The Identification of Assessment Resources to Support Children Learning to Read in the Early Years of School

Literature Review

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1. Introduction to the literature review of assessment of literacy in Early Childhood

There is some controversy about the assessment of literacy in early childhood which is characterised by debate about the purpose of assessment, when it should be carried out, and the most effective types of literacy assessment in the early years. There is growing recognition that the purposes, forms and interpretations of literacy assessments are culturally determined and reflect social values, beliefs and practices about literacy and learning. For example, the age at which children are expected to learn to read and write differs across cultures, as do literacy pedagogies and policies. These differences have implications for decisions about assessment and teaching and learning outcomes. However, within the assessment debate there is broad agreement that assessment of literacy is an important part of the early childhood curriculum. The Early Childhood Australia position statement for Language and Literacy asserts that assessment and monitoring of children's progress should be an integral, ongoing part of the teaching / learning process (ECA, 2007). http://www.earlychildhoodaustralia.org.au/position_statements/language_and_literacy.html. The Australian Literacy Educators Association, in the STELLA (Standards for Teachers of English Language and Literacy in Australia) website (n.d.), states that assessment has a central role in literacy teaching and learning in that it facilitates student learning, informs improvement in teaching practices, and contributes to planning for future learning. The National Inquiry into the Teaching of Literacy (NITL) (2006. p. 18) *Teaching Reading* report recommends that literacy teaching throughout the school years be informed by 'comprehensive, diagnostic and developmentally appropriate assessments of every child, mapped on common scales.'

This report also recommends that school entry assessments on every child be carried out, as well as regular monitoring of decoding and word reading accuracy, and other literacy skills. Furthermore, the report recommends twice yearly reporting for the first three years of school. The Western Australian Literacy and Numeracy Review (WALNR) (2006, p. 9) makes two recommendations regarding literacy assessment in the early years. It recommends pre-primary diagnostic assessment of awareness of sounds in words (phonological awareness), and Year 1 on-entry diagnostic assessment of literacy and numeracy skills (p.9).

Taking into account the social context of decisions about assessment, this literature review seeks to, firstly, define literacy and describe components of reading within the Australian context and, secondly, identify and describe a range of assessments.

Purposes of assessment

Assessment of reading in the early years can serve several purposes: it can identify children who need additional support; it can provide information for reporting purposes; and it can inform teachers as to the effectiveness of their teaching strategies and programs for meeting literacy outcomes (Paris & Hoffman, 2004). Research suggests that, optimal progress for all children depends on accurate and regular assessment, and it has been shown that exemplary literacy teachers, whose students show higher than average 'growth' in literacy, use 'fine grained' knowledge of children's literacy performance to identify children's literacy needs and guide their planning and teaching (Louden et al., 2005).

Assessment also enables teachers to cater for a diversity of literacy learning needs. Information about the social, cultural and linguistic background of students, their home and community literacy and language practices, the funds of knowledge students bring to school and how this might be utilised in the classroom, is an essential part of literacy assessment (Johnston & Rogers, 2002). This perspective puts the teacher at the heart of the assessment process as initially, information about literacy is gained through contact with parents / carers and detailed observation and interaction in the classroom. Thus, children from a diversity of cultural and linguistic backgrounds can be given targeted, meaningful, appropriate learning experiences, when teachers are fully informed about their existing literacy knowledge and practices (Brantley, 2007).

In recent years there has been a focus on the 'prevention' of early reading problems (Snow, Burns, & Griffin, 1998) through appropriate 'first wave' teaching, and this is based on instruction that is informed by accurate assessment data (Louden, 2000). Recent research suggests that it is important to identify children who appear to be 'at risk' of literacy failure as early as possible, as children who fall behind during the early years of schooling rarely 'catch up' with their peers (Juel, 1988; Torgeson, 1998). Both *Teaching Reading*, the report of the National Inquiry into the Teaching of Literacy (NITL) (2006) and the Western Australian Literacy and Numeracy Review (WALNR, p.13) endorse this view. The Western Australian Literacy and Numeracy Review (WALNR, p.13) states that 'the assessment of all children by their teachers at school entry and regularly during the early years of schooling is of critical importance to the teaching of reading'. The *Teaching Reading* report suggests that the early identification of reading difficulties enables intervention strategies to be implemented

early in the child's schooling (NITL, 2006). However, the question of how early to assess and intervene continues to be the subject of debate. It is argued that, if children come to school with few 'school-like' literacy experiences, it would be premature to conclude that they are experiencing difficulty in learning to read, although they may be deemed 'at risk' if not provided with appropriate teaching / learning experiences. Most children develop a range of literacy knowledge and skills during their first year at school: therefore, it is argued by some that it would be more productive to enable children to participate in an effective literacy environment in their first year of school, before assessing them to identify intervention needs (Clay, 1998; Johnston & Rogers, 2003).

Clearly, it is critical to appropriate planning and teaching, that regular assessment is undertaken during the first year of school, providing teachers with a road map of what needs to be taught. This is especially important in early childhood, as children in their first year of school can vary greatly in their literacy knowledge: some know very little about school based literacy, and others can read as well as children three or four years their senior (Hargis, 2006). In these circumstances, it would be inappropriate, if not unethical, to fail to offer a differentiated program, based on assessment data. Assessment to inform teaching is clearly necessary at an early stage, but the type and exact timing of assessment is under debate.

If the purpose of 'at school entry' assessment is primarily to identify children 'at risk', this raises the question of who to assess and how to accommodate the dynamic nature of young learners' progression in literacy (Salinger, 2006), and how to address the question as to where 'risk' resides – within the child or within the teaching / learning

practices. It is necessary to ask how school entry assessments can take into account what the child already knows about literacy and can do with literacy, especially in relation to children who are becoming bilingual or bi-dialectal.

This literature review shows that there are many complexities in the assessment of literacy, as pointed out by Valencia, '[A]ssessment serves many purposes, and … instruments designed to serve one purpose do not necessarily serve another' (2007, p. 3). Although this statement is reflected in the literature repeatedly (Farr & Trumbell, 1997; Reutzel & Cooter, 2005), it seems that some debate remains amongst educators as to the purposes, uses and efficacy of various literacy assessments (Afferbach, 2007a). This literature review attempts to provide clarification, with particular reference to reading assessments that are intended for use with young children, particularly those aged three and half to eight years (K-3).

2. Assessment in Early Childhood

Definitions of assessment

There is a proliferation of definitions of assessment in the literature, with various levels of agreement about what constitutes assessment. Assessment in this document refers to all forms of measurement and appraisal that are recorded and integrated in an organised manner, for the purpose of gathering authentic, regular details and objective information about a child's accomplishments (MacAfee & Leong, 2002) Thinking of assessment as a process acknowledges that data collection and its analysis and evaluation is on-going and cumulative.

Assessment is carried out through various assessment tools, techniques or data collection methods, often called 'assessments', instruments, tools or measures. It has been suggested that a group of assessments used to comprehensively measure a

particular domain may be referred to as an assessment 'system' (Snow, 2002). It should be noted that there is sometimes confusion between 'assessment', 'evaluation' (Cobb, 2003) and 'reporting', with the three terms often being used interchangeably. However, 'assessment' relates mainly to collection of data or evidence about a child's learning, 'evaluation' refers to analysis and making judgements about the child's learning using the data collected, and 'reporting' refers to recording the assessment and /or evaluation information (Annandale et al., 2003).

General issues in assessing young children

The literature has highlighted a number of factors which need to be considered in relation to the assessment of young children. Research suggests that the younger the child, the more difficult it is to be confident about assessment results (Salinger, 2006). A comprehensive assessment system requires ongoing, cumulative assessment using multiple data sources from multiple viewpoints and contexts. A single 'snapshot' assessment is inadequate, especially in the early years when growth can be rapid, episodic, and children's level of competence will vary according to the context and the task.

The identification and incorporation of the 'funds of knowledge' that children bring to school is seen as central to further development. This perspective advocates close liaison with parents / carers through informal and semi-formal interviews and detailed recorded observations of children in a range of contexts through which they demonstrate their knowledge, skills and understanding. Accessing children's experiences outside the classroom gives the teacher insight into the way in which children think and helps identify different strengths and different learning modalities. This information can then be used to inform the teaching and learning program in ways that enable children to make connections between the known and the new.

This is particularly important for children from diverse linguistic and cultural backgrounds, whose cultural knowledge, values and practices may differ significantly from school-based ways of learning. In addition, there is overwhelming evidence that children's home languages have a continuing and significant role in identity, social and emotional competence, learning and the development of English (Au, 2000; Makin, Campbell & Diaz 1995). Given that home language skills are transferable and strengthen understanding of language use, the literature suggests that children should be encouraged to continue to build a strong foundation in their home language. This has important implications for assessment, where recognition of competence in home languages forms part of the overall picture of children's level of understanding and skills. Conversely, when assessing EAL / EAD it is important to be aware that it takes between 2 and 3 years to develop English for social and conversational purposes whereas it may take up to and beyond 5 years for cognitive and academic language to develop. The context and length of time learning English, as well as differences between languages will also effect the way in which children learn and use English.

The use of informal tests in early childhood

Informal assessments have informed early childhood education for many years. Often carefully constructed, contextually based and culturally sensitive, these types of assessments (for example, observation schedules, recorded conversations, annotated work samples) are generally criterion referenced as opposed to norm referenced. They rely on skilful, knowledgeable teacher construction and interpretation and are often regarded as more 'authentic' than standardised and /or commercial assessments (Abadiano & Turner, 2003; Buhagiar, 2007).

According to Puckett (2000, p. 37), '[T]he process of authentic assessment considers development, learning, teaching, and assessment as ongoing, continuous, interrelated, and all occurring at the same time'. Much authentic assessment depends on skilful, focussed observation and the analysis of children's work samples and work processes. The validity of such professional judgements can be augmented by regular group discussions and individual reflections (Puckett, 2000). Indeed, moderation is an important aspect of all informal assessments.

However, due to concerns about the low level of validity and reliability of informal assessment types, in some circumstances, teachers may need to 'triangulate' results with other assessment types to ensure as high a degree of veracity as possible. Moderation processes should be set in place to guard against subjectivity.

The use of formal tests in early childhood

Formal tests have been identified as a useful way of screening, diagnosing and monitoring children's progress and each of these purposes is discussed in detail in section 5 of this review. However, it is important to document some of the general concerns about the effects of formal tests on students, especially on young children. As outlined by Linn and Miller (2005), one of the main criticisms is that tests, and formal testing environments, can cause anxiety in many students. This anxiety can affect their performance and thus the validity of the test results. If using tests, it is thus necessary to observe their effects on children.

A second criticism of tests and, indeed, any assessment types, involves the fact that children can be categorised and labelled (Linn & Miller, 2005). This can influence the

ways in which students are perceived and the ways in which they perceive themselves, influencing future performance (the 'pygmalion effect'). In the case of very young children, it is particularly easy to incorrectly label children, since accurate assessment is complex and difficult. Furthermore, it has been argued that tests can damage children's self-concept if not used judiciously, and that they can set up self-fulfilling prophecies (Linn & Miller, 2005).

The Association for Childhood Education International position paper (Solley, 2007) lists the following disadvantages of formal assessments in early childhood contexts: The use of formal assessment often:

- results in increased pressure on children, setting too many of them up for devastating failure and, consequently, lowered self-esteem;
- does not provide useful information about individual children, yet often becomes the basis for decisions about children's entry into kindergarten, promotion and retention in the grades, and placement in special classes;
- leads to harmful tracking and labelling of children;
- compels teachers to spend precious time preparing children to take the tests, undermining their efforts to provide a developmentally sound program responsive to children's interests and needs;
- limits educational possibilities for children, in distortion of curriculum, teaching and learning, as well as lowered expectations;
- fails to set the conditions for cooperative learning and problem-solving.

It has also been pointed out that standardised test results tend to be highly correlated with parental occupations, level of education and income (Wortham, 2005, p. 11). All these issues are worth considering when assessing children using formal tests.

Finally and perhaps most significantly if it is accepted that literacy is a complex process, which involves many different aspects of development, then formal tests can only provide limited information and need to be augmented with informal assessments.

General issues relating to the specific assessment of *reading* in young children are discussed in section 6 of this review.

3. What is literacy?

There are numerous definitions of literacy, ranging from traditional perspectives which view literacy simply as reading and writing to current perspectives which take a much broader view. Recent perspectives include speaking and listening, reading, writing and viewing, as well as critiquing texts as part of literacy (Hill, 2007; National Inquiry into the Teaching of Literacy, 2006). The NITL (2005, p. 7) suggests that literacy 'involves the integration of speaking, listening, viewing and critical thinking with reading and writing'. It states that being able to create and use texts for a variety of purposes, in a number of different contexts, is part of becoming literate. As well as identifying particular modes of language, the West Australian *Curriculum Framework* (1998, p. 84) has also identified the importance of understandings and skills which form the basis of language learning. The advent of information technology has led to the concept of multiliteracies, which include electronic literacies, technoliteracies,

digital literacies and visual literacies, as well as 'traditional' print based literacies (Hill, 2007). Thus, becoming literate in today's society requires the knowledge and skills needed to read and write and use spoken and written language as well as sounds and visual images.

Educators' understandings about the nature of literacy learning have also changed and more recent perspectives suggest that literacy is a social phenomenon, influenced by social and cultural factors as well as cognitive abilities. The West Australian *Curriculum Framework* (Curriculum Council, 1998, p. 95) endorses this view, stating that language learning is both a social and collaborative process. This social and collaborative process starts from birth as children become involved in a range of everyday social and cultural events. It is through these events that children begin to learn about literacy. For example, as young children watch television, videos, DVDs, use different types of texts, attend religious institutions, take part in family and community celebrations, observe or join in computer activities, they are gaining expertise and knowledge about the purposes and forms of literacy in their community (Kress 2003; Lankshear & Knobel 2003). Furthermore, as suggested above, many literacy practices involve the use of a combination of linguistic, visual, audio and spatial resources to make meaning. For example, interactive books and games often use a combination of visual icons, auditory texts and graphics to support the narrative (Hill, 2007). This suggests that from an early age, children are involved in a diverse range of complex and multi-dimensional literacy practices which vary according to their social and cultural background.

As well as developing understanding about the forms and functions of print, literacy learning involves decoding (the relationship between the sounds of oral language and the way in which these sounds are symbolically represented) and comprehension (an understanding of the meaning of the spoken and written word). The development of all these aspects of literacy is influenced by the child's engagement in different types of practices which, in turn, impact on motivation and attitude towards learning literacy. Thus, literacy learning cannot be viewed as a pre-programmed universal sequence of development: rather, development is shaped by the interface between experience and cognitive abilities and learning styles (Fleer & Raban, 2007). However, while recognising individual variation in sequence and rate of literacy learning, several theorists have identified general stages of development which may help to map children's progress and guide appropriate learning experiences.

The sociocultural view of literacy suggests that when children enter formal schooling, they already have some knowledge about and experience of literacy practices. The NITL report, *Teaching Reading*, (2005, p. 15) recognises that literacy begins before formal schooling and that parents can give children the 'best start' to their literacy development. The West Australian *Curriculum Framework* (1998, p. 94) also acknowledges the importance of valuing and building on the competencies and understandings that children bring to school.

This view of literacy has important implications for assessment, particularly in relation to 'on entry' testing. Research suggests that for children who have experience of 'school like' literacy practices, there is a high degree of continuity between home and school. Where the literacy practices between home and school are less congruent,

however, some children may face initial difficulties in responding to the demands of a school based early literacy curriculum (Hill., Comber., Louden., Rivalland & Reid, 1998; Makin & Jones Diaz 2002; Paulson & Kelly 2004). Helping children to make connections between family and community literacies and school based literacy practices forms the basis of successful early literacy programmes. Appropriate assessment procedures are necessary in order to discover what the child brings from home, yet what is 'appropriate' may vary according to the situation.

A sociocultural view of literacy suggests that one of the most powerful ways of assessing children is through observation of children in a range of literacy based activities. This enables teachers to collect authentic information to inform future planning as well as providing data for mandatory record keeping (Fleet & Torr, 2007). More formal assessments, used sensitively can compliment this information.

4. What is important in the development of reading in Early Childhood?

While recognising that the modes of literacy are interrelated and mutually supportive, this section of the literature review will discuss the development of reading. Reading can be viewed as a problem solving process, in which children use a range of strategies and information sources to gain access to the meaning of the text. This process involves the interplay between contextual factors, motivational influences and cognitive abilities. In addition to this Fleet and Torr (2007 p.188) point out that 'there are components of success which are not so easily identified or tested, and which need to be nurtured alongside observable behaviours.' These include understandings of the

how texts are used, how texts represent meaning and critical reflection on texts (Freebody, 1992).

The following model from Bell and McCallum (2008) outlines each aspect of the process of reading, and how the aspects might be interrelated.

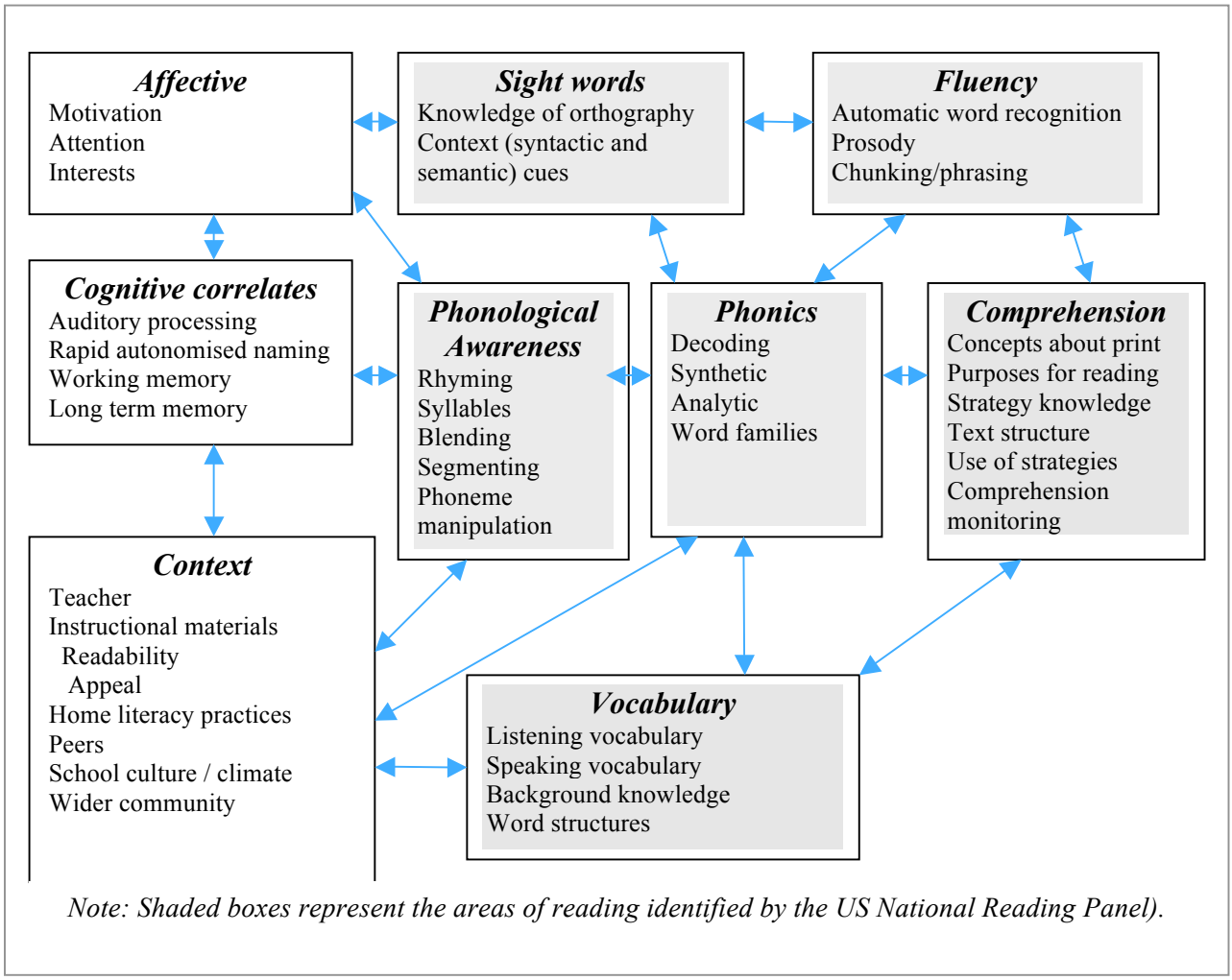


Figure 1. Inclusive model of reading. From: Bell, S. M. & McCallum, R. S. (2007). *Handbook of reading assessment.* Boston: Allyn & Bacon Pearson. p. 56.

Although each aspect of reading is important, ultimately the challenge for young children is to understand the relationships between the sounds of their spoken language and their symbolic representation and to comprehend a variety of text types. The US National Reading Panel (National Institute of Child Health and Human Development, 2000) and the *No Child Left Behind* legislation (2001) endorse this

view and have identified five essential skills for success in reading in the early years, namely:

- the alphabetic principle;
- phonological awareness;
- oral reading fluency;
- vocabulary; and
- comprehension.

In order to successfully learn these five essential skills or sets of understandings, it is pre-supposed that children have some oral language skills such as knowledge of syntactic structures and communicative purposes.

The Bell & McCallum inclusive model above (Figure 1) shows the aspects of reading found to be crucial by the NRP in the shaded boxes. The non-shaded boxes show other aspects of reading, not included by the NRP, which must be included in a comprehensive model of early reading assessment. Context is highly important in a child's literacy development, so it is thus important for teachers to find out as much as possible about home literacy practices, languages, and parental education and attitudes towards literacy. The cognitive correlates of reading are also important, although largely outside the scope of this particular literature review. Issues relating to rapid naming and auditory processing will be addressed in the oral language literature review.

Prior to the NRP, Snow, Burns and Griffin (1998) suggested that the following areas of knowledge in pre-school children are *highly predictive* of later reading success:

- alphabet knowledge;
- phonological and phonemic awareness;
- phonics and the alphabetic principle;
- concepts about print and books;
- oral comprehension; and
- vocabulary.

In *Catch Them Before they Fall,* research carried out in Western Australia, Heath, Fletcher and Hogben (2006) pointed out that, in addition to the above predictors, rapid autonomised naming of objects and colours and existing reading knowledge are also important predictors of reading success, as is the level of a child's mother's education (measured in number of years).

Scott Paris (2005) suggested that educators need to view with caution the notion that unconstrained skills such as letter knowledge and phonological awareness are predictors., However, he notes the dangers of seeing correlations as direct cause-effect relationships, and argues that these 'predictive' factors noted above are necessary but not sufficient for reading success.

The development and assessment of these aspects of literacy will be discussed in more depth in the following sections. Appendix 1 of this document, describes general indicators of development for each aspect of reading.

Oral language and its relationship to reading

Children's oral language, which is largely outside the scope of this literature review, is an important contributor to reading success. According to Hiebert, Pearson, Taylor,

Richardson, & Paris (1998), oral language serves two highly important functions in early reading: firstly, children's knowledge about words and sentences and their sensitivity to sounds, impact very significantly upon their ability to learn to read, and; secondly, oral language enables discussion about texts, which in turn facilitates comprehension and learning. In addition, through oral language, children learn about the communicative functions of language, which are highly important in learning and using written language. It is through discussion, observation and recording of children's engagement in a range of activities that their understanding of text user and text participant can be identified. Assessing critical reflection on texts is again largely identified through the recording of informal and semi-structured discussions around texts.

In *Every Child a Reader* (Hiebert, Pearson, Taylor, Richardson, & Paris, 1998), the oral language-reading connection is outlined. In connecting oral language to reading, children learn that oral language can be represented as print, and that phonemes are graphically represented by letters. They learn that texts have communicative purposes and that language structures and vocabulary vary in different oral and written contexts. Learning about the connection between oral language and written language begins early, often in pre-school and home contexts, and continues throughout primary school. The links between oral language and its importance to reading will be elaborated in the following sections.

Concepts about print (CAP)

In the English language, there are several 'concepts about print' that children need to understand before they can begin to read including knowledge about the directionality of text; knowledge about words and letters (e.g. that each spoken word is represented

by a written word and that each written word is separated from other written words a space, and that letters are represented by specific shapes); that there are other symbols (punctuation and pictures) in texts; that books are held a certain way; and that pages are turned in a particular way (Clay, 2002).

Development of concepts about print

These concepts are often learnt in pre-school environments such as the home or in child-care but, for some children, such concepts need to be taught in school.

Assessment of concepts about print

Concepts of print can be assessed informally by observation, by questioning, or by asking children to perform specific tasks to demonstrate their knowledge, such as holding a book and turning the pages. More formal methods include Marie Clay's Concepts About Print assessment, which is part of The Observation Survey (Clay, 2002). This assesses elements such as knowing: which is the front of a book; left-to-right directionality; the concept of a word; the concept of a letter; changes in word order; changes in letter order;orientation of pictures; the meanings of punctuation such as full stops; and the ability to identify capital letters. The Observation Survey is standardised and norm-referenced, although teachers can also use it more informally for diagnostic purposes. As is the case with most norm-referenced assessments, there are no published norms for the local Western Australian population.

Concepts about print: Issue for EAL / ESD children

Children for whom English is an additional language often have learnt concepts about print relating to their own language, which may be very different to English concepts. For example, some languages read from right to left or from top to bottom in columns,

others are purely logographic and do not have letters in words, still others read from the right to left. Teachers should endeavour to find out about children's home languages from the children, parents and other sources, in order to understand about a diversity of concepts about print.

Alphabetic knowledge

In order to link spoken language to written language, children need to learn about the alphabet. They need to learn how to recognise, name and write the 26 letters of the alphabet, both upper and lower case. Knowledge of letter names in the early years has been identified as a predictor of later reading ability (Heath, Fletcher, & Hogben, 2006; Scanlon & Vellutino, 1996). However, once appropriate and effective teaching of letter names commences, progress is usually fairly rapid, even among children for whom the English alphabet is not present in the home. Paris (2005) has referred to alphabet knowledge as 'constrained' knowledge because it does not usually take a long time to learn, once appropriate instruction has commenced, since the domain is finite.

There are two important reasons for teaching children letter names at an early stage (McKenna & Stahl, 2003). Firstly, letter recognition and naming is essential to allow the teaching of graphophonic relationships, as children need to be able to recognise and label letters in order to assign sounds to them. Secondly, teachers and children, need to be able to talk about letters and their sounds. Letter names are preferable to letter sounds for this purpose, since they are stable, whereas letter sounds associated with each letter are multiple.

Development of alphabetic knowledge

Several researchers have suggested developmental sequences for the learning of alphabet knowledge (see Appendix). For example, in *Every Child a Reader* (Hiebert, Pearson, Taylor, Richardson, & Paris, 1998), it is suggested that by the end of preschool (equivalent to WA kindergarten), many children will know alphabet letters that are personally significant to them, such as letters from their own name (McGee, 2007). Bloodgood (1999) has shown that letter alphabet knowledge develops only when children begin to find letters meaningful to them through interaction in contextually relevant activities, so the developmental sequence of alphabetic knowledge of children from cultural and linguistic backgrounds in which the English alphabet has not been present will vary according to their experiences.

Knowledge about letters and letter names can be developed by many different means, including games and puzzles, discussion during shared book experience, songs, and the use of charts, posters, software and environmental print. Engaging in writing can also help children learn letter names (McGee, 2007). Highly informative informal assessment can take place through observation and conversation during these activities.

Assessment of alphabet knowledge

The assessment of alphabet knowledge entails finding out which letters children can name and /or write, both in upper and lower case. Given the powerful impact of environmental print and family preferences, some children will recognise and use a combination of upper and lower case at the beginning of school. Assessment can be done informally through talking with children about texts, analysing children's

writing, and the observation of children using such materials as letter blocks. More formal methods of assessment are described in the following section.

Letter identification tasks

Clay's (2002) Observation Survey of Early Literacy Achievement (OSELA) includes a letter identification assessment, which presents a randomised list of upper and lower case letters, which the child must name and / or state a common associated sound. Clay's assessment is standardised and norm-referenced, but teachers may choose not to refer to the norms (which are not WA norms) but, instead, to use the information gathered to guide teaching. The widely used (in the USA) Dynamic Indicators of Basic Literacy Skills (DIBELS) (Good, Kaminski, Smith, Laimon, & Dill, 2001) also contains a letter identification assessment. The Neale Analysis of Reading Achievement has a sub-test that assesses letter names and sounds in its diagnostic section (Neale, 1999).

Letter production tasks

This type of task requires that children write letters of the alphabet (not copying) (McGee, 2007). Being able to do this task does not directly influence reading, although it may be used to support the learning of phonics through an invented spelling approach, which requires the ability to write letters. Children are usually be able to recognise letters before they can write them.

Alphabet knowledge: Issues for EAL / ESD children

Learning about the alphabet associated with the English language may be challenging for some children for whom English is an additional language (EAL) or for whom Standard Australian English (SAE) is a second dialect (ESD). In assessing letter

knowledge, it is essential for educators to consider a child's home language(s) and dialects. Languages have a range of ways of representing words in writing. For example, in Chinese, whole words are represented by a symbol, rather than individual phonemes (sounds) being represented by graphemes (letters or letter combinations). In some languages, although the language is alphabetic, the letters of the alphabet are different from the English alphabet. Arabic is an example of this. There are some languages, such as French and Spanish, which share the same alphabet as English, but have different names and sounds for the letters. Some children may not be aware that speech can be written down, much less that the alphabet is the means of doing this in the English language.

When assessing children who do not speak English as their first language, it is essential to consider the length of time that a child has been exposed to the English alphabet. The alphabet knowledge of children who have had little home and pre-school contact with Standard Australian English and literacy practices that are highlighted and valued in school contexts should to be evaluated with sensitivity to these factors. In such cases, it is often judicious to leave formal assessments until after the alphabet has been taught, thus, conventional 'on entry' tests that include assessment of alphabet knowledge will not necessarily be appropriate.

Phonological Awareness

Phonological awareness refers to the awareness of the sounds in language. It has been defined by Lane, Pullen, Eisele and Jordon (2002, p. 101) as: 'Conscious sensitivity to the sound structure of language.'

The importance of phonological awareness in early reading

The USA National Reading Panel (2000) identified more than 50 studies showing the relationship between phonological awareness and reading. Phonological awareness is a strong predictor of reading success in later years, most notably in the area of decoding (Blachman, Tangel, Ball, Black, & McGraw, 1999; Ericson & Juliebo, 1998; Heath, Fletcher, & Hogben, 2006; Lonigan, Burgess, & Anthony, 2000; Smith, Simmons, & Kame'enui, 1995; Snow, Burns, & Griffin, 1998; Torgeson, Wagner, & Rashotte, 1997), although it also correlates with comprehension in later years. Research suggests that phonemic awareness in conjunction with letter knowledge leads to more effective word reading, which leads to higher levels of comprehension (Rhona Stainthorp, 2003). However, as children's level of competence increases, phonological awareness is no longer predictive of reading success, as for most children it has become intertwined with word reading (Hogan, Catts, & Little, 2005). Although factors such as maternal level of education and rapid automatised naming also predict early reading success (Heath, Fletcher, & Hogben, 2006) phonological awareness is one of the only predictors that can be influenced relatively easily through early instruction and intervention.

Research has shown that it is crucial to teach and monitor children's phonological awareness in the early years, as a fundamental knowledge of phonological awareness is necessary in order for a child to fully benefit from decoding and spelling instruction involving letter-sound (and sound-letter) relationships (National Institute of Child Health and Human Development, 2000). Since English involves the encoding of phonemes into graphemes, it is essential that children understand that words are composed of phonemes and that they can be represented by letters ('alphabetic

principle'). Without this understanding, children have difficulty in decoding (reading) and encoding (spelling) words they do not know. Children with good phonological awareness can detect, match, blend, segment and manipulate speech sounds, at the word, syllable, onset-rime and phoneme level (Lane, Pullen, Eisele, & Jordan, 2002).

Development of phonological awareness

There are four levels of phonological awareness: word awareness, syllable awareness, onset-rime awareness and phoneme awareness (Lane, Pullen, Eisele, & Jordan, 2002). Some phonological awareness skills can and often do develop prior to learning to read, while others develop alongside reading (Stuart, 2005). However, the rate and sequence at which phonological awareness abilities develop varies from child to child (Lane, Pullen, Eisele, & Jordan, 2002). Even so, research suggests that that phonological awareness develops through a gradual process of refinement of sounds, starting with broad distinctions between general sounds, moving ultimately towards fine gradations of phonemes (Barratt-Pugh., Rivalland., Hamer & Adams 2006). This is illustrated in Table 1.

Developing phonological awareness

General sounds	environmental sounds (e.g., scissors cutting, body sounds) language sounds ('sssss' 'mmmmmm')

Word & rhyme awareness	the cat in the hat scary hairy fairy
Syllables	bis/cuit tel/e/phone pic/nic
Onset-rimes	onset – rime onset – rime c –at d – og h –at fr – og s –at l – og
Phonemes	c–a–p s–o–k b–r–u–sh

Table 1. Adapted from Barratt-Pugh et al 2006, p. 106.

At a very young age, children begin to realise that speech is comprised of a series of separate words. The fact that young children play with words and rhymes , and that they are able to use words in new contexts can be taken as evidence of this (Lane, Pullen, Eisele, & Jordan, 2002). They often have an understanding of rhyme and alliteration prior to starting formal schooling, depending on the types of literacy they are involved in. Once they begin pre-school phonological awareness activities the ability to work with syllables and onsets and rimes usually develops, as does the ability to identify initial sounds. The blending, segmenting and manipulation of sounds, especially final and medial sounds, usually takes longer to develop.

It is important to briefly discuss some major means of instruction of phonological awareness, since assessment is often carried out through the observation of children's performance of these key instructional tasks (through 'performance assessment'). Instruction of phonological awareness at the word level can include tapping activities, in which the child taps a stick or finger for each word heard. A common difficulty experienced by children is confusing words with syllables. Another word level

activity is the counting of words, which may involve the placement of a counter for each word heard. Word counting is more cognitively demanding than tapping words and may also depend upon basic mathematics skills.

Identification of rhyming words is the easiest of the phonological awareness tasks for most children, and it has been shown that many children as young as three years old know some nursery rhymes and are able to identify words that do not rhyme with others (known as an 'oddity task') (Maclean, Bryant, & Bradley, 1987). However, children from home backgrounds where rhymes and nursery rhymes are not common may need explicit instruction in what rhyming words are, which will involve giving many examples of rhyming words. Asking children to detect whether or not two words rhyme with each other is a simple instructional and assessment activity, and is a component of many formal and informal phonological assessments.

Rhyme generation is slightly more difficult for most children than rhyme detection and can be quite challenging for some (Lane, Pullen, Eisele, & Jordan, 2002). It can be particularly difficult for children with limited vocabulary, although this can be overcome by allowing them to generate 'nonsense' words that rhyme.

Rhyme oddity detection involves children detecting the odd word out, or the word that does not rhyme from a spoken list of three or four words. *Rhyme matching* involves children finding two rhyming words from a spoken list of words.

Although it cannot be assumed that all children have participated in rhyming songs and games, many children will know some rhymes by the time they are approximately

three years of age. Listening to and playing with rhymes and rhyming words at an early age, particularly in kindergarten, will give children a good basis for the development of onset and rimes (Cramer, 2006).

Syllable level

Phonological awareness at the syllable level involves the ability to detect, count and segment syllables in words, as well as to manipulate them. Research evidence shows that, at this level, phonological awareness is not normally difficult to teach, however, it is very important to reading. Adams (1990) has shown that the ability to segment and count syllables is important to reading, whereas the ability to manipulate them is less so.

Instruction of phonological awareness at this level often involves clapping and tapping activities, which usually involves extensive teacher modelling (Lane, Pullen, Eisele, & Jordan, 2002). Teaching children to segment multi-syllabic words into syllables can begin when children are in pre-school, for example by helping children to segment their names into syllables. By about five years of age, children who have been given experience involving syllables are likely to able to identify syllables, count the syllables in words, and delete a syllable (usually the first one) from a multi-syllabic word (Cramer, 2006).

Onset-rime level

This level of phonological awareness involves being able to detect and manipulate the onset and rime of words. The onset is the beginning sounds of a syllable, such as the /s/ in ‘sat’ or the /str/ in ‘string’. It precedes the first vowel in a syllable, which is

where the rime begins. This is a useful level of analysis for children because it helps them read by analogy (if I can read 'dog' I can figure out 'log') and learn to spell by building 'word families', or words that have a rime in common (Adams, 1990). It has been shown that being phonologically aware at the onset-rime level is a predictor of children's reading success in later years. Having had many opportunities to work with onset and rimes at school, by the time they 6 years old, many children are able to recognise onset-rimes (Goswami & Bryant, 1990).

Phoneme level

This level of phonological awareness is the most sophisticated and is likely to require the most instruction. It involves the ability to detect, count, segment, blend and manipulate individual phonemes. This is an important ability in that it is a precursor to being able to use grapho-phonic knowledge to 'sound out' when reading and spelling. This level of phonological awareness is often referred to as 'phonemic awareness' (Lane, Pullen, Eisele, & Jordan, 2002), although it must be noted that some international authors refer to 'phonological awareness' as 'phonemic awareness'.

The instruction of phonemic awareness involves a variety of activity types, such as sound detection and counting, sound matching, and sound oddity detection. In sound detection activities, children are asked to say which word begins (or ends) with a particular phoneme. This can be done in the context of story reading or through games. The UK Primary National Strategy's *Letters and Sounds* materials contain many useful games and activities to teach these aspects of phonological awareness (Primary National Strategy, 2007). More sophisticated tasks at the phoneme level

involve the blending and segmenting of individual phonemes, phoneme deletion and manipulation tasks.

Research has shown that by the end of first grade (USA), as a result of both explicit and implicit teaching, the majority of children can count phonemes (Cramer, 2006), and by the time they are six or seven years old, most children can delete and add initial phonemes to make new words in words of up to three phonemes (Pratt and Brady, 1988, cited in Cramer, 2006). However as in all other aspects of reading and learning, there are many exceptions to this and level of competence depends on many factors.

Assessment of phonological awareness

There are several ways in which to assess phonological awareness, and which method to employ will depend upon factors such as the number of children to be assessed, the amount of information the teacher already has about the child, and the amount of time available in which to carry out the assessments (Lane, Pullen, Eisele, & Jordan, 2002, p. 103). The facet of phonological awareness to be assessed and purpose for the assessment will also influence the choice of measure.

According to Lane (2002), the best measures of phonological awareness are those that are administered on an individual basis; however, there are circumstances in which group administered assessments may be adequate for the purpose. Observation of children performing specific tasks, such as the instructional tasks described above, can be an effective means of assessment. A combination of measures ensures the greatest degree of validity and reliability (Yopp, 1988).

It is beyond the scope of this literature review to discuss individual assessments in any detail. However, some major assessment types and tests are briefly outlined. Most of the phonological awareness capabilities and skills outlined above can be assessed using informal assessments, such as the 'Assessing Phonological Skills' assessment constructed by Konza (2006, p. p. 137). If screening or informal assessment reveals difficulties, formal and diagnostic assessment should be carried out.

The Yopp-Singer (1992) test is a means of assessing phoneme segmentation abilities. This assessment is composed of 22 single syllable words, which children are asked to segment into individual sounds. This assessment is not normed, but competency benchmarks are suggested. It is quick to administer and can provide important information on which instruction can be based. For example, it can show if a child is operating at the onset-rime level, or whether a child is able to segment initial, medial or final phonemes.

The Astronaut Invented Spelling Test (AIST) (Neilson, 2003a) is an instrument for assessing children's phonological awareness through their writing. The dictation test, which is part of the *Observation Survey* (Clay, 2002) also assesses children's phonological awareness (phoneme segmentation) through their ability to write a series of words phonetically. These assessments, however, do not isolate phoneme segmentation; the child's knowledge of letter-sound correspondences is also involved, as is the ability to write letters of the alphabet. The Sutherland Phonological Awareness Test (SPAT-R) (Neilson, 2003b) follows on from the AIST and is intended as a diagnostic assessment for children who do not appear to be performing

well in the AIST. There are many other commercial measures of phonological awareness.

Heath et al (2006) have suggested that it is appropriate to screen all children in the middle of Pre-Primary in phonological awareness, using an instrument with Australian norms, such as the SPAT-R. The bottom quartile should then be tested on a measure of short-term memory (digit span or sentence repetition tasks). Information about the home context should also be collected.

Phonological awareness: Issues for EAL / ESD children

In Australian contexts, there are challenges in becoming phonologically aware for children for whom Standard Australian English is a second or additional language or dialect. The challenges exist at each level of phonological awareness. At the word level, it may be difficult for some EAL / ESD children to detect individual words from the flow of English speech, until they have had time to 'tune-in' to English. There are also challenges at the phoneme level, since different languages and dialects have different phonemes. If a child is phonologically aware in their first language, some of this knowledge can be transferred into the context of the English language (see Coppola, 2005). In some cases, children may not have developed phonological awareness in their own language prior to entering school in addition, at the phoneme level, English may has phonemes that do not exist in some children's first language.

For some Indigenous children, there may be additional issues associated with otitis media, which involves intermittent hearing problems. This will clearly affect not only phonological awareness but other aspects of learning and needs to be taken into account when any assessment is being undertaken. Also, (Berry & Hudson, 1997),

have suggested that some indigenous families may substitute phonemes in words – for example, 'bideo' for 'video' and 'dat' for 'that' , thus it is important to be aware, when assessing phonological awareness, that some children may supply the substitute phoneme.

Word identification

Word identification, also referred to as word recognition, is a complex process that involves phonological awareness, phonics knowledge, and sight word knowledge. When reading connected texts, readers also use syntactic and semantic cues to facilitate word identification.

In the early years of reading, word identification is a major determinant of reading success. Without proficiency in word identification, comprehension is impeded because a disproportionate amount of a child's attention must be directed to the lower level decoding process (Samuels, 2002). Furthermore, word identification proficiency in the early years is a major predictor of comprehension in later years (Shaywitz, Escobar, Shaywitz, Fletcher, & Makuch, 1992).

Development of word identification

Ehri (1995), and others, have proposed that word recognition develops in phases, beginning with a pre-alphabetic phase, in which children recognise some letters by their shape and have an emerging understanding that letters represent sounds (the 'alphabetic principle'). During what Ehri (1995) has called the 'partial alphabetic' phase, children acquire more grapho-phonic knowledge and are able to decode some simple words, such as consonant-vowel-consonant words, such as 'dog'.

Next, children become 'fully alphabetic'. Here, they are able to apply grapho-phonic knowledge to decode more complicated words, including unfamiliar words, and they instantly recognise some words ('sight words'). This is followed by the 'consolidated alphabetic' (Ehri, 1995). Here, they 'chunk' letters together to enable them to decode unfamiliar words more effectively. In the final stage of word reading, ('automatic' reading), according to Ehri (1995), students instantly recognise words through sophisticated decoding strategies and the use of context as confirmation.

Although clearly representing stages of development, Ehri (1995) acknowledges that children do not necessarily proceed through the phases in a strict sequential manner. As with all phases of development it is important to remember that not only is the sequence of development a reflection of experiences and cognitive abilities, but also children may 'regress' and appear to be in two phases simultaneously depending on the demands of the task.

Letter-sound knowledge (phonics)

The teaching of letter-sound knowledge (phonics) has been found to be essential to helping children achieve early reading success (National Institute of Child Health and Human Development, 2000; Rose, 2006) and is also an important aspect of spelling. Phonics can be defined as 'the instructional practices that focus on therelationships between letters and sounds. It emphasises how spellings of words are related to speech sounds in systematic ways.' (Hill, 1999, p. 8). There are several types of phonics instruction (Bell & McCallum, 2008) through which informal assessments can be made via observation.

Synthetic and analytic phonics

'Synthetic phonics programs use a part-to-whole approach that teaches children to convert letters into phonemes' (Torgerson, Brooks, & Hall, 2006, p. 14). In other words, children learn to recognise letters and assign sounds to them, then to blend them together to form words. This is a bottom-up approach to learning phonics. On the other hand, analytic phonics uses a whole-to-part approach that avoids having children pronounce sounds in isolation to identify words. Rather, children 'are taught to analyze letter-sound relations once the word is identified' (Torgerson, Brooks, & Hall, 2006, p. 14). In their review of the literature, Torgerson et al (2006) conclude that the research evidence shows no statistically significant difference in effectiveness between synthetic phonics instruction and analytic phonics instruction. What appears to be important is that instruction is explicit and systematic.

Children can also be taught phonics through *analogic approaches*, where they are taught to use part of words that they have already learnt (word families or rimes) in order to decode new words by analogy. Phonics teaching through *spelling* is another common approach, where children are taught to segment words into phonemes and then represent them by using appropriate graphemes. This approach is important as it helps children realise the reversibility of segmenting and blending of phonemes in words. *Embedded approaches* involve the learning of letter-sound relationships as they read connected texts, which is a method used in whole language classrooms. However, embedded approaches are often not sufficiently explicit and systematic on their own, and need to be used in conjunction with other approaches (Bell & McCallum, 2008).

A balance of analytic and synthetic phonics, within the context of a wider reading program that includes reading connected texts for meaning, would appear to be the most effective way of teaching phonics to most children. The *Teaching Reading* report (NITL) (2005) recognises the importance of a balanced approach to literacy teaching, with the provision of direct and explicit phonics instruction (p.38). The evidence for the provision of explicit, systematic phonics instruction appears to be strong: USA National Reading Panel (2000) found that the systematic instruction of phonics is more effective than unsystematic teaching of phonics or no phonics teaching at all, especially if it begins in Kindergarten and 1st Grade (roughly equivalent to WA Pre-Primary and Year One). However, it is important to note that it would be disadvantageous for children who already have extensive and solid phonics knowledge to participate in explicit, systematic phonics teaching. It is necessary to identify these children through appropriate assessment procedures, and to give them literacy instruction that matches their needs.

The importance of phonics in reading

It is important to teach phonics for several reasons. Firstly, a sound knowledge of phonics helps children read, or decode, words that they have not seen before. This gives them more control over the reading process and enables them to read a wider variety of words and texts. In turn, phonics helps children read independently and thus more frequently and widely, helping them build a larger 'sight word' vocabulary (that is, words that are instantly recognised without the need for conscious analysis or decoding). Having a large sight word bank and being quick and efficient at decoding contributes to oral reading fluency (quick, accurate reading), which facilitates comprehension (Fox, 2008). Also, phonics (sound-letter correspondences) is important for children's spelling development.

Carole Torgerson et al (Torgerson, Brooks, & Hall, 2006) carried out a literature review on the teaching of phonics and concluded, like the NRP, that beginner readers should be taught phonics in a systematic, incremental sequence. In addition, they should be taught how to blend phonemes to facilitate 'sounding out' when reading, and that blending and segmenting are reversible processes. Torgerson's report (Torgerson et al., 2006) outlines effective phonics teaching as being part of a literacy curriculum that includes speaking and listening skills and phonological awareness. For most children, systematic phonics teaching should commence at (approximately) the age of five, but this is subject to teacher judgement. There will be occasions when phonics teaching should start earlier or later. According to *Letters and Sounds* (Department for Education and Skills (D*f*ES), 2007), it is appropriate to commence teaching a phonological and phonics program at around the age of five, following a short program based on listening to environmental, music and speech sounds.

Phonics teaching, according to the Torgerson review (2006) of the literature, should be at a brisk pace; taught daily; include a variety of multi-sensory teaching and learning strategies; and be constantly practised and reinforced through such activities as shared reading, guided reading, and writing. Careful assessment and monitoring of children's phonics learning is also recommended. These recommendations are reiterated frequently in the literature (e.g. D*f*ES, 2007).

Development of phonics knowledge

Although not all children develop phonics knowledge in the same way or the same sequence, Hiebert et al., (1998) have identified stages of development based on easier to hard aspects of phonics. In *Every Child a Reader* (Hiebert, Pearson, Taylor,

Richardson, & Paris, 1998) suggested that children learn some letter-sound correspondences during the pre-school years, once they have learnt that words can be segmented into sounds and that letters represent sounds (the 'alphabetic principle'). Later, children accomplish the ability to phonetically decode single syllable words in texts. They also monitor their own reading through using the syntactic and semantic cueing systems in conjunction with their decoding (grapho-phonic) knowledge. The next stage of phonics development involves the ability to instantly recognise single syllable words through the use of grapho-phonic knowledge and through the use of analogy (knowledge of word families or rimes). Children in this stage can also decode multi-syllabic words through phonic and structural analysis. Structural analysis involves breaking words down by units of meaning, or prefixes, root words and suffixes.In the final stage, children typically are able to decode most unknown multi-syllabic words that are not in their sight word store (Hiebert, Pearson, Taylor, Richardson, & Paris, 1998). They recognise most words automatically, through rapid decoding and a large store of sight words.

The UK Primary National Strategy resource, *Letters and Sounds*, has developed a program which is based on six phases of development of phonics knowledge (Department for Education and Skills (D*f*ES), 2007).

- Phase One is a foundational phase in which children learn phonological awareness skills such as blending and segmenting words. This is preceded by general listening activities, based on recognising environmental and musical sounds.
- Phase Two, for which the duration is approximately six weeks at the beginning of school, involves learning 19 letters of the alphabet and one sound for each.

Children also learn to blend and segment sounds, and use their knowledge of blending and letter sounds to decode simple captions.

- Phase Three involves learning the 7 letters of the alphabet not covered in PhaseTwo, and consolidating those from PhaseTwo. Blending and segmenting sounds represented by single sounds and graphemes of more than one letter is covered here.
- Phase Four involves blending and segmenting words with adjacent consonants and consolidating grapheme –phoneme correspondences already introduced.
- Phase Five builds on the phonemes and graphemes introduced in Phases Two and Three and is implemented throughout the 1st year of school. This includes the introduction of more graphemes to represent phonemes already taught and the blending and segmenting of sounds represented by all grapheme-phoneme correspondence taught so far.
- Phase Six involves word specific spellings of same sounds (eg sea / see) and increasingly fluent sounding and blending of words encountered in reading for the first time, alongside spelling of words with prefixes and suffixes.

Not all children will develop phonics knowledge at the same rate or in the same sequence as that described above. The sequence of development relates to a program of activities designed to be taught in a particular way, in a specific order. Because development of phonics knowledge depends largely on the teaching program used, assessment should relate to the teaching program.

Assessment of phonics knowledge

There are several means of assessing phonics knowledge, and several schema for assessing it. Much depends on the type of phonics teaching that the children concerned have experienced. According to Tompkins (2007), children should be

taught all phonics concepts by the end of second grade and should demonstrate all of the skills outlined below between the ages of approximately 4 and 8 years of age. In the literature, there are many suggestions regarding the sequence of phonics teaching / learning, and Tompkins is just one example.

Skill	Description	Example
Common consonant sounds	Identify consonant sounds, match sounds to letters, isolate sounds in words, substitute sounds in words.	/d/, /b/, /t/, /s/, /p/, /m/, /n/, /f/
Less common consonant sounds	As above.	/g/, /h/, /j/, /k/, /l/, /q/, /v/, /w/, /x/, /y/, /z/
Short vowel sounds	Identify the five short vowel sounds and match them to letters.	/ă/ as in cat, /ĕ/ as in egg, /ĭ/ as in wig, /ŏ/ as in rot, /ŭ/ as in cut.
CVC vowel pattern (include non-words)	Read and spell CVC pattern words.	dad, ten, sat, hip, put, zog
Consonant blends	Identify and blend consonant sounds (beginning and end of words).	/pl/ as in play, /str/ as in string, /mp/ as in camp
Onset and rimes – short vowel words	Break CVC and CVCC words into onsets and rimes and substitute onsets and rimes to make new words.	c-at, c-amp, st-amp, sp-ill,
Consonant digraphs	Identify consonant digraphs, match sounds to letters, and read and spell words with consonant digraphs.	/ch/ as in chip, /sh/ as in shop and wish, /th/ as in that and bath, /wh/ as in when, why, what
Long vowel sounds	Identify the five long vowel sounds and match them to letters.	/ā/ as in game, /ē/ as in seen, /ī/ as in ice, /ō/ as in rope, /ū/ as in cute, tube, few.
CVCe words	Read and spell CVCe words.	game, ride, slide, bone, lame
Common long vowel digraphs	Identify vowel sounds represented by common long digraphs. Read and spell words using them.	/ā/ as in rain, day /ē/ as in beach, sweet /ō/ as in soap, know
W and *Y* as consonants and vowels	Recognise W and Y as consonants at the beginning of words / syllables and as vowels at the end. Identify sounds made.	window, yesterday by, baby
Onsets and rimes – long vowel words	Divide CVCe and other long vowel words into onsets and rimes and substitute onsets and rimes to make new word	ch-ase, sl-eep, fl-y, m-ole, b-each
Hard and soft consonant sounds	Identify hard and soft sounds represented by the letters C and G and read and write words using these consonants.	/g/ as in girl, /g/ as in giraffe /c/ as in cat, /c/ as in circle
Less common vowel digraphs	Identify the vowel sounds of less common vowel digraphs and read and write word using them.	/ô/ as in walk, caught, saw, bought, /ā/ as in weigh, /ē/ as in key, chief /ī / as in pie, eye

		/ŏo/ as in would, could, should, /ū/ as in stew, blew, fruit
Vowel diphthongs	Identify the vowel diphthongs and read and write words using them.	/oi/ as in boil, boy, spoil
Less common consonant digraphs	Identify the sounds made by the less common consonant digraphs and read and write words using them.	/ph/ as in phonics, graph /gh/ as in laugh, /ng/ as in sing, hang /tch/ as in switch, match
r-controlled vowels	Identify r-controlled vowel patterns and read and write words using them.	/ âr/ - hair, bear, bare, their, there /ar/ - star /er/ - here, fear, deer /or/ - worn, store /û/ - first, bird, burn, work
Consonant spelling patterns	Read and write words using these spelling patterns.	/g/ - girl, ghost /j/ - jet, gem, rage, lodge /k/ - cat, kettle, sock /s/ - sun. circus, goose /z/ - zoo, rise, logs

Table2. Adapted from Tompkins (2007, p. 110).

Teachers can informally assess children's phonics knowledge through listening to them read (and analysing their miscues) and through analysing their spelling. Observing children carrying out word-sort activities can be highly informative Teachers can also construct their own custom-made assessments. In addition, there are also many published phonics assessments, both informal and formal. Many phonics teaching programs, such as *Jolly Phonics* (http://www.jollylearning.co.uk), have integral assessments.

McKenna and Stahl (2003) have devised an Informal Phonics Survey, through which children can show their knowledge of the following phonics areas: consonant sounds (single letters); consonant digraphs; consonant blends in short vowel words; short vowels in consonant-vowel-consonant (CVC) words; vowel digraphs; vowel diphthongs; R- controlled vowels and the 'al' (as in ball) sound. Teacher-made surveys can fulfil the same purpose as this instrument.

A number of phonics assessments involve asking the child to read a series of 'nonsense' words, or non-words, such as 'zet' or 'zill'. Indeed, McKenna and Stahl 2003) have devised a test called 'The Z Test', which is a non-word test composed of words beginning with the letter 'Z'. Non-word tests ensure that children cannot read words as visual wholes (as memorised 'sight words'), but that they use phonics knowledge to decode them. However, this type of assessment has been criticised for being meaningless to children.

The Early Names test (Mather, Sammons, & Schwartz, 2006) is intended to assess the phonics knowledge of children in the early years of school through the reading of names which use common letter patterns found in the English language. This assessment is not appropriate for children who are beginning readers, but may be useful in the phonics assessment of early readers. In this assessment, the teacher / administrator asks the child to pretend that they (the child) are a teacher calling out a school roll, and the child proceeds to read out a list of 30 names such as Rob Hap, Pat Ling, Kate Tide, Grace Nup and Ray San. Through the use of a scoring matrix, the teacher can analyse the child's performance and make some decisions about future teaching needs. Some unusual ('nonsense') names are used in this assessment to minimise the possibility of the words in the list being sight words for the children, and in an attempt to make the assessment more culturally fair. Mather et al(2006) have argued that the Names Test is more meaningful to children than are non-word tests.

In the USA, the DIBELS is frequently used as a means of assessing phonics knowledge and growth, since it comprises a section called Nonsense Word Fluency (NWF), which assesses decoding / phonics ability and speed.

Orthographic knowledge

Orthographic knowledge is knowledge about the 'system' of printed symbols / letters and letter groups, that represent spoken language (Bell & McCallum, 2008). Knowledge of letter names, comes under the umbrella of orthographic knowledge. Orthographic patterns are not only based on regular sound-symbol relationships, but also on meaning; the English orthography involves letter patterns that are not phonetic, but are based on root words and meanings from other languages, such as Greek, Latin and French. Knowledge about prefixes and suffixes and how they are added to base words to form words is orthographic knowledge.

Sight words and automatic word recognition

Automatic recognition of words, without the need to consciously decode, is known as sight word recognitionand is necessary for fluent reading and good comprehension, as it allows the reader to concentrate on higher order processes. However, in reality, it may be difficult to distinguish between sight word recognition, where the whole word is recognised instantly, and 'automatic word recognition', where the word is decoded quickly and instantly, but not necessarily without analysis. It is therefore, in general, better to use the term 'automatic word recognition'which incorporates both meanings.

Assessment of automatic word recognition

Automatic word recognition is usually carried out through the use of high frequency word lists. The OSELA (Clay, 2002) includes high frequency word lists, as does the DIBELS and many other published assessments, including Informal Reading Inventories, which will be discussed below. It is difficult for teachers to know with any certainty whether a word is a 'sight word' or whether it is being automatically, instantaneously decoded by a child. Also, the practice of having children read lists of

words in isolation can be criticised as being a task that children may find meaningless and confusing, since it is not the kind of reading task that would normally be carried out in the classroom. Furthermore, children cannot use all cueing systems when reading words in isolation.

Word identification: Issues for EAL / ESD children

According to the literature, assessment of EAL / ESD children need not differ substantially, as it is essentially focused on the constrained skills of decoding and understanding letter-sound relationships and orthographic patterns (Chard, McDonagh, Lee, & Reece, 2007). Nevertheless, it is necessary for teachers to ascertain what the EAL / ESD child's linguistic background is; how long they have been learning English; and how accomplished they are in reading in their first language. Assessment data must be interpreted with caution in the light of information about the child's first language proficiency (oral and written) and in the light of the features of the first language (e.g. orthography, syntax). Norms may not be appropriate if EAL / ESD children were not part of the norming group.

For children whose first language has predictable rules governing grapho-phonic relationships (e.g. Italian, Arabic, Spanish), the learning of English letter-sound correspondences may be more difficult because of its many irregularities (Goswami, 2002). This can prove to be frustrating for the children.

Vocabulary for reading

A detailed description of the acquisition of speaking and listening vocabulary is beyond the scope of this literature review. However, it is important to note the importance of vocabulary (lexis) to reading: vocabulary knowledge is a crucial aspect

of reading, as it facilitates word identification and comprehension. Limited vocabulary can, however, be both a cause and an effect of poor reading ability, since vocabulary can be improved through reading.

According to Harmon, Hedrick, Soares and Gress (2007, p. 138), 'Knowing a word means not only knowing the meaning, but knowing the contexts in which it is used; it means knowing related words and ideas; it means knowing when and where to use a word.' The development of vocabulary knowledge is complex and may present problems for children from diverse cultures, who may use words in different ways.

A full discussion of the development of vocabulary is beyond the scope of this literature review. Vocabulary is learnt through interacting with others; participating in activities with others; through reading and listening; and through direct modes of instruction, such as science lessons in school. Many children know up to 10,000 words by the time they start school, and it is estimated that they learn between 1,500 and 8,000 a year during their school years (see Brantley, 2007). Receptive vocabulary refers to the ability to listen to and read the words with understanding while not necessarily being able to use them in speaking and writing (expressive vocabulary). Receptive vocabulary is important in reading, as well as the ability to infer the meanings of words through use of the reading context.

Assessment of receptive vocabulary

Receptive vocabulary has traditionally been assessed through questioning and asking children for definitions. However, this may give limited knowledge about whether children have a 'deep' concept of the word. According to Harmon et al (2007), three effective ways of assessing vocabulary are: asking children to provide synonyms and

antonyms of the word; asking children to categorise words under headings; and observing children's use of the word in oral and written contexts.

An important question to ask in assessing vocabulary is: Which words do children need to know? The usefulness and importance of a word to a child should be a factor in the teaching and assessment of vocabulary (Harmon et al., 2007).

Picture vocabulary assessments can be used, where children are shown pictures and are asked to point at a picture that matches a stimulus word pronounced by the teacher / administrator. A formal test of this type is the Peabody Picture Vocabulary Test – Revised (Dunn & Dunn, 1997). However, this assessment is from the USA and may not be culturally appropriate for children from Australia, especially culturally diverse children.

Vocabulary: Issues for EAL / ESD children

If at all possible, the level of vocabulary in the child's home language should be assessed, as well as English language vocabulary. When assessing English language vocabulary, the length of time that the child has been learning English should be considered. Some vocabulary assessment tasks, such as picture vocabulary tests, may be problematic as objects and concepts represented in the pictures may not be familiar and / or they could be interpreted in different ways according to cultural and linguistic background of the children.

Reading comprehension

Comprehension is 'the ability to derive meaning from text' (Rathvon, 2004) and is the ultimate aim of most reading activity. The RAND Reading Study Group, chaired by

Catherine Snow, provides a more elaborated definition, and describes the term reading comprehension as 'the process of simultaneously extracting and constructing meaning through interaction and involvement with written language' (Snow, 2002, p. xiii).

According to the RAND group, reading comprehension consists of three elements: the reader, the text and the activity or purpose for reading, and these elements must be seen as being located within a sociocultural context. This conception of reading, which acknowledges complexity, contrasts with Gough's 'simple' view of reading, which regards reading comprehension as the product of word recognition and comprehension of oral language/vocabulary knowledge (Gough, 1996). According to this theory, reading problems can arise from a child's limited knowledge in either word recognition or word understanding, or both. However, this theory tends to oversimplify the complexity of reading (Stahl & Yaden, 2004).

For children in the early years, decoding and comprehension are highly correlated, good decoders are usually good at reading comprehension and poor decoders are usually not good at reading comprehension. One reason for this is that limited decoding ability can result in slow, word-by-word reading, which leaves little cognitive capacity free for higher level comprehension processes (Samuels, 2002). However, there are exceptions in the case of children who have hyperlexia (good decoders who have poor listening and reading comprehension skills) and dyslexics (poor decoders who often have good listening comprehension skills) (Rathvon, 2004). Nation and Snowling (1997) demonstrated that approximately 10% of children who have good decoding skills have problems in comprehending texts, so good decoding is not the only element of reading comprehension.

However, for children in the early years, phonological awareness and word identification (decoding) are the most effective predictors of comprehension problems in later years (Foorman et al., 1997). Thus it is important that these elements are assessed in order to ensure that children are given appropriate early support. Listening comprehension becomes a more important predictor of reading comprehension as the children becomes more competent readers (Vellutino, Scanlon, & Tanzman, 1994). Thus, it is important to continue teaching and assessing oral language, such as comprehension of oral language texts at the literal, inferential and evaluative level.

In order to comprehend texts efficiently; children need to be able to decode the words; have an appropriately developed spoken vocabulary; have knowledge of text structures; have some relevant background knowledge to bring to the text; and be able to choose and use a range of comprehension strategies, such as inferring, creating mental imagery, self-monitoring for meaning, clarifying, summarising and predicting (Duke & Pearson, 2002). If the child's level of comprehension appears to be of concern it is important to assess each of these elements,

Development of reading comprehension

In order to extract and construct meaning from text, children learn a range of skills that develop in complexity over time. Research suggests that these skills are central to enabling children to become actively engaged in the text (National Institute of Child Health and Human Development, 2000; Pressley, 2000). These skills are not hierarchical, but become more complex and sophisticated as children engage in higher levels of thinking. Rather, it is the way in which these skills are taught that influences

the development of comprehension. Research suggests that even from a young age, children make meaning from text using a variety of strategies.

There are many strategic processes that young children need to learn in order to comprehend texts effectively (Duke & Pearson, 2002). Research suggests that in the early years of school, helping children to activate their prior knowledge helps than to make links between the known and the new. Even children who are not yet at the stage of decoding can be encouraged to construct visual images through verbalising the 'picture in their head', drawing and drama. This helps children to check their understanding and, if necessary, look for more details about the text. Predicting what a text might be about encourages readers to look for evidence in the text and revise initial predictions if necessary.

Answering and generating questions is central to comprehension and can operate at different levels. Questions can generate lower- and higher-order levels of thinking as they move from the literal to the deductive and evaluative, making increasing cognitive demands. Helping young readers to analyse text structure helps them to predict and understand what is happening and what is likely to happen in new fiction and non-fiction texts, enabling them to assimilate new material into current knowledge. Effective summarising is an important part of comprehension as this involves evaluating a text and deciding which of its elements are most significant.

There are a range of semantic strategies that can be used to help clarify the meaning of words and phrases to aid comprehension. For young children these include previewing vocabulary and building banks of new words. So far, these strategies

relate to making meaning from the text. In addition to these, young children can be taught strategies that will enhance their critical understanding and inform their reflections on what they have read and written. Interpretative strategies can help even young children to read for multiple meanings and identify the way in which texts construct particular views of the world. Finally, young children can be encouraged to use appropriate strategies to clarify their understanding and solve a comprehension problem. Developing metacognitive awareness is one of the most important strategies for reading comprehension.

Assessment of reading comprehension

Comprehension, because of its complexity, is difficult to assess, and there is no consensus regarding the best way to do it (McKenna & Stahl, 2003). According to the RAND Study Group, assessment of comprehension should reflect the full range of reading comprehension outcomes and be based on a 'rich and elaborated theory of reading comprehension' (Snow, 2002, p. xix).

RAND (2002, p. 53) criticises current reading comprehension assessments on the grounds that they:

> 'Inadequately reflect the complexity of the target domain (comprehension); conflate comprehension with vocabulary, domain-specific knowledge, word reading ability, and other reader capacities involved in comprehension; do not rest on an understanding of reading comprehension as a developmental process or as a product of instruction; do not examine the assumptions underlying the relationship of successful performance to the dominant group's interests and values; are not useful for teachers; tend to narrow the curriculum; are uni-dimensional and method-dependent, often failing to address even the minimal criteria for reliability and validity.' From this, it appears that there is much work to be done in the development of efficient comprehension assessments'.

The RAND group (Snow, 2002, p. 56) proposed several essential criteria for an effective reading comprehension system, namely:

- the capacity to reflect authentic outcomes;
- congruence between assessments and the process involved in comprehension;
- developmental sensitivity, the capacity to identify individual children as poor comprehenders;
- the capacity to identify subtypes of poor comprehenders;
- instructional sensitivity;
- openness to intra-individual differences;
- usefulness for instructional decision-making;
- adaptability with respect to individual, social, linguistic, and cultural variation; and,
- a basis in measurement theory and psychometrics.

These criteria could not possibly be met by a single assessment, so a combination or 'system' of assessments needs to be devised to assess comprehension, both the process and the product. Criteria for selecting and evaluating assessments are discussed in further detail in a later section of this literature review.

Bearing in mind RAND's criticisms, it is necessary to outline existing types of comprehension assessments. These include comprehension measures, passage comprehension measures, story retelling measures, cloze procedure measures and curriculum-based measurement of reading comprehension (Rathvon, 2004).

Word comprehension measures are also known as reading vocabulary tests, which assess whether children comprehend the meaning of individual words. These assessments are useful because comprehension depends on good knowledge of

vocabulary. However, as pointed out by RAND, they do not assess comprehension *per se*, but a necessary element of comprehension. The ability to read words and understand them is, of course, related to receptive vocabulary, which was discussed above.

Passage comprehension measures involve the child reading a passage of text, either silently or orally, and then answering some questions about the text, either orally or in writing. In some assessments, children are permitted to re-read / refer to the text before answering questions, and in others they are not. In this case, factors relating to the child's memory are confounded with their comprehension. In assessments where the child is required to provide written answers to questions, writing abilities may influence performance.

Questions relating to the levels of comprehension (literal, inferential, evaluative / critical) are often asked as an assessment of comprehension (McKenna & Stahl, 2003). However, questioning can be problematic in terms of validity and reliability for several reasons,. For example, whether or not the child's answer is deemed to be good or poor often depends largely on teacher judgement, unless answers are pre-specified. If answers *are* pre-specified, a child may not be given credit for giving a novel (but logical and correct) answer. Another problem with comprehension questions is that, occasionally, children may answer them correctly without having read or understood the text, because they can answer them using only their prior knowledge. Sometimes, the questions themselves can be difficult to read and / or comprehend, with implications for the quality of students' answers (McKenna & Stahl, 2003).

Story retelling measures require children to retell, in their own words, usually without access to the text, a story they have read (Rathvon, 2004). Children's comprehension is assessed depending on the amount of detail provided and the correct sequencing of events. Often, the teacher uses a checklist to record the child's retelling. Teachers can ask probing questions to jog the child's memory. In the early childhood years, oral response formats are preferable to avoid confounding reading comprehension abilities with writing abilities. However, children with expressive language difficulties may not be able to show their comprehension adequately in this format (Gunning, 2006). Scoring and evaluation of this type of comprehension measure depends largely on teacher judgement, so reliability and validity may not be as high as in some other types of comprehension assessments (Rathvon, 2004).

Cloze measures of reading comprehension involve children supplying missing words in texts that have had selected words deleted. In early childhood contexts, this is often done orally. Words may be deleted at random or may be key words. In some cloze assessments(called the modified cloze procedure) children are given several words from which to choose. . Limitations of the cloze procedure include the fact that its 'unnatural' format can be confusing for some students, especially if they have had little experience with this type of activity (Irwin, 1991; McKenna & Stahl, 2003). Because a cloze exercise is often a written assessment, results can also be affected by the child's levels of writing ability and motivation, rendering this type of assessment generally inappropriate for very early childhood contexts. Also cloze measures generally assess only sentence level comprehension and do not adequately assess children's ability to integrate information between sentences and paragraphs.

Curriculum-based measurements of reading comprehension are based on a child's classroom curriculum and therefore have a high content validity. These informal assessments are designed by teachers to assess the major outcomes and sub-outcomes of their teaching curriculum. The limitations of CBM comprehension measures include low reliability because questions are not standardised (Rathvon, 2004).

Whilst it is not possible in this literature review to discuss the whole range of commercial assessments available, it is appropriate to discuss a tool that is in common use in Australian junior schools. The Neale Analysis of Reading Ability (NARA) (Neale, 1999) is a popular formal means of assessing reading comprehension (in children aged six and above) in Australia. This is a standardised, individually administered test that measures reading rate, accuracy and comprehension. Children read stories from a special illustrated book and then answer a series of questions orally. However, the NARA has been criticised on the grounds that its inferential level questions only addresses a limited number of inference types. Indeed, this appears to be the case with other comprehension tests (Bowyer-Crane & Snowling, 2005). Also, because the teacher supplies unknown words to readers during the administration of the NARA, there have been questions as to whether it actually measures listening comprehension as opposed to reading comprehension. Despite the criticisms, Cain and Oakhill (2006) have concluded that the NARA is a an effective instrument for researchers and practitioners to measure reading comprehension as well as word reading accuracy.

Reading comprehension: Issues for EAL / ESD children

Since comprehension depends on accurate word recognition, the issues relating to EAL / ESD and word recognition apply here. Also, children from diverse cultures may be disadvantaged in that texts given may not relate to their world knowledge and interests, or contain vocabulary that they understand. They may not have had exposure to the text structures assessed, or the types of assessment formats. For example, comprehension is often assessed through direct questioning. In some cultures, this type of interaction is inappropriate. The assessment format of retelling may also be difficult for children from some cultures, where time and sequencing of events is not deemed to be important. Children from certain cultures may have been taught that it is not acceptable to challenge authority, so comprehension at evaluative and critical levels may be difficult for them. For some Aboriginal children, assessing comprehension through direct questioning may not be appropriate, because answering questions is not seen as obligatory (Berry & Hudson, 1997).

Reading fluency

There is no consensus on the definition of reading fluency (Oakley, 2005). Most definitions of reading fluency include accuracy, rate, phrasing and expression, although some also include comprehension (Samuels, 2002). An element of fluent reading is automaticity of word recognition. In order to read fluently, children need to be reading texts of an appropriate level. Fluent reading is necessary as it is highly related to comprehension and a skill that enables quicker, smoother, more enjoyable reading, so may result in increased motivation to read more. Fluent reading can also enhance a child's sense of worth as a reader. Furthermore, the listeners'

comprehension and enjoyment of texts is enhanced when the reader is fluent and expressive.

Development of reading fluency

Reading fluency develops alongside the development of word identification and comprehension. In addition to being taught word identification and comprehension, children need to be exposed to models of fluent reading and be helped to develop 'syntactic sensitivity' (Rasinski, 1994, 2003). This is because fluency involves being able to read with smoothness and expression, with appropriate phrasing (which involves attention to syntax and meaning), as well as with accuracy and at an appropriate rate. In order to develop fluency, children need to practise reading, and this can be done through repeated reading in activities such as choral reading and readers' theatre. They also need to be able self-monitor their own reading for fluency, which may involve comparing their own reading to an'inner model' of fluent reading.

Assessment of reading fluency

There is no consensus on the definition of reading fluency, and thus no consensus on how it should be assessed (Oakley, 2005). Traditionally, fluency has been assessed primarily through measuring words read per minute (WPM) or words correct per minute (WCPM). Benchmarks have been developed in some localities regarding WCPM. In the USA Grade One children are expected to read between 30-60 WCPM by the beginning of the year, and Grade Two children are expected to read up to 100 WCPM. A problem with this type of measure is that it emphasises speed and accuracy at the expense of meaning so children can be given the impression that 'reading fast' is good reading.

A well known fluency assessment that measures more than just rate and accuracy is Zutell and Rasinski's (1991) Multi-dimensional Fluency Scale (MFS), which is an informal assessment that constitutes rating scales of expression and volume; phrasing; smoothness;and pace (during periods of minimal disruption). This is a quick and simple means by which to measurefluency, but teachers need to make sure that appropriate level texts are used for fluency assessment purposes. Zutell and Rasinski (1991)suggest student self-selected texts, but there are problems associated with this as some children may select easy texts and others may select texts that are above their fluency level. Generally, it is advised to select texts that are at a slightly easy to instructional level. However, fluency should also be assessed on 'grade level' texts. (Kuhn, 2007). Another possible criticism of the MFS is that subjective teacher judgements play too large a role in deciding how to rate the children's reading.

A more formal approach to assessing reading fluency is The Rubric for Fluency Evaluation (Fountas & Pinnell, 1996). Here, children read aloud a section of instructional text (90-94% accuracy) that they have previously read, twice. This rubric has been adapted by Reutzel and Cooter (2005) and allows teachers to rate the reading as: non-fluent reading; beginning fluency; transitional fluency; or fluent reading.

The Dynamic Indicators of Basic Literacy Skills assessment (Good, Kaminski, Smith, Laimon, & Dill, 2001), which is widely used in the USA, and freely available on the DIBELS website (https://dibels.uoregon.edu), includes an oral reading fluency measure (ORF), which measures word read correctly per minute. Critics argue, however, that this type of assessment penalises children who read at a slower rate, but who may be making more meaning (Riedel, 2007). Because the notion of fluency

comprises many reading skills, fluency assessments confound the assessment of several areas of literacy learning, such as comprehension and word identification.

Reading fluency: Issues for EAL / ESD children

Because fluency involves word identification and comprehension, all issues relating to these reading areas and EAL / ESD children apply here also. In addition, children from diverse linguistic backgrounds may have different patterns of stress and intonation in their home language / dialect, which teachers should consider when assessing reading expression.

Knowledge of reading strategies

An important aspect of reading is strategic knowledgewhich relates to children's metacognitive knowledge in relation to reading; effective readers are able to identify purposes for reading and apply strategies that are appropriate for the purpose (McKenna & Stahl, 2003). Reading strategies can be assessed by observation or by interviews, such as the Burke Reading Interview (Burke, 1987). This inventory asks questions such as: Who is a good reader? What makes that person a good reader? Do you think you are a good reader? Why? The First Steps materials (Annandale et al., 2004a, 2004b) also include interviews and suggestions for teaching and assessing reading processes and strategies.

Affective factors

Affective factors should not be overlooked in the discussion of what is important in reading in the early years. Children's interests, motivation and self-perceptions as readers are crucial in becoming successful readers (Gambrell & Ridgeway Gillis, 2007). There is a reciprocal relationship between motivation and literacy success,

children who experience success continue to be motivated, conversely increasing difficulties in reading often lead to increasing lack of motivation (Gambrell & Ridgeway Gillis, 2007). Negative affective factors can contribute to reading difficulties or slowed development or can be influenced by reading difficulties, so it is essential that teachers investigate affective factors in the light of students' reading abilities.

Assessing affective factors

Motivation is a crucial and often neglected aspect of reading which can be assessed informally through interviews with the child and /or with the parent and by observing children's behaviour in reading situations. Conversations with children can be most informative (Edmunds & Bauserman, 2006).

More formal assessments include The Elementary Attitude Survey (ERAS) (McKenna & Kear, 1990), which is an instrument that assists in the assessment of children's attitudes towards recreational and academic reading. It is norm-referenced in the USA, but these may not be appropriate for the Australian context. The format of this assessment is attractive to children as it features the cartoon character, Garfield. The assessment can be administered in group contexts and can give useful information about children's literacy likes and dislikes.

Other published tools include the Motivation to Read Profile (MRP) and Me and My Reading Survey (MMRS) (Gambrell, Palmer, Codling, & Mazzono, 1996). The MRP is composed of the reading survey and a conversational interview. The survey is a self-report measure that is intended to measure children's views about themselves (self-concept) as a reader, as well as the value they place on reading. This is

administered in a group context and may not be appropriate for younger children. The conversation is administered on a one-on-one basis and asks about children's interests, favourite authors, and their views on informational and narrative texts. An example of a question is: "Tell me about the most interesting story or book you have read this week.' The MMRS assesses the reading motivation and behaviours of young children (Years 1 and 2) and is a multiple choice, 17 item scale. It is similar to the ERA in format and administration; the teacher / administrator reads the items aloud and the children follow along using pictures to keep their place. They must circle the number that corresponds to their feelings (1 – 4) so this assessment is not appropriate for children who cannot recognise numerals. It can be administered on an individual basis if appropriate.

Motivation: Issues for EAL /ESD children

Motivation is an important factor in supporting reading in children from diverse cultural and linguistic backgrounds. Finding texts that are culturally appropriate and engaging at the appropriate cognitive level, while not overwhelming EAL learners needs careful consideration. Duel texts and community language texts should supplement English texts to ensure children are engaged and feel their skills and understandings are recognised.

5. Purposes and types of assessment of reading in Early Childhood

Purposes and beneficiaries of reading assessment

Appropriate assessment in the area of reading is essential for several purposes (National Inquiry into the Teaching of Literacy, 2006). Schumm and Arguelles (2006) have identified six major purposes of reading assessment:

1. To screen students for initial groupings, instruction and to find out whether further assessment is needed;
2. To identify students' areas of strength and need (diagnostic/instructional);
3. To monitor growth / progress in reading development;
4. To measure student outcomes in reading;
5. To evaluate the efficacy of teaching programs;
6. To report to parents and educational systems.

Teachers need to be able to assess children's reading for each of these purposes, although monitoring growth / progress and measuring student outcomes is undoubtedly the most central purpose within most classrooms.

Sheila Valencia (2007) suggested that literacy assessments can be termed either 'internal' or 'external' depending on whether they are used for internal purposes of assessing students within the classroom to inform instructions, or for external audiences such as state governments, districts and national governments. These broad categories are useful because they distinguish between two beneficiaries of assessment: the students themselves or others.

Internal assessments, or classroom assessments, conducted on an ongoing basis, on an individual, one-on-one basis, may be formal or informal and are used to help teachers monitor students' learning and plan appropriate instruction (Valencia, 2007). According to Valencia (2007, p.4), internal assessments are valuable because they are: embedded in the instructional goals and practices of the classroom; more detailed and specific than external assessments, thus more useful for informing classroom practice; used to assess both processes and products of literacy learning; appropriately timed so that teachers gain assessment information when they need it; and designed so that teachers can adapt assessments to address individual needs and interact with students during implementation so as to glean extra information. Internal assessments have also been termed as 'assessments *for* learning' (National Inquiry into the Teaching of Literacy, 2006). Many internal assessments are teacher-made and since most teachers are not experts in educational measurement, concerns are sometimes voiced about the validity and reliability of such assessments.

External assessments (S. W. Valencia, 2007) are administered infrequently (yearly to thrice yearly and sometimes less frequently), usually to whole groups rather than on an individual basis. Such assessments are usually standardised, formal assessments, which often do not provide classroom teachers with detailed information about the literacy strengths and needs of students in their class. This type of assessment is also known as assessment *of* learning.

Although both types of assessment have value, 'tension' between them can result if they are not used mindfully. For example, internal, classroom based assessments may

be perceived as having less status and validity than external assessments, causing teachers to place less emphasis on them, resulting in fewer internal assessments being carried out and thus reduced learning opportunities for students. Assessments themselves are of little value unless they are skilfully analysed and reflected upon, and then logically acted upon to improve instruction (Valencia, 2007).

Not only does the purpose of the assessment influence a teacher's choice of assessment, but the context and the individual child concerned must also be taken into account. As noted by Farr and Trumbill (1997, p. 2), 'Good instruction and assessment should look different in different environments, depending on the students served'. There is clearly no one 'best way' to assess children's reading progress, or one 'best' set of literacy assessments.

There are no simple answers as to which reading assessments are the most appropriate in the early years. There is no substitute for a skilled, reflective teacher who understands the different types of assessments and their various purposes, and who reflectively interacts with students in order to find out what they know and what they can do (Valencia, 2007). Such a teacher needs to have a deep understanding of literacy learning achieved through learning and experience. Indeed, one of the recommendations of the Western Australian Literacy and Numeracy Review (2006) is that teachers' skills in assessment and evaluation should be upgraded through professional development and postgraduate study.

Teachers need to be highly skilled and deeply knowledgeable about assessment and literacy (Paris & Hoffman, 2004), and have sufficient time to conduct a range of

assessments in order to effectively monitor students' literacy learning and to profile their strengths and areas of need. It has been argued that relatively few teachers are in this enviable position, and even support staff such as school psychologists and reading specialists (at least in the USA context) are often not adequately prepared in this area (Nelson & Machek, 2007).

Some researchers have indicated the need for comprehensive models of reading assessment in the early years which would serve as guides for teachers (McGee, 2007). This type of model may constitute a useful 'roadmap' for teachers, but care should be taken that externally mandated assessments do not become prevalent. The literature warns that too much emphasis on externally mandated, prescribed assessments and batteries of assessments can, in fact, be counter-productive (R. Valencia & Villarreal, 2003; S.Valencia, 2007) in that teachers may resort to a more shallow, measurement-based curriculum and may lose confidence and skills in rich classroom-based, internal assessments.

Assessment types

Different types of assessments are used for different purposes: assessment types can be either formal or informal. However, it is useful to use a formal-informal continuum as many assessments do not fall neatly into either of the categories. Because of the different nature and purpose of different types of assessments, it is not possible to evaluate them all according to exactly the same criteria. Criteria need to be looked at differently according to whether an assessment is formal or informal.

Formal assessments

Formal assessments are administered in a structured format and are pre-planned. Within the category of formal assessments, sometimes known as 'traditional' assessments, fall three subcategories, which overlap slightly: standardised tests, norm-referenced tests and criterion-referenced tests (Brantley, 2007).

Standardised tests

Standardised tests are administered and scored in a structured, prescribed way to ensure consistency and reliability. Such tests often have scripts that are read out by the teacher / administrator. Standardised tests may be norm-referenced or criterion-referenced. They are always formal assessments. As suggested above, the use of standardised tests needs careful consideration as many are based on the assumption that literacy is a set of skills that a child has or needs to acquire. In addition, because, they are normative they are often used as an indication of a child's overall ability rather than an indication of what is yet to be learned.

Norm referenced assessment

Norm referenced assessments are formal assessments that compare the performance of the student concerned to that of a reference group of peers. Test developers give the test to a large group of the 'norming' population in order to ascertain performance norms. Norm referenced assessments, compare students to others, or rank them, often allocating a percentile or a stanine. Sometimes a 'reading age' is given. Such assessments can be administered on an individual or group basis, depending on the test in question. They are standardised, which means that they must be administered according to a strict set of instructions to ensure comparability and consistency. Norm-referenced assessments may not be appropriate for use with culturally and

linguistically diverse (CALD) children because of bias in concepts tested, language of testing, under-representation of CALD children in norming groups and the misinterpretation of CALD children's responses (Laing & Kahmi, 2003).

A problem for the Australian population of children, and for the Western Australian population in particular, is the absence of local norms: many of the standardised assessments available have USA or UK norms only, which may not be appropriate for local children. This renders many norm-referenced assessments available less than useful for local contexts.

Criterion referenced assessments

'A criterion-referenced measure compares a child's performance on a specific skill, grammatical structure, or linguistic concept to independently predetermined criteria' (Laing & Kahmi, 2003, pp., p.46). Such assessments are focussed on the extent to which a child has achieved specific outcomes and do not compare a child's performance to that of another, although a 'benchmark' may be set to indicate minimum performance. However, the setting of benchmarks is not without complexities, and these may be somewhat arbitrary and may not relate to the teaching program concerned.

In general, criterion referenced assessments are often more sensitive to the needs of individual children and to the teaching context than are norm-referenced assessments. They are also useful for helping teachers plan appropriate instruction because they focus on outcomes. In addition, they can facilitate an inter-relationship between teaching and assessment, which can be reduced or lost when using norm-referenced

assessments. Criterion referenced assessments, whilst often formal, can also be informal.

Survey assessments

'Survey tests attempt to provide a broadly defined estimate of a student's overall achievement level in a given area (McKenna & Stahl, 2003, p. 24). Survey tests give a broad idea about achievement but do not provide enough specific information to be useful in planning instruction. They are useful in indicating which children may require 'deeper' assessment. The WALNA, in its present form, would be categorised as a survey assessment.

Screening assessments

A primary purpose of screening in the early years is 'To identify children at risk for reading failure and to monitor progress in early reading skills.' (Rathvon, 2004. p. 12). According to Reutzel and Cooter (2005), screening assessments are also useful for gaining preliminary / baseline information about students in order to make decisions about groupings and instructional strategies. Screening assessments should be quick and are usually carried out on a whole class or group basis, although some are administered on an individual basis (McKenna & Stahl, 2003), especially in early childhood contexts. Assessment types such as graded word lists, standardised reading tests, cloze, and oral reading passages have been suggested as suitable means of screening students' overall reading ability (Barr, Blachowitz, Bates, Katz, & Kaufmann, 2007). Screening assessments do not provide teachers with detailed information about the various aspects of a child's reading strengths and areas of need.

Because screening assessments are used for identifying students who may be at risk, it is important that they show predictive validity (Good, Kaminski, Smith, Laimon, & Dill, 2001; Simpson & Everatt, 2005) with reference to the skills deemed essential to learning to read. *The Dynamic Indicators of Basic Early Literacy Skills* (Good, Kaminski, Smith, Laimon, & Dill, 2001) are used widely in the USA as a screening tool since it has well documented technical adequacy. Screening assessments need to be administered as early in the school year as possible to identify students who are likely to experience difficulty unless given additional support and /or a modified reading program. However, they should not be administered before children have had a chance to settle in and should not be administered to children from culturally diverse backgrounds who will may not be able to participate in a meaningful way. Rathvon (2004) explains that there are 'windows' in which it is appropriate to screen children's abilities in *particular* areas. These 'windows' are often short-lived because of children's rapid literacy development in the early years. Generally, the later screening is administered, the more accurate it is in identifying children 'at risk'. However, because of the importance of early identification, there is a disadvantage in leaving screening until later.

Because 'windows' are short-lived, many screening assessments are only administered in the early years; for example, assessments concerned with phonological awareness, letter identification and naming, and rapid automotised naming (RAN) (Wolf & Bowers, 1999). These measurable factors are not the only predictors of reading difficulties; factors associated with language background and maternal education (Heath, Fletcher, & Hogben, 2006) also appear to be important. Information about these factors can be gathered through interviews with parents.

Many screening assessments have 'benchmark' scores, below which children are deemed to be 'at risk. However, benchmarks are often contested and, in the case of Australia, it has recently been suggested that benchmarks set by governments are too low, and thus tend to 'under-identify' children who are at risk (Senate Standing Committee on Employment Workplace Relations and Education, 2007).

Diagnostic assessments

Harris and Hodges (1995, p.86) define reading diagnosis as 'an astute analysis of the process by which [a student] gains meaning, significance, enjoyment, and value from printed sources.' Thus, diagnostic assessment involves the gathering and careful evaluation of detailed data in order to understand individual students' reading *processes* and to enable the planning of appropriate learning activities. Another definition of diagnostic assessment, provided by Coyne and Harn (2007, p. 40) states that: 'Diagnostic assessments help teachers plan instruction by providing in-depth information about students' skills and instructional needs.'

Rathvon (2004, p.12) states that the purpose of diagnostic assessment in the early years is 'To provide information about the nature and extent of reading problems for intervention planning and educational programming.' Diagnostic assessment is not necessarily reserved for children with 'difficulties', but can be used to diagnose strengths and areas of need (gaps) in all children. Sometimes educational psychologists undertake diagnostic assessments, but this is not always the case: classroom teachers need to be able to make accurate diagnoses about the causes of their students' areas of need and the reading processes they are using and not using

effectively, in order to provide appropriate instruction. Diagnostic assessments are usually conducted on an individual basis.

An example of a diagnostic assessment that is commonly used is the *Informal Reading Inventory (IRI)* (e.g. Burns & Roe, 1989), which involves the child reading aloud a list of words and then a passage of text, before answering a set or oral comprehension questions. The teacher then analyses the child's reading (including errors and reading rate) and comprehension answers in order to ascertain areas of strength and need. Running records (Clay, 2002) can also provide valuable diagnostic information, such as the cueing systems children are using, reading accuracy, and self correction rate.

Progress monitoring assessments

Progress monitoring assessments measure children's 'growth' towards meeting specified literacy outcomes (Coyne & Harn, 2007). This is crucial in the early years because development is rapid and, by the same token, children can quickly fall behind. Progress monitoring assessments should be carried out with increased frequency (up to once a week) for children who have difficulty in meeting benchmarks required or who are receiving extra support or a modified reading program (Coyne & Harn, 2007; Schumm & Arguelles, 2006). Progress monitoring assessments, like screening assessments, are not designed to provide detailed information about a child's reading achievement, but are intended to be a quick indication that the current instruction is appropriate.

An example of a progress monitoring tool that is in wide use in the USAis The Dynamic Indicators of Basic Literacy Skills (DIBELS) (Good, Kaminski, Smith,

Laimon, & Dill, 2001). However, this tool has been criticised, especially on the grounds of being inadequate as a tool for measuring comprehension (Reidel, 2007). Progress can, and should also, be monitored informally, continuously and cumulatively through such devices as running records and focused observations.

Outcomes assessments

Outcomes / achievement assessments are summative assessments of what a child has learnt over a period of time, such as a school term. They measure long term growth (Walpole & McKenna, 2004) and include large-scale measures such as WALNA (*Western Australia Literacy and Numeracy Assessment*). Progress monitoring assessments should provide confirmation of what the teacher already knows through progress monitoring and diagnostic assessments (Coyne & Harn, 2007), and must be of a high level of reliability and validity because they are often used to make important decisions about students and instructional programs.

Informal assessments

Informal assessments are an important component of any reading assessment system, and teachers often feel more comfortable using informal assessments than they do formal ones (Bell & McCallum, 2008). It is suggested that informal assessments provide a broader picture of children's understanding and use of literacy, than decontextualised tests. Informal assessments in reading include teacher made assessments, observations, conversations, and some commercial assessments such as Informal Reading Inventories (IRIs) and running records. Laing et al (2003) have suggested that informal assessments are particularly appropriate for culturally and linguistically diverse (CALD) children, because teachers are able to take onto account the relationship between cultural and linguistic factors and learning outcomes.

Informal assessments can also be used to document information about the children's first languages and dialects. Informal assessments help to complete the picture of children's use and understanding of their home language(s) and indicate their importance to children, parents and community. These assessments give teachers insights into children's level of competence in homes language(s) and provide information about differences between languages and how these might influence the learning of English. Capturing children's competence in their home languages(s) involves the voice of parents, children and teachers through discussion and observation and recording of learning in different domains.

Dynamic Assessment

In recent years there has been an increased interest in the notion of dynamic assessment, which is an interactive means of assessment that takes into account the learner's capacity to respond to intervention or support. According to Kletzien and Bedmar (1990), dynamic assessment is less likely to paint a 'deficit' picture of children in that it does not focus on what students *cannot* do. Dynamic assessment uses Vygotsky's (1978) notion of 'zone of proximal development' as a theoretical base, and assesses what children are in the process of mastering (or can do with support) as well as what they can do independently. This is in line with the pedagogical practices in most Western Australian schools that use the 'gradual release of responsibility' model. In the context of reading, 'responsiveness to intervention' (RTI) has been put forward as a valid method of identifying children who might be 'at risk' of reading problems, and as less likely than 'traditional' methods to over-identify children who are not at risk as being so (Fuchs et al., 2007). In RTI, the instruction

itself 'becomes the test' (Fuchs et al, 2007, p. 58). There are different versions of RTI, however, and the teacher needs to be highly skilled in order to correctly administer and interpret this type of assessment. Furthermore, it is as yet not thoroughly researched or articulated.

Student self-assessment

Because much assessment is done *to* and *for* students, and not *by* students, it is not as educative as it could be and, indeed, may be seen by students as a 'black box' (Black & Williams, 1998) in that the input (in the form of test responses) goes in and a score and some feedback may be received, but the student does not often come to understand how the assessment works and, thus, is not able to learn how to self assess (Afferbach, 2007a). Since it is desired that students develop a meta-cognitive (self-monitoring) approach to reading, it makes sense that they should be encouraged to set goals and measure their own success in achieving these goals; self-assessment is an effective means of doing this, even in early childhood contexts. Furthermore, self-assessment hands over some of the power over assessment processes to students, which seems desirable for educational and ethical reasons.

Parent Interviews

Research has shown that there is a high correlation between parents' assessments of their 3 and 4-year old pre-school children's literacy knowledge and later school-based assessment data (Dickinson & DeTemple, 1998). Boudreau (2005) has also found that parental interviews are useful in predicting children who may later have difficulties in school language and literacy. The *First Steps* materials (2nd edition) (Annandale et al., 2004a) contain templates for a variety of parent interviews. In early

childhood contexts, interviews and informal conversations with parents and other carers are a highly useful source of information.

Computer assisted assessments

Computer assisted literacy assessments have been developed to assist teachers. For example, in the USA, STAR Reading and STAR Early Reading software by Renaissance Learning is being used in thousands of classroom to assist in the speedy assessment of children's reading abilities. In the UK and in Australia, programs such as Performance Indicators in Primary Schools (PIPS) are available. According to PIPS Australia (http://www.education.murdoch.edu.au/pips), PIPS was in 2006 being used by more than 700 schools in this country for on-entry baseline literacy assessment, including more than 300 WA schools across all sectors. Research relating to the efficacy of computer assisted assessments is still relatively scarce, so it is not possible to discuss in detail the efficacy of such systems.

Godfrey (2002; J. R. Godfrey & Galloway, 2004), conducted an evaluation of PIPS with a small sample of Indigenous childrenand found that this computer based assessment was a valid and reliable assessment for use with these students, although some educators have questioned the cultural appropriateness of the measure for this population.

Running Records

Running records are a common informal means of assessing young children's reading processes, and are an important component of Reading Recovery programs and many Guided Reading programs (Fountas & Pinnell, 1996). In running records, the teacher records the errors and self-corrections that children make in order to calculate an error

rate, a self-correction rate, and to make hypotheses about which of the three cueing systems (meaning, syntactic, visual/grapho-phonic) children are effectively using. Running records can give teachers good insight into children's reading strengths and needs, and can help teachers select texts at appropriate levels for learning. Research shows that the most effective teachers use running records to monitor the progress of their young students (Pressley et al., 2001).

Some commercial assessments are now using running records as a basis of their assessment models. For example, *AlphaAssess* and *Informal Prose Inventory* (Ayrey, 1999) use running records and comprehension questions of graded texts as a basis for reading assessment. Likewise, the computer-based *PM Benchmarking* provides graded texts and ready made running record sheets for teachers. This acknowledges that some teachers find that conducting running records 'over the shoulder' somewhat difficult, and that it is sometimes useful to have a copy of the text that the child read for future reference. Also, it may be an indication that teachers prefer to have access to texts that they perceive to have been 'levelled' or graded in a consistent way as a basis for running records assessments.

Fawson et al (2006) have conducted research on the reliability of running records and have found that, in order to arrive at truly reliable results, each student should read a minimum of three passages to different teachers and the three scores should be averaged. The reliability of running records is limited by the fact that text factors vary greatly from one text used for a running record to another. For example, the linguistic and conceptual features of texts can vary greatly, even if they have been 'levelled' by teachers or commercial organisations; levelling of texts is a relatively inexact process

in many school contexts, although some advice on how to do this is available in the literature (Fountas & Pinnell, 1996). Fawson et al (2006) have pointed out that interscorer reliability may be an issue in running records, also, with raters scoring running records according to different levels of experience and understandings about the reading process.

Informal Reading Inventories

Informal Reading Inventories (e.g.Burns & Roe, 1989; Johns, 2005; Manzo, Manzo, & McKenna, 1995), contain graded reading passages which children read aloud. Their reading rate and accuracy are recorded, and comprehension is assessed through several (approximately eight to twelve) questions, ranging from literal to critical. Questions relating to vocabulary are often included also. Graded word lists are included to assist teachers in deciding which level of text the child should read. Walpole and McKenna have written, about IRIs:

> 'For more than half a century, reading educators have regarded the informal reading inventory as the comprehensive assessment instrument of choice. Through a combination of graded word lists and passages, flexibly administered, a teacher can garner valuable information about a child's independent, instructional, and frustration reading levels; listening level; decoding strategies; sight-word acquisition; and reading rate. After administration, a teacher can conduct a specific miscue analysis, inferring information about readers' knowledge and strategies based on their oral reading errors' (Walpole & McKenna, 2006, p. 592).

Although IRIs have enjoyed popularity for a long time, their limitations have been pointed out by Paris and Carpenter (2003). Limitations include problems in assessing comprehension adequately, the time-consuming nature of IRIs, and the fact that they are not accurate enough to track reading progress over time (Paris and Carpenter, (2003). The psychometric adequacy of IRIs has long been questioned (Walpole &

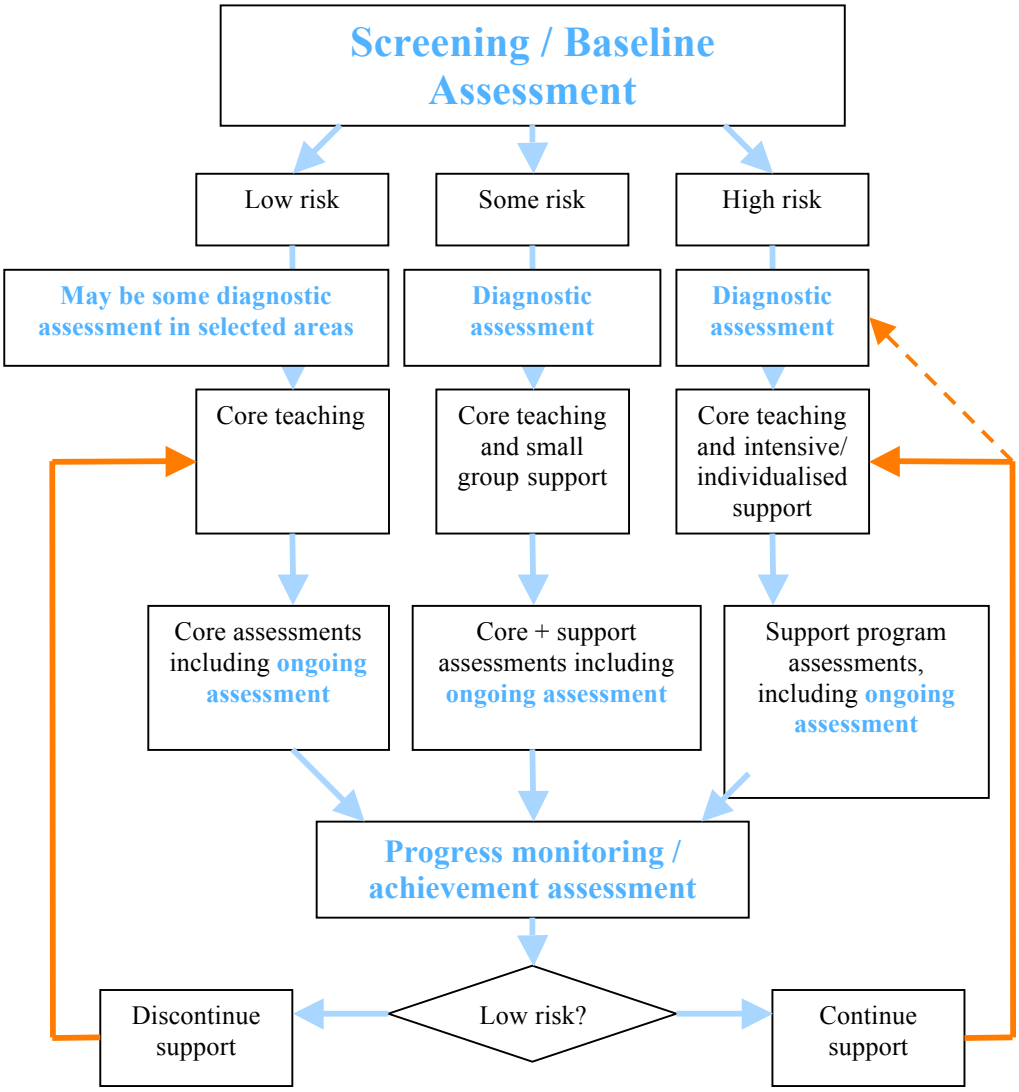
McKenna, 2006), and Walpole and McKenna have suggested that the IRI has a useful place as an initial screening instrument, but should be followed up by assessments that have a higher degree of reliability and diagnostic capacity. They point out that the results of IRIs are, in themselves, not specific enough to inform planning, particularly in beginning readers and older, struggling readers. They are, however, useful as part of a comprehensive system of assessment tools, for children of approximately five years of age onwards.

Portfolios

A student portfolio can contain information from both formal and informal assessments, and is used to show a student's development across time; it is thus a longitudinal record of learning rather than a 'snapshot' of achievement at a particular moment in time. The processes and products of a child's literacy learning can be assessed using portfolios. For the most part, portfolio assessments are formative and informal, and this means that immediate feedback can be given to children to enhance their learning. However, summative assessment can be achieved in an authentic way by the building of portfolios, in which children's work processes are documented and their work products are collected and commented upon with reference to particular outcomes.

Portfolio assessment has much potential as a means of accommodating diversity. However, it could be argued that portfolios are sometimes used as 'showcases' of artificially polished work samples rather than as a repository of work samples that show a student's skills, knowledge and progress. Also, because the child should collaborate in the selection of pieces for the portfolio and should reflect on them (J. H. Cohen & Wiener, 2003), it can be seen as a highly educative assessment that considers the voice of the child.

Evidence about reading that can be included in portfolios includes anecdotal notes, observational checklists, literature questionnaires, audio and video clips (on CD or DVD), story retelling records, records of think-alouds, running records, informal reading inventories, reading lists and logs, reading attitude surveys and interviews, and rubrics (Cohen & Wiener, 2003). It is important for teachers to think about the purpose of the items included, and the aspects of reading that they assess.



Based on A model of assessment driven reading instruction by McKenna, M & Walpole, S. (2005). How well does assessment inform our reading instruction? *The Reading Teacher*, 59 (1), p. 85.

Figure 2

Figure 2 shows how and when different types of assessment might be used in a teaching / learning cycle. McKenna and Walpole's (2005) model uses terms such as 'at risk' and 'support' (changed from 'intervention' in the original model), but it should be recognised that these terms can be problematic in that 'risk' cannot be said to reside in the child but in the child's educational context, and it is acknowledged that most children bring a wealth of literacy knowledge from home. However, they may be termed 'at risk' (for want of better terminology) when accurate and

appropriate assessment has indicated that, without extra / modified teaching, children may not learn SAE literacy successfully.

The model above shows that baseline / screening assessments occur only occasionally, annually at most, but other types of assessment occur more frequently, with ongoing, cumulative informal assessments proceeding in a formative fashion throughout teaching.

6. Issues in the assessment of reading in Early Childhood

Approaches to literacy assessment are influenced by different views of what literacy is and how it develops (Johnston & Rogers, 2003). In the early childhood context, there is also debate about how assessment should take place; young children have characteristics that make many assessment procedures less reliable and appropriate, hence it is important to use a variety of assessment measures, over time. Some researchers state that assessment in group contexts is not appropriate for young children, and that standardised assessments should be avoided, where possible (Wortham, 2005).

There is some consensus in the research that there are key components in reading that should be assessed early as they are predictors of later reading difficulties: early identification allows early intervention, which is crucial for the best outcome(s) for the children concerned. These areas include alphabetical knowledge, phonological awareness, phonics and the alphabetic principle, concepts about print and books, and oral comprehension and vocabulary (Snow, Burns, & Griffin, 1998).

Constrained and unconstrained skills

Paris (2005) suggested that there are two qualitatively different types of skills or knowledge in literacy learning, and that these require different types of assessments. 'Constrained' skills are finite and can be learnt in a set (usually short) period of time, after instruction / teaching has been commenced:

> '[A]lphabetic knowledge, phonemic awareness, and oral reading fluency are constrained both theoretically and methodologically, unlike vocabulary and comprehension. They all develop from non-existent to high or ceiling levels in childhood' (Paris, 2005, p. p. 185).

'Unconstrained skills', however, are much more complex and learning develops over a long period of time, sometimes over a lifetime. These types of skills require different types of instructional approaches and assessment techniques (Paris, 2005, p 190).

According to Paris (2005), the assessment of constrained skills should not be assessed and analysed with the same types of tools as unconstrained skills because of the fundamental differences in the ways in which these two categories of skills develop; in other words, ceiling levels are reached very quickly, usually in early childhood. Growth rates of various component skills vary, and are not necessarily linear, and are therefore not 'normally distributed' skills. Paris (2005, p. 199) suggested that constrained skills are only normally distributed when children are 'midway to mastery', and that this distribution is transitory and artificial. Thus, norm referenced assessments may not be appropriate for these skills.

Culturally and linguistically diverse children and early reading assessment

The assessment of culturally and linguistically diverse (CALD) children's literacy needs to be very carefully considered, as these children can be disadvantaged by the use of inappropriate assessments (Valencia & Villarreal, 2003). Choosing appropriate assessments for CALD children is complicated by the fact that they are by no means a homogenous group of children. Furthermore, just as a teacher's orientation towards reading theory will influence their use of reading assessments generally, their views and understandings about how linguistically diverse children learn English will influence their assessment choices. Furthermore, all assessments and tests are social constructions (Johnston & Costello, 2005) and are thus likely to disadvantage children from diverse cultures. It has been pointed by many researchers that existing norms and benchmarks do not take minority students into account:

> 'Australian researchers have illustrated that the benchmarks fail to take sufficient account of minority learners who are in the process of developing their English language proficiency, and are bound not to show their progress in English in these tests, because the tests are focused on mother-tongue literacy (Davison & McKay, 2002; Davison & Williams, 2001a, 2001b; Hammond & Derewianka, 1999; McKay, 1998, 2000)' (McKay, 2005, p. 245).

CALD children bring a wide range of educational experiences to school with them, but these may not be aligned with the types of learning and experiences that are valued in school contexts and assessments that are typically carried out at school. Teachers should find out about students' backgrounds before classroom-based assessment takes place (Lenski, Ehlers-Zavala, Daniel, & Sun-Irminger, 2006). For example, it is necessary to know how long students have been learning English as the needs of newly arrived students who have had schooling in their first language are

very different from those who have had little schooling, or from those who have spent several years learning English.

Designers of commercial assessments have, in some case, attempted to make assessments 'culture free' but, according to Tierney (1998), this is not possible because literacy practices are grounded in cultures. He writes:

> 'Culture-free assessments afford, at best, a partial and perhaps distorted understanding of the student. In other words, assessments that do not build upon the nature and nuances of each individual's experiences should be viewed as flawed.' (Tierney, 1998, p. 381)

Fairness is one of the principles of assessment set out by the Western Australian Curriculum Framework (Curriculum Council, 1998). However, 'traditional' assessments can be unfair to people from culturally and linguistic minorities on several counts. Firstly, assessments may be biased in favour of the types of knowledge in which certain cultural and linguistic groups have an unfair advantage. Secondly, there may be procedural unfairness if all test-takers are not treated in the same way. It is also argued that some children may not have had equal opportunities to learn, rendering assessments unfair and inappropriate. Finally, there is the notion of equity of results, which states that if results are not distributed equally amongst diverse groups, then it is intrinsically unfair (Linn & Miller, 2005). It has been argued, however, that this notion is in itself intrinsically unfair, not least to able students, who may somehow be 'held back' by this stance (Donnelly, 2007).

In order to be fair to a diversity of students, ways of demonstrating knowledge (assessment tasks and methods) should be many and varied (Farr & Trumbull, (1997). Informal assessment is often thought to be more appropriate for EAL / EAD children because of its flexibility and because it can be tailored to individual needs and contexts.

In the Western Australian context, English as a Second Language / Dialect Progress Maps (trial edition) (Department of Education and Training, 2007) have recently been released. This resource describes quality teaching processes and principles for EAL / EAD children and describes 'levels' of progress for these children. Although this document will give teachers and indication of what to assess, it does not specify how data collection (assessment) should proceed for these children, and how data might be interpreted. However it does give broad teaching direction for each level.

Indigenous children

Although there have been some improvements in recent years, there remains a disparity in literacy achievement between the Indigenous population and the 'mainstream', as measured by Year 3, 5 and 7 benchmark assessments such as the Western Australian Literacy and Numeracy Assessment (WALNA). Results are typically about 20 percent below the national average (MCEETYA, 2006).

In order to effectively teach reading to indigenous children, it is recommended that teachers understand indigenous culture(s) and that they explicitly teach English in the context of pedagogically appropriate approaches (MCEETYA, 2006). There has been some progress in the teaching of Aboriginal children through the use of culturally appropriate pedagogies, but the impact of this is not

always demonstrated because inappropriate assessment types continue to be used. Mitchell (2002) has pointed out:

> 'While there has been considerable focus on strategies to improve Indigenous literacy levels, usually these levels are assessed using tools developed without Indigenous students in mind. Such tests and assessment tools often contain cultural and learning biases that do not show students' real level of achievement' (Mitchell, 2002, p. 5).

Bandscales (e.g. Department of Education Training and the Arts, 2002) have been developed for use with Aboriginal children, but these are essentially profiling instruments, not assessment (data collection) techniques. Such documents give guidance on what should be assessed, but littleadvice regarding how it might be assessed. The recently released ESL / ESD Progress Map (Department of Education and Training, 2007), includesAboriginal children, and has the potential to provide guidance on how these children learn. The document describes progress and indicates what should be assessed, but does not include information on how to assess .

The Longitudinal Literacy and Numeracy Study (LLANS) Assessment has been used successfully to assess literacy and literacy growth in Aboriginal children. Frigo and Adams (2002) have stated that LLANS is appropriate for indigenous children because: it takes place in a meaningful context that is based on familiar classroom activities; it is administered on a one-to-one basis; it includes hands-on activities that use familiar classroom materials, such as real books; it emphasises process as well as product; and it is in line with school and wider curricula.

Children with learning difficulties

In order to fairly assess children who have learning difficulties, it is often necessary to modify or accommodate assessments. Children with difficulties need to be assessed more often, using progress monitoring assessments, which will often be of an informal nature.

Cohen and Cowan (2008, p. 372) describe how formal assessments (tests) can be accommodated to support students with difficulties, without changing the integrity of the test: provision of extra time for the student to complete the assessment; read directions aloud to the student; minimise distractions in the physical environment where the test will take place; provide several sessions for the student to complete longer assessments; allow the student to dictate responses to the teacher or test administrator. Test instructions should be read carefully for advice about whether modifications are possible.

Interpretation and use of assessments

Assessments results can be interpreted in different ways, depending on the literacy values and expertise of the interpreter. In some circumstances, the idea of an 'objective' assessment administration and interpretation may be very difficult. In the Western Australian context, many teachers have received professional development in making consistent judgements (Department of Education and Training, 2004) and the use of moderation processes to enhance the objectivity of informal assessments.

Assessment standards

National and international literacy organisations have made statements about standards for literacy assessment.

The STELLA statement (Australian Association for the Teaching of English & Australian Literacy Educators Association, n.d.) has recommended whole school, coordinated literacy assessment and reporting practices, and the provision of feedback to students that recognises achievement whilst focusing attention on areas needing improvement. STELLA also recommends that a wide range of formal and formal assessments should be used 'judiciously' by the teacher, that assessment items and tasks should be relevant, valid, fair and transparent and should reflect authentic / real uses of literacy in a diversity of contexts. This statement recommends that assessments should meet requirements of mandated testing programs whilst retaining their teaching goals and not compromising the learning of their students. Finally, it is recommended that assessment information should be put to use to constantly monitor and evaluate both short and long-term teaching and learning goals.

The International Reading Association (IRA) and the National Council for Teachers of English (NCTE) (1994) have produced a joint statement on the standards for the assessment of reading and writing. The standards are: the interests of the student are paramount n assessment; the primary purpose of assessment is to improve teaching and learning; assessment must allow for critical inquiry into curriculum and instruction; assessment must recognise and reflect the intellectually and socially complex nature of reading and writing and the important roles of school, home, and society in literacy development; assessment must be fair and equitable; the consequences of an assessment procedure are the first, and most important, consideration in establishing the validity of the assessment; the teacher is the most important agent of assessment; the assessment process should involve multiple perspectives and sources of data; assessment must be based in the school community;

all members of the school community – students, parents, teachers, administrators, policy makers and the public – must have a voice in the development, interpretation and reporting of assessment; and parents must be involved as active, essential participants in the assessment process.

School entry assessment

There has been a movement towards the introduction of school entry assessments in Australia, with NITL (2006) and WALNR (2006) endorsing this push. The Council of Australian Governments (COAG) has prepared a national reform agenda (NRA) to improve literacy and numeracy standards throughout Australia. Year One on-entry assessment in literacy and numeracy is a central tenet of this plan. In Western Australia's plan to improve literacy and numeracy outcomes (Action 20) (Government of Western Australia, 2007), it is stated that there is a need for a:

> WA Year One On-entry Literacy and Numeracy Diagnostic Tool – development of a high quality WA tool, based on the nationally agreed elements, and applied to every child on entry to year one by the commencement of the 2010 school year, with the diagnostic information used to identify and case manage those at risk of low literacy and numeracy achievement.

In other Australian states, various forms of on-entry assessments are already in place. For example, South Australia has introduced a Learner Record Book and an Information for Educators book, which assist teachers in making, analysing and recording observations of children's literacy knowledge. Information from the home context and a pre-school summative report are also used as sources of information. In Victoria, children are assessed within the first month of schooling and, as in Soouth

Australia, data is entered in a computerised database. Teachers are supplied with a School Entry Assessment Kit to assist them in this process. In the New Zealand context, children are assessed in literacy on school entry through the use of the School Entry Assessment (SAE). The literacy component of this assessment includes Marie Clay's (2002) Concepts About Print (CAP) and Tell Me, which is an oral language assessment. Phonological awareness and letter name knowledge is not included in the School Entry Assessment.

There is ongoing debate about the purposes, efficacy and fairness of on-entry assessments, with the main cause for concern being associated with the possibility of premature labelling of children as 'at risk' and / or mis-identification (under or over-identification) of children being 'at risk'. Also, there are concerns about the ability of on-entry assessments to be 'fair' and appropriate to children from a diversity of social and linguistic backgrounds.

9. Criteria for selecting assessments

Criteria for choosing assessments can be divided into two broad categories; namely, 'quality' and 'feasibility' (Rahn, Stecher, Goodman, & Alt, 1997). Quality relates to reliability, validity and fairness, whereas feasibility relates to factors such as time and cost, complexity, and acceptability to the audience / users. According to Rahl et al (1997), it is sometimes necessary for educators to make an informed trade-off between these two broad criteria, as there is some conflict between the two. 'Situational appropriateness' can be added to quality and feasibility, since it is not possible to judge the value of an assessment in a vacuum; the intended context needs to be a consideration (Afferbach, 2007b).

Much has been written on the criteria for selecting appropriate assessments in the field of literacy, although there are differences in the terminology used and the emphases. However there is considerable consensus in the literature about the criteria for selecting appropriate assessments. Turbill (1994, p. 16), for example, suggested that assessment should: result in optimal learning for all involved; inform, support and justify teacher decision making; reflect the theories of language and literacy that guide teaching; be accurate, valid and reliable.

Afferbach (2007b) described the CURVV model, which he devised with Leipzig (Leipzig & Afferbach, 2000). Here, five criteria are deemed to be important in choosing reading assessments: consequences; usefulness; roles and responsibilities; reliability, and; validity. The CURVV model was developed as a response to a traditional emphasis on reliability and validity as criteria for choosing assessments, and these criteria, although important, are not the only considerations in appropriate, quality literacy assessment. The 'consequences', 'usefulness' and 'roles and responsibilities' criteria allow educators to judge the 'situational appropriateness' of an assessment. The notion of 'consequences' encourages educators to consider the consequences of the use of the assessment, whether positive or negative. Assessment should certainly be positive overall. The notion of 'usefulness' concerns the place of a particular assessment in the assessment system used in the classroom or school; does it provide information that will be useful for a particular purpose? The third component of the CURRV framework reminds educators to consider their roles and responsibilities with reference to the assessment of children's learning: for example, the importance of informed use of assessments; the need to familiarise children with

the format and purpose of particular assessments; and the responsibility of educators to provide an appropriate assessments environments.

The RAND group (Snow, 2002, p. 56) proposed several essential criteria for an effective reading comprehension assessment system, namely: the capacity to reflect authentic outcomes; congruence between assessments and the process involved in comprehension; developmental sensitivity, the capacity to identify individual children as poor comprehenders; the capacity to identify subtypes of poor comprehenders; instructional sensitivity; openness to intra-individual differences; usefulness for instructional decision-making; adaptability with respect to individual, social, linguistic, and cultural variation; and a basis in measurement theory and psychometrics. Although some of these criteria relate specifically to the assessment of reading comprehension, others could be applied to the assessment of literacy more generally.

Ravthon (2004) suggested several criteria for selection of reading assessment measures in early childhood contexts. She pointed out that measures should be designed to assess reading or reading related skills of children in the target age group (K-3), and that it is particularly important to assess areas that are *predictive* of future success in reading, such as phonological awareness and knowledge of letter names. Criteria such as usability, technical adequacy and cost are also listed by Ravthon.

Because the purposes and the designs of formal and informal assessments are very different, it is not possible to judge them by exactly the same means. Although they can usually be judged by the same broad criteria, each of the criteria must be

'unpacked' in a slightly different way, according the assessment type and purpose, and the particular situation.

Criteria that are often mentioned in the literature will now be described in more detail:

Technical adequacy

Technical adequacy refers to the validity and reliability of an assessment: the extent to which it measures what it purports to in a consistent manner.

Validity: In general, the term 'validity' refers to the degree to which an assessment measures what it is intended to measure (Rahn, Stecher, Goodman, & Alt, 1997). There are several types of validity, as briefly described below:

- **Content validity**: This refers to whether or not the assessment reflects the curriculum / content concerned. There needs to be a match between what is taught and what is assessed.
- **Face validity**: This refers to whether the test 'looks like' or appears to test what it purports to test. This is a superficial type of validity but important to the test taker and the person selecting the test.
- **Predictive validity**: This term refers to the extent to which the assessment is able to accurately predict future performance. Screening assessments should have high predictive validity.
- **Concurrent validity**: Concurrent validity is the extent to which results from one test correlates with the results of another assessment that purports to measure the same thing.

- **Construct validity**: This refers to the extent which a test measures a theoretical characteristic or trait (that is not observable or measured directly).
- **Treatment validity**: This refers to the degree to which the information from the tool can lead to the development of an informed plan of action.

The importance of these types of validity is dependent on the purpose of the tool and the planned administration (Mindes, 2003).

Reliability: The reliability of a test or assessment relates to its consistency or dependency; if it leads to similar results in similar circumstances, it is deemed to be reliable (McKenna & Stahl, 2003). An assessment is reliable if 'chance' factors are minimised and there is a high degree of accuracy (Rahn, Stecher, Goodman, & Alt, 1997, p. 86). There are two types of reliability:

- **Test-Retest reliability** - Refers to the extent to which a tool can generalise to different instances of test administration. If a person is retested using the same test (or a parallel form), the results should be the same.
- **Inter-scorer reliability** - Refers to the extent to which a tool can generalise to different administers of the test; that is, the degree to which more than one scorer obtain the same result (Mindes, 2003).

Response format

According to Grendler and Johnson, 2004 (cited in Brantley, 2007), the response format of an assessment is of utmost importance. Whether or not the required response is written or oral, open-ended, multiple-choice or in the student's first or second language are all considerations that need to be borne in mind. An example of an inappropriate response format would be the multiple choice format for children recently arrived from Middle Eastern countries, since this format is unfamiliar there (Brantley, 2007). Thus, the response format should be aligned with the student and with the area being assessed. This can be referred to as an element of 'situational appropriateness' or 'situational alignment'.

Situational circumstances

The context or situational circumstances in which the assessment is carried out must be considered when selecting appropriate assessments(Afferbach, 2007b; Brantley, 2007). Whether or not the assessment is administered on an individual, small group or whole class basis can be of utmost importance, not just for practical reasons but because of the preferences of students concerned. Another consideration is whether or not the assessment is timed: timed assessments can be disadvantageous for some students, especially for those from cultures in which the notion of time varies from the dominant view. The general context of the assessment can also be of importance: for example, the seating arrangements; the 'tone' of the teacher's voice; whether or not the test is presented as a 'test' or just another learning activity; and whether or not the assessment varies significantly from the everyday classroom learning activities.

Clarity of directions for children

It is essential that students understand the requirements of assessments (Brantley, 2007). If they are confused by instructions, they can perform poorly. There may be occasions when instructions should be read in a student's native language, to ensure clarity of comprehension, although modifications of any kind are not permissible in standardised tests.

Usability / Feasibility:

It must be feasible for classroom teachers or others to implement assessments, in the context of existing workloads and classroom pressures, and the current level of teacher expertise (McAfee & Leong, 2002). The two main factors to be taken into account when assessing usability / feasibility include the time allocation needed for administering and evaluating the assessment; whether or not the teacher's level of expertise is appropriate for correct administration and evaluation of the assessment. Another consideration is the clarity of instructions (for the teacher / administrator) included with the assessment.

Value / Cost

The cost of the assessment and any associated materials needed, such as individual answer booklets for children, needs to be taken into consideration. It is a reality in today's educational context that all practices should afford 'value for money'.

Appropriate for diversity of students across Australia/Fairness

According to Rahn et al., (1997) the 'fairness' of an assessment relates to the degree to which students of similar abilities are able to achieve comparable scores.

Educative

According to the Western Australian *Curriculum Framework* (Curriculum Council, 1998), assessment should not only be valid, fair, comprehensive and explicit, but it should also be educative. This means that assessments should provide information that makes a contribution to a student's learning. Useful feedback should be provided to children wherever possible. The notion that assessment should be educative is repeatedly supported in the literature. For example: 'Assessment should always be in the service of learning' (Falk, 1998, p. p. 57).

The most educative assessments are formative assessments, so in order for an assessment system to be educative, it needs to include assessments of this type. The encouragement of children's self-assessment and self-monitoring also enhances the educative capacity of an assessment system, as does, where possible, providing clear and explicit descriptions of the purposes and workings of the assessment to the child..

10. Conclusions

The area of reading assessment in early childhood (ages 3-8) contexts is complex and contested. There are broad agreements on *what* should be assessed and *why* these particular aspects of reading should be assessed, but questions as to when and how to assess young children's reading are debated in the literature, especially with reference to children from culturally and linguistically diverse backgrounds.

In order to assess young children's reading in a fair, valid, comprehensive, educative and explicit way (Curriculum Council, 1998), the literature shows that it is necessary to assess children by multiple methods, in multiple contexts, on an ongoing, cumulative basis, preferably as a part of the normal teaching and learning context. Because young children develop rapidly and episodically, 'snapshot' assessments are not appropriate.

There are some areas that are 'predictors' of later reading obstacles and difficulties, and these should be assessed as early as possible, although it is not generally appropriate to assess children in a formal sense as soon as they enter school, if at all: it is more fruitful to wait until the end of the first school term, since this gives children a chance to learn some of the 'constrained' skills such as letter names and phonological awareness. However, much of the literature indicates that informal assessment should begin straight away to allow teachers to tailor teaching to individual needs.

In the Western Australian context, there are difficulties associated with commercial and formal assessments being designed for other populations, with (perhaps) different curricula and teaching / learning practices. Furthermore, the norms and benchmarks in many formal assessments have not been set for the local WA population, this work needs to be carried out if such assessments are to be useful.

It is necessary for teachers to consider the purpose of each assessment, and to think about assessments in the light of criteria outlined above. It is particularly important, in early childhood contexts, to consider whether the assessment is developmentally,

socially and culturally appropriate for the child, This is a complex task that requires a high degree of knowledge about literacy learning and assessment, and about the nature of learning in early childhood contexts.

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APPENDIX

Examples of early reading benchmarks indicated in the literature

Concepts about Print

Preschool (K)	Knows that it is the print that is read in stories.
	Understands that different texts are used for different purposes.
	Displays reading and writing attempts 'look at my story'.
	Shows interest in books.
	Writes' (scribbles) messages as part of playful activity.
K (PP)	Points to print when listening to print or when rereading own writing.
First grade (Yr 1)	Understands punctuation and book features.

Every Child A Reader (Hiebert, 1998)

Attitude/Engagement

K (PP)	Asks adult to read to him/her.
	Listens attentively when read to.
	Names some favourite books and authors.
First grade (Yr 1)	Creates written texts to share with others.
	Reads on own for enjoyment.
	Identifies favourite books.
	Takes pride in oral reading.
Second grade (Yr 2)	Enjoys silent reading at school.

	Enjoys activities such as choral reading, dramatisation of stories.
	Visits library and gets books out.
Third grade (Yr 3)	Reads voluntarily for own purposes.
	Responds to texts in various ways, such as oral presentations, journal writing, and dramatisation.
	Identifies favourite genres and topics for voluntary reading.
	Helps other children learn to read in voluntary and reciprocal reading contexts.

Every Child A Reader (Hiebert, 1998)

Alphabet knowledge

Preschool (K)	Knows that alphabet letters are a special type of graphic that can be recognised individually.
	Identifies 10 alphabet letters, especially those from own name.
K (PP)	Recognised and names all upper and lower case letters.

Every Child A Reader (Hiebert, 1998)

Phonological Awareness Development

Pre-school (K)	Attends to separable and repeating sounds in language.
	Attends to initial and rhyming sounds in prominent words.
K (PP)	Identifies initial phonemes
	Segments words into their phonemes and blend phonemes into words.
	Understands that spoken words consist of a sequence of phonemes.
	Identifies which word is different when given a spoken set (e.g. dan,

	dan, den).
	Understands when two words from a spoken set share sounds (e.g. mac, pat, ten).
	Produces a word that rhymes with a spoken word.
	Counts the number of syllables in a word.
First grade (Yr 1)	Blends and segments the sounds in single syllable words.

Every Child A Reader (Hiebert, 1998).

Beginning Kindergarten (PP)	Can tell whether two words rhyme.
	Can generate a rhyme for a simple word (such as cat, dot).
	OR can easily be taught to do these tasks (constrained tasks).
End of Kindergarten (PP)	Can isolate and pronounce the initial sound of a word (e.g. /n/ in nose).
	Can blend the sounds in two phoneme words (e.g. /b/-/oi/ for boy).
Midway through First Grade (Year 1)	Can isolate and pronounce all the sounds in two- and three-phoneme words.
	Can blend the sounds in four-phoneme words containing initial consonant blends.
End of First grade (Yr 1)	Can isolate and pronounce the sounds in four- phoneme words containing initial blends.
	Can blend the sounds in four- and five- phoneme words containing initial and final blends.

Torgeson & Mathes (2005, p. 7).

Phonics Development

K (PP)	Has knowledge of many letter-sound correspondences.
	Begins to understand that the sequence of letters in a written word represents the sequence of sounds or phonemes in the spoken word.
First grade (Yr 1)	Decodes single syllable words in texts phonetically.
	Monitors own reading through using the syntactic and semantic cueing systems.
Second grade (Yr 2)	Instantly recognise single syllable words through the use grapho-phonic knowledge and through the use of analogy.
	Decodes multi-syllabic words through phonic and structural analysis.
Third grade (Yr 3)	Decodes most unknown multi-syllabic words that are not in sight word store.
	Recognises most words automatically.

Every Child A Reader (Hiebert, 1998)

Comprehension

K (PP)	Notices when simple sentences do not make sense Answer questions out loud
	Demonstrates familiarity with different types of texts, such as storybooks, informational texts, poems, newspapers and everyday print such as signs and labels.
	Begins to make predications based on illustrations.
First grade (Yr 1)	Self-corrects when a word doesn't fit with the context/does not make sense or sound right.

	Notices when difficulties are encountered in comprehension (awareness that texts should make sense and some degree of monitoring for meaning).
	Makes predications about what will happen next in stories.
	Discusses how, why and what (re. informational texts).
	Is able to orally paraphrase/talk about new information from texts.
	Writes responses to questions after reading.
Second grade (Yr 2)	Goes back and rereads sentences that do not make sense.
	Is able to interpret information from graphs, diagrams and charts.
	Recalls facts and details of texts (literal comprehension) Discusses the similarities and differences in events and characters across stories.
	Connects and compares information across informational texts.
	Asks how, why and what questions about stories.
Third grade (Year 3)	Is able to identify words or word parts that impede comprehension.
	Summarises main points from fiction and non fiction texts.
	Discusses themes of texts.
	Asks how, why and what questions re informational texts.
	Has knowledge about structure of texts – i.e. cause-effect, fact-opinion, main ideas-details of informational texts.
	Examines hypotheses and perspectives of texts – critical literacy.

Every Child A Reader (Hiebert, 1998)