted effectively and assessed accurately.

***Recommendation 2: That better articulation of VP can be put into CAPS****. This can be done by inserting Visual Skills into Emergent Reading and emergent mathematics as significant conceptualized content inclusive of all the key VPS, as well as of suggestions or principles for visual training design.*

Another challenge raised by the documentary analysis of the Grade R CAPS curriculum is as follows: more in-depth Level 5 pre and in-service training in the use of the CAPS curriculum is needed. (The separate study, involving documentary analyses of VP knowledge content of Level 6 pre-service training mentioned previously, could be broadened to analyse CAPS-curricular knowledge content of the same.) But it is not enough for the departmental and academic institutions tasked with curriculum delivery, to employ the curriculum as a bonding agent. They must feed the fledgling curriculum in a dynamic partnership. This is because in the South African context of Grade R Practitioners, the curriculum is also required to be itself a training system, a training agent.

One aspect of such a partnership currently exists in the form of departmental sanction of part-time Level 6 in-service training of Grade R teachers with sufficient credits by academic institutions. This is a recognition that the in-service training provided by departmental education specialists needs to be supplemented, as does Level 5 pre-service training. These Grade R teachers are sponsored via a WCED learnership which also includes funding from the National Skills Fund (NSF) and a private bank. Financial considerations aside, more could be accomplished by the work of a joint academic-departmental training design team at provincial level. Such a Grade R field-specific team would be in a position to more effectively reconfigure training models; and to infuse them with curricular content, beginning with VP subject content, as well as visual training content. At present, much CAPS content in the Western Cape enters training streams via private companies and NGOs acting as intermediaries between training institutions and the WCED. A joint academic-departmental team that is Grade R-training specific can potentially incorporate the role of the intermediaries, provided they themselves are professionally developed to do so. Such a team would need to be trained in matters like Grade R policy development, in order to create policies which merge and promote the interests of both parties. An advantage of such a partnership is that it could promote future agreements between the DBE, DHET and academic institutions around Grade R teacher training nationally. Nevertheless, partnerships don't gel unless they have a common, focal point of interest.

The recommendation is that the applied *Visual Skills* concept within CAPS referenced above is used by a joint academic-departmental training-design team to

bring CAPS more strongly into a dual role as both a subject and an agent of Level 5 pre and in-service training. A pre and in-service "curriculum" is needed to cover the whole CAPS curriculum, in terms of how to use it effectively. This in-depth coverage is not merely about the application of CAPS-based learning activities - it is about the *design* of CAPS-based learning activities. This is in keeping with the best practices of developing a comprehensive and useable knowledge base and integrating curriculum knowledge with pedagogy.

***Recommendation 3: That more CAPS concepts and content can be put into training.*** *The Grade R Level 5 training requires more infusion of Grade R CAPS. This can be done by using VP and visual training-design, under the Visual Skills concept, as a driver for aligning CAPS more strongly to Level 5 pre-service and in service training streams.*

## 6.3 Understanding of BtLAB

The discourse analysis revealed the challenge that BtLAB is still too remote to Grade R teachers to be serviceable to them in the teaching-learning process. It is therefore recommended that BtLAB can be redesigned to directly involve Grade R teachers early in the year. To do this, the BtLAB-VP assessment activities at least, would need to be revised to fit more concrete learning levels. The connection of BtLAB to the Grade R teachers would have to be made by the integration of BtLAB with pre and in service training via CAPS, as discussed below. Another application is that Grade R teachers can directly learn more about how assessment of VP and visual training outcomes works, by personally applying a more concrete version of the BtLAB assessment.

The documentary analysis of BtLAB highlighted its value as a neutral, diagnostic assessment instrument containing explicit and comprehensive VP content, albeit semi-concrete. Even though the WCED relied on BtLAB to diagnose Grade R CAPS delivery, the challenge is that such an instrument is not yet fully curricular or mainstream. Grade R teachers doing informal, formative CAPS assessments are simply advised to do diagnostic interventions every 10 weeks, without being given detailed guidelines in the curriculum documents. The statistical analysis of CAPS

and BtLAB results in 2012 supported the challenge that BtLAB results could be more serviceable to CAPS as an early warning system pertaining to developmental deficits such as visual figure ground and visual discrimination in the Cape Winelands District. The recommendation therefore is that BtLAB can be incorporated into CAPS and made mainstream, with more concrete activities and an early test date for follow up by formative CAPS assessment. This would make BtLAB more formative as well. The direct involvement of the Grade R teachers in the process would pre-suppose in-service training to capacitate them to teach towards a BtLAB-type component of CAPS, run it and then teach from it. At the outset, this can be done in tandem with lead teachers or educational specialists. BtLAB is generic, but the best practise of contextualized approaches would be followed by BtLAB as a school-based diagnostic and formative assessment. After this, school readiness can routinely be confirmed by CAPS summative assessment each November across all the school districts. So there would have to be a longer-term application of teacher subject knowledge capacitation beforehand, linked to more through-going CAPS training inclusive of a significant BtLAB-type diagnostic assessment component. Ultimately, these processes need to flow from stronger alignment of all the Grade R training streams with CAPS, as recommended above.

***Recommendation 4: That more BtLAB can be put into CAPS***. *This can be done by redesigning BtLAB as an early, concrete, diagnostic, formative, and interventionist CAPS assessment tool administered by Grade R teachers following in-service training.*

## 6.4 Grade R teacher self-awareness

The discourse analysis revealed that the Grade R teachers who participated are ripe for subject knowledge capacitation in VPS amongst other areas of specific and useful knowledge. The challenge is that they need and want this capacitation. And, such capacitation will gain traction if it is integrated with both pre-service and in-service training of Grade R teachers. Grade R teacher capacitation will also gain a higher profile in schools where Principles and HOD's consider the personal growth

plans (PGP's) of the Grade-R teachers as inseparable from the realization of the school improvement plan (SIP).

The previous recommendations have each in some way been related to a model of professional development of Grade R teachers. The model has been termed progressive, firstly, in the sense that it seeks to follow best practices. Specifically, it follows best teacher-training practices, which impel a Grade R teacher towards maturity, competence and expertise. A best practise is identified as distinctive when enough data ratifying its effectiveness is collected through research shared at a district, provincial, national or international level. Furthermore, a best practise reviews an applied principle that works on a more universal level and then previews the application of that principle on a localized, contextual level. But it would be presumptuous to proceed without taking a good look at what is already being done locally. If what is being done locally is successful, it will confirm, or may even modify and improve the principle. If what is being done locally is less successful, it may be modified and improved by the principle. Therefore an improvement is possible both universally and locally, whereas no improvement whatsoever is less likely. This two-way change dynamic is what makes a model of professional development which follows best practices, a progressive model.

But best practices not only need localized contexts of application, but also specific knowledge frameworks of application. Therefore subject knowledge capacitation in VPS has been proposed as a key element of Grade R training design which, when addressed, may draw in other important training elements (auditory, cognitive, emotional, social, cognitive and physical development) and subjects (Mathematics, Life Skills). Ultimately, the joint providers of pre and in-service Grade R teacher training would have to remain involved in a dynamic academic-departmental partnership in which consensus is reached around a suitable and progressive model of professional development; a model which properly accounts for balance between Grade R specialization and educational generalization; a model which emphasizes the Grade R teachers' capacity to generate new or pragmatic knowledge which responds to the learners' actual needs encountered.

The model of professional development is not only progressive in accounting for the requirements of Grade R teachers to make sustained maturational-expert progress.

It is also progressive in promoting a Grade-R teacher's institutional-chronological progress. There needs to be a clear and achievable pathway by which hard-working and diligently studying Grade R teachers can access the relevant national diploma or bachelor degree at NQF Level 6. Ideally, Grade R teachers need to reach the gazetted requirement of Level 6. There is much in-service training to be done to assist Level 5 Grade R teachers to obtain the remaining credits with which to access Level 6 training. This in-service training is vital for the best teacher-training practices of addressing prior knowledge to stimulate new knowledge and developing skills required for continuous learning. If the Grade R teachers are credited for it, they will be motivated to benefit optimally from all training opportunities. They would benefit greatly from training designed to give them sustained progress along an accreditation continuum.

The recommendation is that a progressive, nationally accredited model of professional development of Grade R teachers can be (1) confirmed by departmental-academic role players; (2) presented to all South African Grade R teachers as a way forward from whichever context they find themselves in; (3) localized at school and classroom level by means of a pilot project focused on addressing a particular developmental issue such as teacher subject knowledge capacitation in VP; and (4) designed to follow best practices (maturational and institutional) involving relevant role players (teachers, lead teachers, HOD's, Grade R specialists and teacher-trainers) and contextualized methods (coaching/mentoring/lecturing on-site/off-site/online).

***Recommendation 5: That better training can be put into Grade R teachers.*** *This can be done by means of the presentation to them of a progressive, nationally accredited model for their professional development, via an academic-departmental pilot focused on mediating VP to them.*

## 6.5   Conclusion

*What subject knowledge of Visual Perceptual Skills is possessed by the Grade R teachers in School A?* The purpose of answering this research question has been to generate further study and dialogue which may address a basic underlying

challenge; the challenge is to improve the training Grade R teachers gain access to, particularly at Level 5 to begin with. As suggested by the research question, addressing this challenge was focussed on teacher subject knowledge capacitation in the area of VP.

The study revealed that the Grade R teachers in School A were doing the visual training required to impart only *half* of the key VPS profiled in this study, due mainly to some in-service training. What about imparting the other half of the VPS? What about the VP subject knowledge inputs in pre-service training, the curriculum and diagnostic assessments? The answers to these questions will differ between teachers, classrooms, schools, districts and provincial education departments. But this does not mean that the ability to impart the full range of VPS cannot be achieved.

The study has shown that Grade R training streams and the curriculum require more and better-articulated VP: then more and better VP can be inserted. This can be done by means of a Visual Skills component during the continuous production and revision of curricular-training material. Then this component can be applied in pre-primary teaching and in tertiary training contexts.

It has been found that the new curriculum and the training streams required to deliver it are still too divergent. However, they can be dovetailed in an academic-departmental partnership in which the joint initial aim can be to further capacitate Grade R teachers in VP knowledge and visual-training design skills.

If a diagnostic tool is demonstrably serviceable, it can be merged with the curricular mainstream during the process of curricular revision and infused into in-service training. Or if it cannot be merged, it can be set aside and reconceived within the curriculum.

The Grade R teachers in the study have shown that they desire more training. However, little can be done without both their trainers and their employers getting on board. Academic institutions and education departments need to partner with Grade R teachers and with one another around both a progressive model of professional development and a materially useful training focus.

VP and visual training can be the substance of such a focus, in the fundamental interests of the early-learning child. The Grade R learner, to access early reading, needs imparted VPS via visual training within a Visual Skills curricular component. And for the Grade R teacher to access early-reading teaching, the same subject knowledge needs to first be imparted to him or her, via the pre and in service capacitation process.

It is hoped that a study such as this may join other minor catalytic actions to ignite more dialogue and synergy between ideas and power, for the benefit of Grade R teachers and learners. But even where ideas or power may be deficient, at grassroots level the work must continue. The Grade R teachers in a specific school *can* be capacitated in better subject knowledge of VPS towards scaffolded visual training for early reading, leading to stronger literacy and numeracy performance in Grade 1. They can have a success story to tell of a prototype initiative, which can illuminate the path of Grade R success for wider spheres of role players.

South African children aged four and below should be everybody's concern, as are the seven-year olds "entering" the school system. But the five and six-year olds must not be overlooked, nor must the Grade R teachers trained to prepare them to read, write and calculate. The threat remains that the window of opportunity to give learners a firm foundation may, in spite of intentions of phased national roll-out, still fall through the cracks of sweeping developmental programs. But *Grade R* and *Visual Perceptual Skills* must become more than ephemeral buzz words. They must simply represent the five-year old South African child next door being able to make sense of what is seen with the eyes, so that the way forward into the reading world is not a stumble down but a step up, with a steady hand-up from the teacher.

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# APPENDICES

Appendix A:      Ethics – Consent form used on site

                 Referred to in Chapter 3 and 4

Appendix B:      Departmental (WCED) consent letter

                 Referred to in Chapter 3

Appendix C:      Transcript of discourse of sample

                 Referred to in Chapter 4

Appendix D:      VP related content in NCS for English HL

                 Referred to in Chapter 4

## Appendix A:        Ethics – Consent form used on site

**CONSENT FORM**

Christina Catherina Andrich has obtained permission from both the Cape Peninsula University of Technology (CPUT) and the Western Cape Education Department (WCED) to conduct research in public schools within the Western Cape. The title of her Master's in Education research thesis is: *Grade R educators' subject knowledge of visual perceptual skills for early reading.*

She has also signed an ethical clearance document with CPUT and made an undertaking with the WCED that the research will be of practical value to both institutions and will not cause any harm to the respondents in her study, that is, the Grade R Educators in the research site, referred to in the study as 'School A'.

These undertakings mean that she is committed to doing research which will encourage and empower the educators and school involved in the study. It is required therefore, that the Principal and Grade R Educators sign an undertaking that they are aware of the nature of the research and give permission for it to be conducted:

Undertaking

Hereby I, _____ (name & surname)

Principal / Grade R Educator (please circle), of 'School A':

Give permission for CC Andrich to conduct research in my school and class. I am satisfied that she will not publish anything that will undermine my professionalism and work; that she will always act in my and the school's best interests.

Signed: _____

Date: _____

Place: _____

# Appendix B:         Departmental (WCED) consent letter

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**REFERENCE:** 20131003-18377

**ENQUIRIES:**   Dr A T Wyngaard

Mrs Christina Andrich
21 Plettenberg Street
Worcester
6850

**Dear Mrs Christina Andrich**

**RESEARCH PROPOSAL: GRADE R EDUCATORS' SUBJECT KNOWLEDGE OF VISUAL PERCEPTUAL SKILLS FOR EARLY READING**

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 **15 July 2013 till 15 August 2013**
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 Dr A.T Wyngaard 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.     A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
11.     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.
Signed: Dr Audrey T Wyngaard
**Directorate: Research**
**DATE: 03 October 2010**

## Appendix C:       Transcript of discourse of sample

Written-response questionnaire and focus-group discussion points on 15 October 2013. (Afrikaans original text included: geskrewe response vraelys en fokus groep besprekingspunte) Note that (a), (b), (c), (d) represent the reponses of the four respective Grade R teachers in the sample.

| Question 1 | Written Responses | Verbal Responses | Summary |
|---|---|---|---|
| **Briefly describe the type of pre-service training you did and how you experienced it.** | *(a) I did 2 years of ECD training at Boland College. It was a great joy to me because I realized more and more that this was where I wanted to be (baby 'til pre-school).*<br>*(b) I did ECD Level 4 and 5 at Boland College, Worcester. I learned how to work with children and to develop them for the next Grade.*<br>*(c) Boland College, Worcester. It was a huge experience for me, to work with children and to learn. I have been at De Villiers Primary for 6 years and I enjoy the challenge of each day.*<br>*(d) My training as Grade R teacher was very instructive to me and I enjoyed it tremendously. Even the workshops and courses we currently attend are learning opportunities for me.* | *(a) (written response read out loud)*<br>*(b) I agree with a (a), we did the same training.*<br>*(c) I said to myself, I don't want to do anything else, I want to be here.*<br>&bull; *Did the two-year course exclude Grade R?*<br><br>*Yes*<br><br>*(d) I was also at Boland College for the two years. Before I landed up there I was in the wrong profession. I cried more than I laughed. My love for children is now stronger than it was in my previous job.* | All four teachers did two years of ECD training (Level 4 and 5) at Boland College for FET in Worcester. One teacher did further studies with UNISA. The ECD training was experienced as enjoyable and instructive by all the teachers. It excluded a Grade R focus. |
| *Beskryf kortliks die soort voor-diens opleiding U ondergaan het en hoe U dit ervaar het.* | *(a) Ek het 'n 2 jaar VKO opeiding by Boland-Kollege gedoen. Dit was vir my een groot genot, want ek't meer en meer besef dis waar ek wil wees. (baba tot kleuter)*<br>*(b) Ek het Educare Vlak 4 en 5 by Boland Kollege, Worcester gedoen. Ek het geleer hoe om met kinders te werk en hulle te ontwikkel vir die volgende Graad.*<br>*(c) Boland Kollege, Worcester. Dit was vir my 'n groot ervaring, om met kinders te werk, en te leer, Ek is al vir 6 jaar by De Villiers L/S en ek geniet elke dag se uitdaging.*<br>*(d) My opleiding as Graad R opvoeder was vir my baie leersaam en ek het dit vreeslik geniet. Selfs die werkwinkels en kursusse wat ons nou nog bywoon is vir my 'n leerskool.* | *(a) (geskrewe response hard op gelees)*<br>*(b) Ek stem saam met (a), ons het dieselfde opleiding gedoen.*<br>*(c) Ek het vir myself gesê, ek wil nie enigiets anders doen nie, hier wil ek wees.*<br>&bull; *Het die twee jaar kursus Graad R opleiding uitgesluit?*<br><br>*Ja*<br><br>*(d) Ek was ook by Boland Kollege vir die twee jaar.. Voordat ek daar beland het was ek in die verkeerde beroep gewees. Ek het daar meer gehuil as gelag. My liefde vir kinders in nou sterker as by die vorige werk s'n.* | |

| Question 2 | Written Responses | Verbal Responses | Summary |
|---|---|---|---|
| ***Can you remember where you learned something about visual perceptual skills?*** | *(a) Yes, it was during my ECD training that I learned that a child learns through his senses, and about the different learning styles.*<br>*(b) I learned from Christelle Andrich in a workshop.*<br>*(c) Marita Du Plooy, Mrs Andrich.*<br>*(d) Yes! On campus we had a subject, CBT. And also now in my further studies at UNISA, i had the subject KKO.* | *(c) (written response read out loud)*<br>*At the workshops which you presented.*<br><br>• *What specifically did you learn at the workshops?*<br><br>*(d) The subject CBT touched on visual perceptual things. Last year we also learned aspects of visual perception from you, which we discussed with each other, included in our lesson planning and applied in the class.*<br>*(a) At the ECD training, we also learned about the three different styles of learning, that is, auditory, visual and kinaesthetic.* | VP content was mainly touched on when different learning styles were covered, namely, auditory, visual and kinaesthetic. In service training covered aspects of VP and was conducted by both a psychologist and a learning support advisor by means of workshops and courses. Classroom application was emphasized. |
| *Kan U onthou waar U iets geleer het oor visuele perseptuele vaardighede?* | *(a)Ja, dit was tydens my VKO-opeiding toe ek leer dat 'n kind deur sy sintuie leer, en van die verskillende leerstyle.*<br>*(b) Ek het by Christelle Andrich in 'n werkswinkel geleer.*<br>*(c) Marita Du Plooy, Juffrou Andrich.*<br>*(d) Ja! Op kampus het ons 'n vak gehad, CBT. En ook nou in my verdere studies by UNISA het ek die vak gehad, KKO.* | *(c) (geskrewe response hard op gelees)*<br>*By die werkwinkels wat U aangebied het.*<br><br>• *Wat het julle spesifiek by die werkwinkels geleer?*<br><br>*(d) Die vak CBT het aangeraak op visuele persepsie goeters. Ook verlede jaar het ons aspekte van visuele persepsie by Juffrou geleer wat ons by ons met mekaar bespreek het, in ons lesse en bepanning ingesluit het en in die klas toegepas het.*<br><br>*(a) By die VKO het ons ook geleer van drie verskillende leerstyle, d.w.s., ouditief, visueel en kinesteties.* | |

| Question 3 | Written Responses | Verbal Responses | Summary |
|---|---|---|---|
| *How would you define visual perceptual skills in your own words?* | *(a) Visual Perception is that which the eyes see, and then the information which is observed is transmitted.*<br>*(b) Visual Perception is the interpretation and integration of visual stimuli.*<br>*(c) It is the gathering of information through what you see, visually with your eyes.*<br>*(d) To me it is the development of the whole body of the child. The brain, limbs and even the organs. And the brain has the chief function because it gives all the instructions.* | *(a)(written response read out loud)*<br>*The child can say what he has observed.*<br><br>• *Why will it be necessary to teach VPS to a Grade R learner?*<br><br>*It greatly helps a child to learn to read and write.*<br><br>*(d) The brain has the chief function, when the eyes see it, the correct message must reach the brain, e.g., I see the picture, is the object above, below, left, right? Then the brain can distribute the message further.* | All the definitions of VP given were clear and accurate, accounting for observation, interpretation and mental processing. The definitions appeared to be internalized as they were given in correct logical terms. They were also, linguistically distinct from each other. |
| *Hoe sal U visuele perseptuele vaardighede defineer in U eie woorde?* | *(a) Visuele persepsie is dit wat die oë sien en dan word die inligting deurgegee wat waargeneem is.*<br>*(b) Visuele persepsie is die interpretasie en intergrasie van visuele stimuli.*<br>*(c) Dit is die insameling van inligting deur dit wat jy sien, visueel met jou oë.*<br>*(d)Vir my is dit die ontwikkeling van die hele liggaam van die kind. Die brein, ledemate en selfs die organe. En die brein het die hoof funksie want hy gee al die opdragte.* | *(a) (geskrewe response hard op gelees)*<br>*Die kind kan sê wat hy waargeneem het.*<br>• *Hoekom sal dit nodig wees om VP vir 'n Graad R leerder aan te leer?*<br><br>*Dit help die kind baie om te leer lees en skryf.*<br><br>*(d) Die brein het die hoof funksie, as die oë dit sien,moet die boodskap by die brein reg uitkom, bv., ek sien die prentjie, is die voorwerp bo, onder, links, regs? Dan kan die brein die boodskap verder versprei.* | |

| Question 4 | Written Responses | Verbal Responses | Summary |
|---|---|---|---|
| ***In what way do you think visual perceptual skills can help a child get ready to read in Grade 1?*** | *(a) It enables the child to read, write and do maths.*<br>*(b) When a visual perceptual readiness program is being conducted, real objects (three-dimensional objects) should initially be used. Only later are two-dimensional objects (pictures and worksheets) brought in.*<br>*(c) It is important for every young child to have visual perceptual skills, because he/she uses his/her body to collect information.*<br>*(d) Think and reason. Language, motor skills. Emotional and social.* | *(b) (written response read out loud)*<br>• *Anyone else?* | The application of VP towards early reading was described in terms of enabling the learner to progress from concrete to semi-concrete to abstract perceptual tasks, physically gathering information and cognitively processing it. |
| *Op watter manier dink U dat visuele perseptuele vaardighede 'n kind kan help om vir Graad 1 voor te berei?* | *(a)Dit stel die kind in staat om te lees, skryf en wiskunde te doen.*<br>*(b) Wanneer 'n visuele persepsie gereedmakingsprogram voorberei word moet aanvanklik werklike voorwerpe(dri-dimensionele objekte) gebruik word. Eers later word tweedimensionele voorwerpe (prente en werkblaaie) bygebring.*<br>*(c) Dit is belangrik vir elke jong kind om visuele perseptuele vaardighede te hê, want hy/sy gebruik sy/haar liggaam om inligting in te versamel.*<br>*(d)Dink en redeneer, Taal, Motories, Emosioneel en Sosiale.* | *(b) (geskrewe response hard op gelees)*<br>• *Nog iemand?* | |

| Question 5 | Written Responses | Verbal Responses | Summary |
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| ***Give an example of apparatus which you use to teach visual perceptual skills in your class. Describe how you use that apparatus in a concrete way.*** | *(a) Concrete apparatus, e.g., blocks, shapes etc. can be used. Sorting according to shape, size, similarities and differences identified.*<br>*(b) I will use a ball. The learners must feel, they can see and they can throw and kick.*<br>*(c) Shapes – the child must sort the shapes according to colour and shape.*<br>*(d) Clay or play dough – fine-motor skills. Learners must knead it with their hands. Visually see what he/she is* | *(c) Shapes: the child must set put everything that is yellow to one side, pack it out in a pattern, or pack everything out according to colour.*<br><br>*(a) When sorting is done, the child must be able to identify similarities and differences.*<br>*(d) ((written response read out loud and modified) Shapes of letters as well as the shapes themselves can* | The apparatus used for teaching VPS in a concrete way included blocks, shapes, a ball, play dough and themed posters and pictures. There was good all round understanding that the apparatus serves to help the learners to sort |

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| | *constructing, e.g., shape of numbers and letters, own name and a picture, even number names, and different shapes. And so they also learn the colours, because the clay or toy is coloured, e.g., red, blue, green etc.* | *be formed out of clay, as well as objects such as a house. Colours and numbers can be mixed, e.g., a red number 1, a blue number 2.*<br><br>• *Anybody else?*<br><br>*(a)Also with visual pictures, a child can be asked: what is all that you see there, what is the boy doing? Posters and words must be up in the class where they can be seen; when a lesson is presented, the child will say: "This word looks like that one on the wall!"*<br>• *Anything else?* | according to shape, size and colour, identify similarities, differences and patterns even distinguish the shapes of own name and specific letters |
| *Gee 'n voorbeeld van apparaat wat U sal gebruik om visuele perseptuele vaardighede in U klas inteskerp/te onderrig. Beskryf hoe U die apparaat op 'n konkrete manier sal gebruik.* | *(a) Konkrete apparaat, bv. Blokkies, vorms, ens kan gebruik word. Sortering volgens kleur, grootte, verskille en ooreenkomste identifiseer.*<br>*(b) Ek sal 'n bal gebruik, die leerders moet voel, hulle kan sien en hulle kan gooi en skop.*<br>*(c) Vorms – die kind moet die vorms volgens kleur en vorm sorteer.*<br>*(d) Klei of speeldeeg-Fynmotories. Leerders kan dit brei, met hul hande. Visueel sien wat hy/sy maak, byv. Vorm van getalle, letters, eie naam en 'n prentjie, selfs getalname, en verskillende vorms. En so leer hulle ook die kleure, want die klei of speelding is gekleur, byv. Rooi, blou, groen ens.* | *(c) Vorms: die kind moet alles wat geel is eenkant sit, in 'n patroon pak, of alles volgens kleur uitpak.*<br>*(a) As daar uitgesorteer is, dan moet die kind ooreenkomste en verskille kan identifiseer.*<br>*(d) (geskrewe response hard op gelees en aangepas)Vorms van letters sowel as die vorms self kan uit klei gemaak word, sowel as voorwerpe soos 'n huisie. Klere en getalle kan gemeng word, bv, 'n rooi nommer 1, 'n blou nommer 2.*<br><br>• *Nog iemand?*<br><br>*(a)Ook met visuele prente, kan 'n kind gevra word: wat sien jy als daar, wat doen die seuntjie. Plakkate en woorde moet in die klas op wees waar dit gesien kan word; as 'n les aangebied is, sal die kind sê: "Hierdie woordjie lyk soos daardie een op die muur!"*<br><br>• *Nog iets?* | |

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| Question 6 | Written Responses | Verbal Responses | Summary |
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| *In what way do you think the CAPS training file has helped you to teach the children in your class.* | *(a) I think the three subjects are of such a nature that integration takes place, in other words, in whatever you do, the whole child is developed and stimulated.*<br>*(b) It helped a great deal. Children improved in literacy and numeracy, e.g., recognising letters/numbers, naming and counting them. The writing of letters also improved.*<br>*(c) The information/resources file was very comprehensive. All learning areas are set out, week by week*<br>*(d) ) In the first place, I am a very practical and creative person. The resource file is like a second Bible to me, I make useful concrete resources, and also for the other Grade R classes.* | *(c) (written response read out loud)*<br>*With the setting up of the learning area it is made clear what the child must be taught and what the child must be able to do each week.*<br><br>*(written response read out loud)*<br><br>• *Can you name the three subjects?*<br><br>*Yes, Home Language, Mathematics and Life Skills.*<br><br>*(d) The resources and the activities that are given help me to take the learning process further in a practical way and to think a little bit out of the box.* | One teacher remarked that the three CAPS subjects, namely, English Home Language, Mathematics and Life Skills facilitated the integration of the child's developmental areas. Two teachers pointed out that the resource (training) file greatly assisted them in setting up new concrete resources and learning areas on an on-going basis, according to what children must learn and be able to do week by week. They indicated that there was a flow of new ideas which stimulated "thinking out of the box". One teacher reported that the inputs from the CAPS training file had produced a visible improvement in the learners' abilities to recognize, name and write letters. |
| *Op watter manier dink U het die KABV/CAPS opleidingslêer/bronn elêer U gehelp om die kinders in U klas te onderrig?* | *(a)Ek dink die 3 vakke is van so aard dat integrasie plaasvind, m.a.w., wat jy ook al doen die kind word totaal ontwikkel en gestimuleer.*<br>*(b) Dit het baie gehelp. Kinders het verbeter in Geletterdheid en gesyferdheid, bv., herken syfers/getalle en benoem dit/telling. Die skryf van syfers het ook verbeter.*<br>*(c). Die inligting /bronnelêer was baie volledig. Alle leerareas is uiteengesit, week vir week.*<br>*(d) In die eerste instansie is ek 'n baie praktiese en kreatiewe mens. Die bronneleêr is vir my 'n tweede bybel, ek maak vir my lesse die oulikste konkrete hulpmiddels, en ook vir die ander Graad R klasse.* | *(c) (geskrewe response hard op gelees)*<br>*Met die uiteensitting van die leerarea word dit duidelik gestel wat elke week vir die kind geleer moet word en wat die kind moet kan doen.*<br><br>*(a) (geskrewe response hard op gelees)*<br><br>• *Kan jy die drie vakke noem?*<br><br>*Ja, Huistaal, Wiskunde en Lewensvaardigheid.*<br><br>*(d) Die bronne en aktiwiteite wat gegee is help my om die leerproses prakties verder te vat en 'n bietjie uit die boks te dink.* | |

| Question 7 | Written Responses | Verbal Responses | Summary |
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| *Describe your experience of the CAPS training. What do you think CAPS sets out to achieve?* | *(a) CAPS- the training has good guidelines which are passed on, CAPS would like each child to obtain knowledge and skills irrespective of their circumstances.*<br>*(b) My experience is that we need to/must get all learners onto the same level. So at all times hard work must be done with the learners so that they can understand.*<br>*(c) For me it is very enjoyable to work with CAPS, the policy is set out clearly, what is expected of you as an teacher, to teach the children.*<br>*(d) CAPS helps the Grade R learner to develop holistically, in a more practical and creative way.* | *(b) (written response read out loud)*<br><br>• *Anyone else?*<br><br>*(c) (written response read out loud)*<br><br>*(a) (written response read out loud)*<br><br><br>*(d)The play-based way of working makes it a lot more interesting and enjoyable for the children. They look forwards to the new activities each week.* | Two teachers pointed out that CAPS has clear guidelines for what teachers are expected to teach and learners are to earn. One teacher described CAPS as a play-based approach which facilitated holistic development. Two teachers indicated that CAPS, with hard work, is able to enable learners from various contexts, with varying abilities, to make constructive progress. |
| *Beskryf jou ervaring van die KABV/CAPS opleiding. Wat dink U is dit wat KABV/CAPS poog om te bereik?* | *(a)CAPS – opleiding het goeie riglyne wat deurgegee word, CAPS wil hê dat elke kind kennis en vaardighede verwerf, ongeag hul omstandighede.*<br>*(b) My ervaring is dat ons alle leerders op dieselfde vlak moet/wil kry. So dan moet daar ten alle tye hard met die leerders gewerk word sodat hulle kan verstaan.*<br>*(c) Vir my is dit baie lekker om met CAPS te werk, die beleid is mooi vir jou uiteengesit, wat daar van jou as opvoeder verwag word om vir die leerder te leer.*<br>*(d) Moet definitief wees om die Graad R leerder in sy geheel te ontwikkel in 'n meer praktiese, kreatiewe en speel wyse.* | *(b) (geskrewe response hard op gelees)*<br><br>• *Nog iemand?*<br><br>*(c) (geskrewe response hard op gelees)*<br><br>*(a) (geskrewe response hard op gelees)*<br><br>*(d)Die speel wyse van werk maak dit baie meer interessant en genotvol vir die kinders. Hulle sien uit na die nuwe aktiwiteite elke week.* | |

| Question 8 | Written Responses | Verbal Responses | Summary |
|---|---|---|---|
| ***In what way does CAPS help you to teach visual perceptual skills?*** | *(a) The CAPS has a balanced day program and each term's lesson plans are set out in such a way that all perceptions are covered.*<br>*(b) It helps me to do the things physically with the learners, e.g., kick a ball, throw, catch, to see where the learners' barriers are.*<br>*(c) It helps the child to develop comprehensively.*<br>*(d) For me personally it is the more concrete way of working that the learners are exposed to which makes the imparting of any subject enjoyable.* | *(a) (written response read out loud)*<br>*Each week there are specific VPs to address.*<br><br>• *Is there specific wording which refers to VP?*<br><br>*(d) No, there aren't. It is not written like that in the book. They will only refer, for e.g., to visual arts. Then we need to decide ourselves what we can include there for visual arts.* | The teachers indicated that CAPS provided a more concrete and practical way for developing learners comprehensively. One teacher referred to specific VPs being addressed on a week by week basis. Another indicated that VP was not explicitly referred to in CAPS. |
| *In watter opsig/op watter manier help KABV/CAPS U om visuele perseptuele vaardighede vas te lê?* | *(a)Die CAPS het 'n gebalanseerde dagprogram en elke kwartaal se lesplanne is so uiteengesit dat ons alle persepsies aanraak.*<br>*(b) Dit help my om fiesies die goed met die leerders te doen, bv., skop 'n bal, gooi, vang, om te sien waar die leerders se uitvalle is.*<br>*(c) Dit help die kind om ten volle te ontwikkel.*<br>*(d) Vir my persoonlik is dit die meer konkrete werkwyse wat die leerders aan blootgestel word wat vaslegging van enige vak genotvol maak.* | *(a) (geskrewe response hard op gelees)*<br>*Elke week is daar spesifieke visueel persepsies om aan te spreek.*<br><br>• *Is daar spesifieke bewoording wat verwys na visuele persepsie?*<br><br>*(d) Nee, daar is nie. Dit staan nie so in die boek nie. Hulle sal net verwys nab bv. visuele kunste. Dan moet ons self kyk wat ons daar kan insit vir visuele kunste.* | |

| Question 9 | Written Responses | Verbal Responses | Summary |
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| ***What kind of assessment do you do? In what way was it changed in the past to improve it?*** | *(a)Informal assessment. It is now done continuously.*<br>*(b) In the past we did tasks/sheets. Now we have sheets which are sometimes typed, but most involve practical work.*<br>*(c) Continuous assessment, most of it practical. In the past it involved more activity sheets.*<br>*(d) Continuous assessment – also referred to as informal assessment in Grade R. As I do the activities with the learners during the course of the day, I observe them without pen and book in hand. When they are busy with educational play, I quickly write down my observations at my desk.* | *(c) (written response read out loud)*<br>*Now the child does not know that he is being assessed, he is not aware of it.* | All the teachers indicated that CAPS Grade R assessment was more informal, continuous and practical than pre-CAPS assessment. |
| *Watter sort assessering doen U? Op watter manier was dit in die verlede verander om dit te verbeter?* | *(a) Informele assessering. Dit word nou deurlopend gedoen.*<br>*(b) In die verlede het ons take/blaaie gedoen. Nou het ons blaaie met aktiwiteite wat of getik word, en die meeste is praktiese werk wat ons doen.*<br>*(c) Deurlopende Assessering en meestal is dit prakties. In die verlede was dit meer "aktiewiteitsblaaie" wat gedoen was.*<br>*(d) Deurlopende assessering – ook bekend in Graad R as informele assessering. Soos ek deur die dag met die leerders hul aktiwiteite doen, neem ek hulle waar, sonder pen en boek in my hand. As hulle met opvoedkundige speeltyd besig is sal ek gou by my tafel gaan draai.* | *(c) (geskrewe response hard op gelees)*<br>*Nou weet die kind nie dat hy geassesseer word nie, hy is nie bewus daarvan nie.* | |

| Question 10 | Written Responses | Verbal Responses | Summary |
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| ***What do you think the purpose was of the BtLAB?*** | *(a) I think the purpose was to see whether the children are school ready.*<br>*(b) To test which level the learners are on. Especially the weaker children, they are tested.*<br>*(c) To see whether the child is able to apply what has been learned.*<br>*(d) To establish whether the system is working, and not so much to establish what level the learners are on.* | *(b) (written response read out loud)*<br><br>*(a) (written response read out loud)*<br><br>*(c) (written response read out loud)*<br><br>• *In the first year BtLAB was done at the start of the year. What did you think about that?*<br><br>*(d) We did not really understand what it was about.*<br><br>*(c) Yes, we didn't understand. We only see that the children are withdrawn and tested.*<br><br>*(a) I think it will be better if it is done at the start of the year.*<br><br>*(c)Yes, then we van see the learners shortcomings and work on those.* | One teacher said the purpose of BtLAB was to test school-readiness. In similar vein, another teacher said the purpose was to see whether the learners were able to apply what they had learned. One teacher indicated that the idea was to identify weaker children. Another teacher said it was not about testing the learners so much as to "establish whether the system is working" Two teachers indicated that they did not really understand what BtLAB was about, as that were not involved in the testing process. One indicated that BtLAB would have greater value at the start of the year, to which another added that this would make it possible for them to address learners' identified developmental gaps. |
| *Wat dink U was die doel van BtLAB gewees?* | *(a) Ek dink die doel was om te kyk of die kinders skoolgereed is.*<br>*(b) Om te toets op watter vlak die leerders is. Veral die swak kinders, hulle word getoets.*<br>*(c) Om te kyk of dit wat die kind geleer het / of hy dit kon toepas.*<br>*(d)Om te bepaal of die sisteem werk, en nie so seer om te bepaal op watter vlak die leerders is nie.* | *(b) (geskrewe response hard op gelees)*<br><br>*(a) (geskrewe response hard op gelees)*<br><br>*(c) (geskrewe response hard op gelees)*<br><br>• *In die eerste jaar was die BtLAB gedoen aan die begin van die jaar. Wat het julle daarvan gedink?*<br><br>*(d) Ons het nie regtig verstaan waaroor dit gaan.*<br><br>*(c) Ja, ons het nie verstaan nie. Ons sien net die kinders word uitgeneem en getoets.* | |

|  |  | (b) Ek dink dit sal beter wees as dit aan die begin van die jaar gedoen word.<br><br>(c) Ja, dan kan ons die leerders se leemtes sien en daaraan werk. |  |

| Question 11 | Written Responses | Verbal Responses | Summary |
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| ***What was the value, if any, of the BtLAB to you and to the children?*** | *(a) It does not help at all because at the end of the day the child is stil promoted to Grade 1. But as an teacher I can still try to address those barriers.*<br>*(b) It helped the learners. It helps the learners to make progress, because then the teacher knows where the fault is that needs to be worked on.*<br>*(c) No value for teacher or children. When the Education Department arrives they in any case promote the children to Grade 1, and then the BtLAB doesn't count at all.*<br>*(d) Personally I think we will get better results if the learners get more tests like this.* | *(d) It has no value for the teacher or children because when the child is withdrawn, he is tested by someone with whom he does not have daily contact. Now when the education department comes, they don't focus on what the child can't do, they focus on the child's age, and then they promote the child to Grade 1, even though we said that the child experiences problems here and there.*<br>*(a) (written response read out loud)*<br><br>• *How can the teacher contribute?*<br><br>*(a)The teacher can do an intensive, effective intervention.* | Most of the teachers indicated that BtLAB has no value for either them or the children. Reasons given are as follows: The learners are tested not by the teacher but by the education department. Then they are all promoted by the education department according to age, without any reference to their learning barriers. Because of this, as well as the timing of the testing near the end of the year, the teacher does not have the opportunity to do any focused interventions. On the positive side, one teacher indicated that the teachers can use the results to modify their teaching or project areas for early intervention the following year. Another added |
| *Wat was die waarde, indien enige, van BtLAB vir U en vir die kinders?* | *(a) Dit help geensins want aan die einde van die dag word die kind tog oorgeplaas Graad 1 toe. Maar ek as opvoeder kan wel daardie uitvalle probeer aanvul.*<br>*(b) Dit het die leerders gehelp/ Dit help die leerders om te vorder, want dan weet die onderwyser waar die vout is of waaraan gewerk moet word.*<br>*(c) Geen waarde vir opvoeder of kinders. Wanneer Onderwys department hier kom plaas hulle in elk geval die kinders oor na Graad 1, en dan tel die BtLAB geensins.*<br>*(d) Vir my persoonlik sal ons beter uitslae kry as die leerders meer soortgelyke toetse kry.* | *(e) Dit het geen waarde vir die opvoeder of kinders want wanneer die kind uitgeneem is, is hy getoets deur iemand met wie hy nie daaglikse kontak het nie. Nou wanneer die onderwys department kom, dan kyk hulle nie vas aan wat die kind nie kan doen nie, hulle kyk vas aan die kind se ouderdom, en dan plaas hulle die kind oor na graad 1, alhoewel ons gesê het die kind ervaar hier of daar probleme.* |  |

| | | *(a) (geskrewe response hard op gelees)* | that better Grade R results would be obtained if more tests like BtLAB were done. |
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| | | • *Hoe kan die onderwyser bydra?* | |
| | | *Die onderwyser kan 'n daadwerklike intervensie doen.* | |

| Question 12 | Written Responses | Verbal Responses | Summary |
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| ***What kind of feedback did you receive from the Learning Support Teacher or the District Office after the BtLAB was conducted?*** | *(a) No feedback or evidence received.*<br>*(b) Thge feedback was that the learners performed very poorly.*<br>*(c) No feedback received.*<br>*(d) No support, only the results. But our school's learning support teacher did offer support and help.* | *(a) This year we received a good list of all the learners in Grade R, which indicates where your child was unsuccessful, so we knew exactly.*<br><br>*(d)Yes, only the sheets.*<br><br>*(b) Mrs [x] did not give me the sheets but told me that the children did poorly.* | The teachers were unanimous that in 2012 the only feedback received from the District Office was the statement that the learners performed poorly and the only support received was a pledge of support from the LSE. In 2013 a comprehensive list of individual learner results was provided. |
| *Watter sort terugvoering het U ontvang van die Leerondersteuningsadviseer /Leer Ondersteunings Adviseer (Opvoeder ook)of die Distrikskantoor nadat die BtLAB afgehandel/conducted was?* | *(a) Geen terugvoering of bewyse gekry.*<br>*(b) Die terugvoering was dat die leerders baie swak gedoen het.*<br>*(c)Geen terugvoering ontvang.*<br>*(d) Geen ondersteuning, net die uitslae. Maar ons skool se leerondersteuning juffrou het ondersteuning en hulp aangebied.* | *(a) Hierdie jaar het ons 'n goeie lys gekry van al die leerders in graad R, wat aangedui het waar jou kind uitgeval het, so ons het presies geweet.*<br><br>*(d)Ja, net die blaaie.*<br><br>*(b) Juffrou [x] het nie vir my die blaaie gegee nie maar gesê dat die kinders swak gedoen het.* | |

| Question 13 | Written Responses | Verbal Responses | Summary |
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| ***How would you describe your basic role as a Grade R teacher? What would you say motivates you the most to fulfil that role?*** | *(a) I am there to impart learning in a suitable and sensitive way to learners, perceiving their needs.*<br>*(b) To present my lessons in a more practical way. To make or obtain the right resources.*<br>*(c) The basic role of the Grade R teacher is to stimulate the learner through play. The children come out of different circumstances and it is wonderful to see how that child rises up and grows.*<br>*(d) To properly establish the basis and foundation of each aspect of a Grade R learner in my class. And my purpose is also to achieve the purpose of the curriculum. I know that each child has his own leaning style- visual, practical, concrete etc.* | *(b) (written response read out loud)*<br><br>*(c) (written response read out loud)*<br><br>*(a) (written response read out loud)*<br><br>*(d) (written response read out loud)*<br>*To apply the curriculum in a play based way to the learner.* | All the teachers describe their roles in terms of being prepared to provide suitable learner-centred learning experiences for the learners. This included understanding the learners' different contexts, making useful resources, using a play-based approach and accounting for different learning styles. One teacher added that her role was also linked to fulfilling the purpose of the curriculum. |
| *Hoe sal U U basiese rol as 'n Graad R onderwyser beskryf? Wat sal U beskou as U grootste motivëring om daardie rol te vervul?* | *(a) Ek is daar om leer op 'n toepaslike en sensitiewe wyse aan leerders oor te dra en die behoefte van die leerder raak te sien.*<br>*(b) Om meer prakties my lesse aan te bied. En regte hulpmiddels te maak of te kry.*<br>*(c) Die basiese rol van die Graad R opvoeder is om die kind te stimuleer deur speel. Die kinders kom uit verskillende omstandighede uit en dit is wonderlik om te sien hoe daardie kind uitstuig en groei.*<br>*(d) Om die basis of fondasie van elke aspek van 'n Graad R leerder in my klas goed vas te lê. En my doel is ook om die doel van die kurrikulum te bereik. Ek weet elke kind het sy eie leerstyl- Visueel, prakties, konkreet ens.* | *(b) (geskrewe response hard op gelees)*<br><br>*(c) (geskrewe response hard op gelees)*<br><br>*(a) (geskrewe response hard op gelees)*<br><br>*(d) (geskrewe response hard op gelees)*<br>*Om die kurrikulum op 'n speelswyse by die leerder toe te pas.* | |

| Question 14 | Written Responses | Verbal Responses | Summary |
|---|---|---|---|
| ***What kind of support do you receive from your school and from the education department?*** | *(a) The necessary advice is given and various workshops and courses are presented.*<br>*(b) The school does tests with the learners to see where the barriers are and the education department offers support with towards the presentation of lessons.*<br>*(c) We regularly attend workshops provided by the education department. Our head of department also regularly shares information with us and ideas are exchanged. Often the Grade R classes are sidelined.*<br>*(d) From the school's side the HOD moderates us, the ILST, subject head/grade head come together regularly and the subject advisor comes to support us by visiting.* | *(c) (written response read out loud)*<br><br>• *In what way does it happen that Grade R is sidelined/*<br><br>*It sometimes seems to me as though Grade R is not considered to be important. But the important development starts with the young child.*<br><br>*(d)There are the work sessions once per term..*<br><br>*(a)I wish to add that they did identify two children. It would be much better if the children were tested at the start of the year, because then we teachers can follow it up.* | Teacher support from the school was described in terms of moderation and ideas exchanged with the HOD and collaboration between the grade and subject heads. One teacher indicated that it seemed as though Grade R classes were sometimes sidelined and not considered important. Support from the education department was described in terms of regular practical workshops as well as visits by the subject advisor. |
| *Watter sort ondersteuning ontvang U van U skool en van die onderwys department?* | *(a) Die nodige advies word gegee en verskeie werkswinkels en kursusse word aangebied.*<br>*(b) Die skool doen toetse met die leerders om te kyk waar die uitvalle is en die onderwysdepartement bied ondersteuning met die aanbied van lesse.*<br>*(c) Ons gaan gereeld op werksessies verskaf deur die onderwysdepartement. Ons departementshoof deel ook gereeld inligting met ons, en idees word uitgeruil. Baiekeer word die Graad R klasse eenkant gestoot.*<br>*(d) Van die skool – DPH modereer ons werk,OOS, Vakhoof/Graadhoof en ons kom gereeld bymekaar, en die Vakadviseur kom om ons te ondersteun deur te kom besoek.* | *(c) (geskrewe response hard op gelees)*<br><br>• *Op watter manier gebeur dit dat Graad R eenkant gestoot is?*<br><br>*Dit voel vir my partykeer dat die Graad R word nie as belangrik geag nie. Maar die belangrike ontwikkeling begin by die klein kind.*<br><br>*(d)Daar is die werksessies een keer elke kwartaal.*<br><br>*(a) Ek wil bysê dat hulle twee kinders uitgewys het.[ ] Dit sal baie beter wees as die kinders begin van die jaar getoets is want ons as opvoders kan dit dan opvolg.* | |

| Question 15 | Written Responses | Verbal Responses | Summary |
|---|---|---|---|
| ***Would you like to teach Grade R in the long term? If so, why?*** | *(a) Yes, Grade R is the basis of learning and it is a challenge to me to prepare learners for school step by step.*<br>*(b) Yes I will, I enjoy working with Grade R learners very much. The reason is that I can see what I put in. The results are very good/how the children improve.*<br>*(c) Yes, most definitely. Each day working with the little ones is a challenge and a pleasure.*<br>*(d) Yes!! I am currently busy studying further through UNISA. The Grade R learners are very dear to me, they are honest, a beam of positive energy which is contagious. And my love for children and their development is a natural thing.* | *(c) (written response read out loud)*<br><br>• *Over the long term?*<br><br>*Yes*<br><br>• *Why?*<br><br>*From when I was small I was amongst the children and mad about them.*<br><br>*(a) (written response read out loud)*<br>*Each and every day.*<br><br>*(b) (written response read out loud)*<br><br><br>*(d) I am also a parent who can see how important the development of a child is. And the children in your class also become your own children. It is wonderful to also have them as your own. I would never discourage anyone from being a Grade R teacher. You see how that child develops in spite of his circumstances. You can put a smile on his face by doing a simple thing like giving a hug. It is also great when a child says, "teacher, you look nice today."* | All the teachers responded to this question with an enthusiastic affirmative, substantiated various motivations, as follows: the strategic importance of Grade R, the challenge of achieving school-readiness, sheer enjoyment of the work, tangibility of the results of the work, natural and parental empathy and the appreciative responsiveness of the learners. One teacher was directing her high level of motivation to further educational studies through UNISA. |
| *Sal U graag in Graad R onderrig wil gee oor die langtermyn? Indien so, hoekom?* | *(a) Ja, Graad R is die basis waar leer plaasvind en dis vir my 'n uitdaging om leerders stap vir stap gereed te maak vir skool.*<br>*(b) Ja ek sal, ek geniet dit baie om met Graad R leerders te werk. Die rede is ek kan dit sien wat ek insit. Die resultate is baie goed/hoe die kinders verbeter.*<br>*(c) Ja baie beslis. Elke dag is vir my 'n uitdaging en 'n plesier om met die kleintjies te werk.*<br>*(d) Ja!! Ek is tans besig om verder te studeer deur UNISA. Die Graad R leerders is vir my baie na an die hart, hulle is eerlik en het 'n straal* | *(c) (geskrewe response hard op gelees)*<br><br>• *Oor die langtermyn?*<br><br>*Ja*<br><br>• *Waarom?*<br><br>*Ek was van kleins af tussen die kinders en mal oor hulle gewees.*<br><br>*(a) (geskrewe response* | |

| | | |
|---|---|---|
| *positiewe energie wat aansteeklik is. En my liefde vir kinders en die ontwikkeling van kinders is natuurlik.* | *hard op gelees)*<br>*Elke, elke dag.*<br><br>*(b) (geskrewe response hard op gelees)*<br><br><br>*(d) Ek is self 'n ouer, iemand wat sien hoe belangrik die ontwikkeling van 'n kind is. En die kinders in jou klas word ook jou kinders. Dit is wonderlik om hulle ook te hê as jou eie. Ek sal nooit iemand afraai om 'n Graad R onderwyser te wees nie. Jy sien hoe daai kind ontwikkel ongeag sy omstandighede. Jy kan 'n glimlaggie op sy gesiggie sit deur 'n eenvoudige ding te doen soos om 'n drukkie te gee.Dit is ook lekker wanneer 'n kind sê: "Juffrou jy lyk mooi vandag."* | |

## Appendix D:      VP related content in NCS for English HL

| Listening and Speaking (Content/Concepts/Skills) | Emergent Reading (Content/Concepts/Skills) | Emergent Writing (Content/Concepts/Skills) |
|---|---|---|
| Notes: Terms 1- 4 indicated as "T1,2,3,4" Suggested Assessments(Informal/Oral and/or Practical/Observation) in italics | | |
| Daily activities<br>• Copies correctly (T1)<br>• Listens to and recalls in order simple word sequences (T1,2,3,4)<br>• Sequences pictures of a story (T1,2,3,4)<br>Uses language to think and reason<br>• *Identifies and describes similarities and differences* (T1,2,3,4)<br>• *Matches things that go together, and compares things that are different* (T1,2,3,4)<br>• *Identifies parts from the whole* in 2 and 3 dimensional formats. Copies a picture or a pattern from a card (2-D) using blocks or plastic shapes (3-D) (T4)<br>Uses language to investigate and explore<br>• *Solves and completes jig-saw puzzles (T1 five piece,* T2 ten piece, T3 ten to twenty piece, T4 twenty or more piece)<br>Uses visual and pictorial cues to make meaning<br>• *Recognizes and points out common objects in pictures* (T1) | Reading: Emergent reading skills<br>• Develops correct eye movements such as following a swinging ball from left to right (T1,2,3 follows pencil moved from left to right)<br>• Develops directionality by moving blocks from left to right and top to bottom(T2,3 by "reading" a series of pictures or arrows)<br>• Distinguishes between shapes of different letters and words, sorting objects that are the same, sequencing pictures, identifying the odd one out(T1)<br>• Sequences pictures in a story(T1,2)<br>• Uses memory skills to recall items seen such as letters, shapes or concrete objects(T1)<br>• Completes a visual picture such as building puzzles(T1)<br>• Uses pictures to predict content of stories: 'reads' pictures and captions showing an understanding that pictures and words are related but different(T1,2 *uses pictures* to 'read' simple phrase or caption books, predicts by using familiar texts and picture cues,3 *to understand simple phrases and sentences in a book)*<br>• Interprets pictures to make up own story(T3,4 to construct ideas)<br>• Distinguishes pictures from print(T3,4)<br>• 'Reads' theme related flashcards and captions in a group with teacher(T2)<br>• Recognises own name and the names of at least five other children(T1,2)<br>• *Matches words to words on objects and named items*(T1,4 words to pictures in print such as word-picture puzzles)<br>• Listens to and discusses stories and other texts read or told aloud, recalling details and main idea(T2,3,4)<br>• *'Reads' picture books* with three or four predictable sentences(T3,4 of increasing complexity)<br>• Uses words like 'sound', 'word', 'letter', 'rhyme', 'beginning', 'middle' and 'end' when talking about texts(T3)<br>    Reading: Begins to make meaning of written text<br>• *Understands that print communicates meaning*(T1,2 *knows words can represent own name, names of people, places and things)*<br>• Understands that written words refer to spoken words(T1,2 daily news written down by teacher as child speaks)<br>• Recognises own name and the names of at least five other children(T1)<br>• *'Reads" high frequency words*: own name, common brand names and television programme titles(T1,2 peer names, calendar and weather words,3 *in the community*,4 in the classroom/school)<br>    Shared reading (using at least five Big Books/term)<br>• *'Reads' enlarged texts as a whole class with the* | Handwriting: daily activities using creative art and music rings to develop fine-motor skills<br>• *Forms letters in various ways using the whole body*(T1,2 *finger painting, paint brushes, wax crayons*,3 pegboards, elastic boards,4)<br>• Traces simple outline of pictures and patterns(T1,2 and own names, where the correct starting point and writing direction are indicated on letters,3,4)<br>• Copies patterns onto pegboards(T1,2 and copies patterns, words and letters onto paper,3,4)<br>• *'Writes' in sand trays*(T1,4 *'writes' with a variety of writing tools such as crayons, pencils and chalk*)<br>• Forms some lower case letters correctly, starting and ending in correct place(T4)<br>    Emergent writing<br>• *Pretend writing represented using squiggles*(T1,2 *using mixture of copied letters and squiggles*,3)<br>• Adds a word, phrase or sentence to a drawn picture(T4)<br>• *"Reads" what squiggles 'say'*(T1,2 *what letters and squiggles say)*<br>• *Copies known letters in own name to represent writing*(T1,2 *copies letters from classroom* |

- Perceives objects in the foreground and background (T1,3,4)
- *Finds an image in a detailed picture* (T1,2,3)
- Distinguishes between shapes of different letters and words by sorting identical objects, viewing a sequence of nearly identical pictures, picking out the one that is different and explaining why(T1,2, 3 involves letters like 'c' and 'a', 4 involves sorting plastic letters into groups of the same letter)
- Remembers what the eyes have seen in a memory game (T1)
- *Looks carefully at pictures and talks about common experiences* (T2,3,T4 uses pictures to predict content of stories)
- Matches picture and words using puzzles (T4)

*teacher*(T1,2,3,4)
- *'Reads' class or group generated texts*(T3,4 personal texts such as sentences written by the teacher)
- Points at words rather than pictures when 'reading'(T4)
- Makes links to own experience when reading with the teacher(T3,4 when viewing television or pictures)
- *Discusses and describes story characters*(T1,2,3 *gives opinions*,4)
- Draws pictures to capture main idea of stories(T1,2,3,4)
- Sequences pictures in a story(T1,2,3)
- Identifies sequence of events in stories(T,4)
- Uses book cover and illustrations to predict storyline(T3,4)
- Answers a range of questions based on the story(T3,4)
  Independent reading
- 'Reads' for pleasure in the reading corner(T1,2,3,4)
  Phonological/Phonemic awareness (doing many of these sound activities in routines and rings)
- *Distinguishes aurally between different sounds*(T1,2)
- *Identifies a sound that does not belong in a sequence*(T1)
- Listens for the odd word in a sequence where all the other words begin with the same sound(T2)
- Identifies whether two given sounds are the same or different(T1,2)
- Can identify that oral sentences are made up of individual words: clap on each word in a sentence where all words have only one syllable(T1)
- Segments oral sentences into individual words using word of one syllable first(T3,4)
- Divides multisyllabic words into syllables: uses clapping or drum beats on each syllable in the word or identifies the number of syllables in the names of the children in the class(T2,3 common names,4)
- Identifies rhyming words in well known rhymes and songs, anticipates rhyming words in new songs and rhymes(T2,3 substitutes rhyming words,4 identifies rhyming words in sequences of rhyming words)
- *Recognizes and names some letters of the alphabet*(T3,4)
- Recognizes initial spoken sounds(T2)
  Phonological/Phonemic awareness: relating sounds to letters and words
- Begins to recognize that words are made up of sounds(T1,4)
- Relates sounds to letters and words(T4)
- Understands that words consist of more than one sound(T2,3,4)
- Can recognize sounds at the beginning of some words(T2,3,4)
- *Recognizes aurally /visually some initial consonants/vowels at the start of common words*(T3)

*environment in own writing attempts*,3 labels from advertisements,4)
- *'Writes" from left to right and top to bottom*(T1,2,3,4)
- *'Reads" own and others 'writing'* (T4)
- *'Writes' and asks others to give meaning to what has been written*(T4)
- *Makes attempts at familiar forms of writing, using known letters.*(T4)
  Working with words
- Groups words which start with same initial sound or same letter(T1,2)
- Groups pictures of rhyming words(T3,4)
- Identifies name in print(T1)
- Identifies a letter or a space between words in print: own names or familiar words or in a book(T,2,3,4)
- Contributes sentences to a class piece of writing(T,2,3,4)
- Uses words like 'sound', 'word', 'letter', 'rhyme', 'beginning', 'middle' and 'end' when talking about texts(T3,4)
- Copies short sentences and words written by the teacher(T4)