The comprehension skills of children learning English as an additional language

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Background. Data from national test results suggests that children who are learning English as an additional language (EAL) experience relatively lower levels of educational attainment in comparison to their monolingual, English-speaking peers.

Aims. The relative underachievement of children who are learning EAL demands that the literacy needs of this group are identified. To this end, this study aimed to explore the reading- and comprehension-related skills of a group of EAL learners.

Sample. Data are reported from 92 Year 3 pupils, of whom 46 children are learning EAL.

Method. Children completed standardized measures of reading accuracy and comprehension, listening comprehension, and receptive and expressive vocabulary.

Results. Results indicate that many EAL learners experience difficulties in understanding written and spoken text. These comprehension difficulties are not related to decoding problems but are related to significantly lower levels of vocabulary knowledge experienced by this group.

Conclusions. Many EAL learners experience significantly lower levels of English vocabulary knowledge which has a significant impact on their ability to understand written and spoken text. Greater emphasis on language development is therefore needed in the school curriculum to attempt to address the limited language skills of children learning EAL.

A significant number of pupils in UK schools learn English as an additional language (EAL): in 2008, 14.4% of pupils in primary schools and 10.8% of secondary school pupils were recorded as having a first language that is known or believed to be other than English (Department for Children, Schools and Families [DCSF], 2008). A recent study of reading attainment (Twist, Schagen, & Hodgson, 2007) reported that reading...
achieved is lower for this group of learners than for pupils whose first language is English. Data from national test results support this, indicating that children who have English as a first language experience higher rates of educational attainment than children learning EAL at each stage of education (DCSF, 2006/07). This pattern of relative underachievement suggests that current educational practice is failing to meet the literacy needs of children learning EAL (NALDIC, 2008). This paper aims to explore the literacy skills of this group of children in order to understand and identify appropriate support for their educational needs.

Successful reading requires that children acquire good decoding skills, and for many children, reading difficulties stem from problems at this level (Perfetti, 1985). A large body of research identifies phonological awareness as critical for the development of word reading skills (e.g. Bryant, Maclean, Bradley, & Crosslands, 1990; Hatcher, Hulme, & Ellis, 1994; Muter, Hulme, Snowling, & Taylor, 1997) and the efficacy of phonics teaching in boosting reading skill is well documented (e.g. Hatcher et al., 1994; Stuart, 1999, 2004). In accordance with this evidence, recent recommendations support an integral role for the teaching of phonics within the national literacy strategy (Rose, 2006).

Increasing understanding of the key role of phonics skills in literacy acquisition potentially leads to the assumption that high-quality phonics teaching will automatically lead to improvements in reading attainment (Stuart, 2003). Effective reading, however, involves more than decoding print; indeed, the primary purpose of reading is to understand the text (Nation & Angell, 2006; Stuart, 2003). Successful reading therefore depends on the development of both word reading and comprehension skills, skills which are related but are independent of one another (Oakhill, Cain, & Bryant, 2003). Many reading tests, including those by which national reading standards (Standard Attainment Tests, SATs) are assessed, confound word recognition and text comprehension skills; consequently, it cannot be assumed that poor performance on these measures are necessarily a consequence of problems with word reading. Indeed, research evidence suggests that for some children, low reading attainment reflects problems in understanding, rather than decoding, text (i.e. poor comprehenders; Yuill & Oakhill, 1991). Previous work with EAL learners suggests a similar pattern of comprehension difficulties in the absence of word reading problems (Frederickson & Frith, 1998; Hutchinson, Whiteley, Smith, & Connors, 2003).

Literacy experiences occur outside of the classroom as well as in school. In this study, the children learning EAL are of Asian heritage, and speak a variety of Mother Tongue languages. In addition to attending English-speaking schools, many of these children attend Mosque where they are learning to read the Qur'an. In this context, the aim of reading is not to understand the meaning of the text, as very few Arabic readers progress to understanding the Arabic language (Rosowsky, 2001), but rather to decode the text, and recite the text from memory (Robertson, 2002). One potential consequence of this is a concept of reading as essentially a process of decoding, to the relative neglect of meaning. This approach to reading the Qur'an may then transfer to the reading of English text in the classroom (Rosowsky, 2001). Whilst this approach may support the development of strong decoding skills (Rosowsky, 2001), comprehension of the text is likely to be relatively poor.

Failure to identify comprehension difficulties and provide appropriate support for the development of comprehension will lead to reduced access to the curriculum and an inability to reach the individual's full potential. This was recently demonstrated in a study by Cain and Oakhill (2006b): children with poor comprehension at the age of 8
continued to experience comprehension problems at age 11, leading to significantly lower SAT scores than good comprehenders in Maths, English, and Science subjects. Difficulties with comprehension require specific and targeted support; however, children identified as struggling readers on the basis of SAT scores at age 7 are likely to be targeted with phonics-based training with the aim of improving word-recognition skills, which will do little to support the development of comprehension (Stuart, 1999, 2004).

Comprehension skills are important not only for understanding written text, but also for understanding spoken language, and there is considerable evidence of a single comprehension system which underlies the comprehension of both written and oral text (e.g. Gernsbacher, Varner, & Faust, 1990). Before children begin to read, the language comprehension system develops through oral language experiences. Learning to read involves learning how to access this system via the written code (Stuart, 2003). Thus, in the early stages of beginning reading, the level of understanding that a child can attain from reading text is highly dependent on developing decoding and word recognition skills (Sticht & James, 1984). In this way, the level of comprehension that a child can attain on reading tests can be restricted as a result of word reading problems (Spooner, Baddeley, & Gathercole, 2004). Assessing comprehension of both written and spoken text may therefore identify whether comprehension difficulties reflect a general language comprehension problem, or difficulties related specifically to reading (Cain & Oakhill, 2006a; Carlisle, 1989).

Comprehension is a multidimensional skill that involves a number of processes at several different levels. As a consequence, difficulties in any one of several component skills may contribute to comprehension failure (August, Francis, Hsu, & Snow, 2006; Cain & Oakhill, 2006b). Components that have been consistently identified as important to the comprehension process include background knowledge (including knowledge of story structure) and vocabulary knowledge, inference and integration skills, comprehension monitoring, and working memory (e.g. Nation, 2005; Nation & Angell, 2006; Perfetti, Landi, & Oakhill, 2005; Perfetti, Marron, & Foltz, 1996; Stuart, 2003). The current study focuses on one factor known to be critical for comprehension; that is, vocabulary knowledge.

Many children who are learning EAL experience significantly lower levels of English vocabulary knowledge relative to their monolingual, English-speaking peers (Cameron, 2002). Weaker language skills are likely to have a significant impact on the ability to understand text (Stuart, 2004). Previous work has focused on the role of receptive vocabulary in explaining comprehension. However, tests of reading and listening comprehension often require children to formulate and express answers to questions, whether verbally or in writing. Consequently, the ability to retrieve appropriate language to express understanding is likely to contribute to performance on comprehension tasks (Hutchinson et al., 2003). It is therefore important to assess both receptive and expressive language skills.

This study examines the reading- and comprehension-related skills of children learning EAL relative to their monolingual peers. Tests of reading comprehension and word reading are completed alongside measures of listening comprehension and vocabulary by pupils in school Year 3. It is predicted that children learning EAL will experience difficulties comprehending both written and spoken text, and that these difficulties are related to the weaker vocabulary skills of this group of children in comparison to their monolingual, English-speaking peers, rather than to problems decoding text.
One further factor considered in this research is gender. Although recent evidence suggests that gender differences may not exert the level of impact that is commonly believed (Connolly, 2006), boys are often found to do less well in terms of literacy skills than girls (e.g. DCSF, 2006/07; Sammons, Elliot, Sylva, Melhuish, & Siraj-Blatchford, 2004; Whitehead, 2006). It is therefore important to explore the potential effects of gender on measures of reading ability. For this purpose, gender is included as a variable when analysing scores on the measures of vocabulary and reading skill.

Method

Participants

Ninety-two Year 3 children from four schools in the North-west region participated in the study. In this year of school, there is a significant shift in emphasis of classroom tasks from word-based skills to language comprehension (DCSF, 2006). It is therefore at this age that comprehension difficulties will begin to have a significant impact on the ability to achieve in school. In line with this, this age group has been the focus of much of the research exploring comprehension skills in children (e.g. Hutchinson, Whiteley, Smith, & Connors, 2004; Hutchinson et al., 2003; Yuill & Oakhill, 1991).

Of the monolingual children, 20 were male and 26 female; there were 21 boys and 25 girls learning EAL. Children were defined as learning EAL if a Mother Tongue language was spoken to some extent in the home environment. This was initially determined by teacher indications of Mother Tongue use, and confirmed prior to testing by the language preference questionnaire (Beech & Keys, 1997), which examines children's language experiences across a range of contexts. This identified a range of Mother Tongue languages spoken by the EAL pupils, including Punjabi (18 EAL pupils), Urdu (13), Gujarati (6), Pushto (4), and Bengali (3). Mother Tongue language was unconfirmed for two of the EAL pupils. The majority of children learning EAL (87%) reported that they attend Mosque at least 5 days a week.

Materials and procedure

Children completed several standardized reading-related measures. Form 1 of the NARA-R (Neale, 1997) provided measures of text reading accuracy, comprehension and fluency. This test is one of the most commonly used measures of reading ability in the UK (Cain & Oakhill, 2006a). In the NARA-R, children progress through a series of six graded reading passages. The child reads the passages aloud and reading accuracy errors are corrected. Following each passage, the child is asked a number of open-ended questions which tap both literal and inferential understanding of the story. Children are permitted to refer back to the text when answering the questions. Test administration ends when a prescribed number of reading accuracy errors have been made.

Single-word reading was measured using the Wide Range Achievement Test 3 (WRAT3; Wilkinson, 1993). Children read a list of 42 words of increasing difficulty, presented out of context. Testing ends when the child makes 10 consecutive reading accuracy errors, and the number of words a child reads correctly is recorded.

The Expressive and Receptive One-Word Picture Vocabulary Tests (Brownell, 2000) measured lexical knowledge. These tests provide comparable assessments of expressive and receptive vocabulary and have been co-normed allowing for meaningful comparisons of expressive and receptive language. Research supports the concurrent
and predictive validity of these tests (Prezbindowski & Lederberg, 2003), and they are used elsewhere in literacy research (e.g. Groen, Yasin, Laws, Barry, & Bishop, 2008; Hargrave & Senechal, 2000; Jimenez, 1997; Swanson, Rosston, Gerber, & Solari, 2008). To measure receptive vocabulary, children select the picture that most accurately represents a given word from a choice of four alternatives. In the expressive test, children are presented with a series of pictures depicting an object, action, or concept, which they are then required to name. The tests were developed in the USA and original versions contain some stimuli that were considered to be less familiar to British children; these were anglicized for use in the study (e.g. an outline of the USA was replaced with a comparable representation of the UK).

Two measures of listening comprehension were included. Form 2 of the NARA-R (Neale, 1997) is a parallel assessment to Form 1; passages 1-4 of Form 2 were audiotaped and presented as a test of spoken language comprehension. In addition, children completed levels B and C of the Listening Comprehension Test Series (LCTS; Hagues, Siddiqui, & Merwood, 1999). In the LCTS a set of four recorded clips are played to the class. The clips aim to reflect the range of listening contexts in which pupils' skills may be assessed, and include, for example, a child's description of the route home, a classroom discussion, and a narrative. Multiple choice and true/false questions are used to assess comprehension of the clips; these are heard twice, with responses to questions made following the second presentation.

**Results**

Data obtained on each of the measures were analysed by separate 2 x 2 between-group ANOVAs with factors language and gender.

**Reading accuracy**

Table 1 presents the raw scores for WRAT3 single-word reading and NARA-R text reading accuracy.

**Table 1.** Mean scores (and standard deviations) for reading accuracy as a function of language and gender

<table>
<thead>
<tr>
<th></th>
<th>Monolingual</th>
<th>EAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>WRAT3</td>
<td>31.00 (4.95)</td>
<td>29.92 (6.02)</td>
</tr>
<tr>
<td>NARA-R</td>
<td>43.20 (18.70)</td>
<td>43.38 (21.34)</td>
</tr>
</tbody>
</table>

A significant main effect of language in both analyses indicates that children learning EAL achieved significantly higher scores than monolingual children for both single-word reading \((F(1, 88) = 5.549, \ p = .021, \ \eta^2 = .059)\) and text reading accuracy \((F(1, 88) = 5.458, \ p = .022, \ \eta^2 = .058)\). There were no other significant effects.

In the NARA-R, testing ends on the basis of reading accuracy errors; reading accuracy therefore influences comprehension scores, as more accurate readers can progress further through the passages, and may consequently attempt more comprehension...
questions, than weaker readers. Indeed, a comparison of the number of NARA-R stories completed by the two groups of children revealed significant differences in favour of the children learning EAL (monolingual mean = 3.74 stories; EAL mean = 4.76 stories; \( t(90) = 3.125, p = .002 \)). In order to control for these differences, an ANCOVA was carried out on the comprehension data with NARA-R accuracy scores entered as a covariate.

**Reading comprehension**

Mean NARA-R reading comprehension raw scores, and mean scores statistically adjusted for accuracy using ANCOVA, are presented in Table 2.

**Table 2.** Reading comprehension scores: Means (and standard deviations) for raw scores and means adjusted for NARA-R reading accuracy presented by language and gender

<table>
<thead>
<tr>
<th></th>
<th>Monolingual</th>
<th>EAL</th>
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<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Raw scores</td>
<td>15.20 (6.61)</td>
<td>16.12 (8.33)</td>
</tr>
<tr>
<td>Means adjusted for accuracy</td>
<td>16.66</td>
<td>17.52</td>
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</tbody>
</table>

Co-varying reading accuracy scores in the analysis of comprehension data revealed a significant main effect of language group (\( F(1,87) = 15.860, p < .001, \eta^2 = .154 \)) with significantly higher comprehension scores from the monolingual children than from children learning EAL. There were no other significant effects.

**Listening comprehension**

Mean raw scores obtained on the NARA-R measure of listening comprehension and the LCTS (levels B and C scores combined) are reported in Table 3. A monolingual child was unavailable to complete the NARA-R Form 2; data for this measure is therefore based on a sample of 45 monolingual children and 46 children learning EAL.

**Table 3.** Mean raw scores (and standard deviations) for listening comprehension as a function of language and gender group

<table>
<thead>
<tr>
<th></th>
<th>Monolingual</th>
<th>EAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>NARA-R</td>
<td>8.42 (5.31)</td>
<td>9.85 (4.36)</td>
</tr>
<tr>
<td>LCTS</td>
<td>39.45 (10.50)</td>
<td>45.69 (9.52)</td>
</tr>
</tbody>
</table>

The monolingual children obtained significantly higher listening comprehension scores on the NARA-R measure than the children learning EAL (\( F(1,87) = 6.463, p = .013, \eta^2 = .069 \)). Differences between language groups were not significant,
however, on the LCTS ($F(1, 88) = 1.877, p = .174, \eta^2 = .021$). There were no other significant effects on either measure.

**Expressive and receptive vocabulary**

Table 4 displays the raw scores obtained on the vocabulary measures.

Table 4. Mean raw scores (and standard deviations) for expressive and receptive vocabulary as a function of language and gender group

<table>
<thead>
<tr>
<th>Language</th>
<th>Male</th>
<th>Female</th>
<th>Mean</th>
<th>Male</th>
<th>Female</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expressive</td>
<td>71.05 (13.64)</td>
<td>72.69 (14.40)</td>
<td>71.98 (13.95)</td>
<td>57.62 (6.81)</td>
<td>58.56 (15.48)</td>
<td>58.13 (12.19)</td>
</tr>
<tr>
<td>Receptive</td>
<td>83.05 (11.83)</td>
<td>83.81 (11.31)</td>
<td>83.48 (11.41)</td>
<td>71.67 (9.16)</td>
<td>74.72 (15.42)</td>
<td>73.33 (12.90)</td>
</tr>
</tbody>
</table>

There was a significant main effect of language in favour of monolingual children in the analysis of both expressive ($F(1, 88) = 24.650, p < .001, \eta^2 = .219$) and receptive vocabulary scores ($F(1, 88) = 15.822, p < .001, \eta^2 = .152$). No other significant effects were found.

From these results, it is clear that children learning EAL experience difficulties with comprehension relative to their monolingual peers, and that these difficulties are not a consequence of poor decoding skills but are more likely to be related to weaker vocabulary. A series of standard multiple regressions was conducted to further explore the contribution of expressive and receptive language skills to reading and listening comprehension. A standard regression was computed for each of the criterion variables (LCTS listening comprehension, NARA-R listening comprehension, and NARA-R reading comprehension) separately for the monolingual children and the children learning EAL; results are displayed in Table 5.

Taken together, expressive and receptive vocabulary scores explain a significant amount of variance in comprehension for both monolingual children and children learning EAL. For both groups, only expressive vocabulary makes a significant unique contribution to listening comprehension. This relationship is stronger for the monolingual children; though expressive vocabulary is significant for children learning EAL, the measure explains less variance in listening comprehension for this group. In addition, expressive vocabulary explains a greater amount of variance in comprehension as measured by the NARA-R, than the LCTS measure.

The two language measures differentially predicted reading comprehension for monolingual children and children learning EAL. For children learning EAL, the pattern of results followed that for listening comprehension as only expressive vocabulary made a statistically significant unique contribution to reading comprehension. The contribution of receptive vocabulary to reading comprehension was not significant for this group, but was much greater than that found on either measure of listening comprehension. In contrast, expressive vocabulary made no significant unique contribution to the prediction of reading comprehension for monolingual children. For this group, receptive vocabulary was a significant predictor of NARA-R reading comprehension.
Table 5. Standard multiple regression predicting listening and reading comprehension

<table>
<thead>
<tr>
<th></th>
<th>Monolingual</th>
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<th>EAL</th>
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<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( t )</td>
<td>Sig. ( t )</td>
<td>( \beta )</td>
</tr>
<tr>
<td>LCTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expressive</td>
<td>0.469</td>
<td>2.995</td>
<td>0.005</td>
<td>0.382</td>
</tr>
<tr>
<td>Receptive</td>
<td>0.242</td>
<td>1.548</td>
<td>0.129</td>
<td>0.246</td>
</tr>
<tr>
<td></td>
<td>( R^2 = .43 ), adjusted ( R^2 = .41 ), ( F(2,43) = 16.379, p &lt; .001 )</td>
<td>( R^2 = .34 ), adjusted ( R^2 = .31 ), ( F(2,43) = 11.087, p &lt; .001 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NARA-R listening</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expressive</td>
<td>0.653</td>
<td>4.756</td>
<td>&lt;0.001</td>
<td>0.511</td>
</tr>
<tr>
<td>Receptive</td>
<td>0.142</td>
<td>1.036</td>
<td>0.306</td>
<td>0.141</td>
</tr>
<tr>
<td></td>
<td>( R^2 = .57 ), adjusted ( R^2 = .55 ), ( F(2,42) = 28.173, p &lt; .001 )</td>
<td>( R^2 = .38 ), adjusted ( R^2 = .35 ), ( F(2,43) = 13.339, p &lt; .001 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NARA-R reading</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Expressive</td>
<td>0.121</td>
<td>.748</td>
<td>0.458</td>
<td>0.420</td>
</tr>
<tr>
<td>Receptive</td>
<td>0.539</td>
<td>3.329</td>
<td>0.002</td>
<td>0.286</td>
</tr>
<tr>
<td></td>
<td>( R^2 = .39 ), adjusted ( R^2 = .37 ), ( F(2,43) = 13.933, p &lt; .001 )</td>
<td>( R^2 = .43 ), adjusted ( R^2 = .40 ), ( F(2,43) = 16.140, p &lt; .001 )</td>
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</table>

Discussion

The results of this study demonstrate that children learning EAL have difficulties in understanding written and spoken text relative to their monolingual peers. Reading comprehension difficulties are not a consequence of poor decoding skills; rather, the lower levels of English vocabulary knowledge experienced by many children learning EAL place significant constraints on comprehension.

Consistent with previous work (Rosowsky, 2001), children learning EAL scored significantly higher than the monolingual children on measures of both single-word reading and text reading accuracy. Stronger reading accuracy skills enabled the EAL learners to read more passages and thus attempt more comprehension questions than the monolingual children. When these differences were controlled statistically, the monolingual children demonstrated significantly higher levels of text comprehension. Thus, children learning EAL were achieving significantly lower levels of reading comprehension scores than their monolingual peers in spite of good reading accuracy. Potentially, Arabic reading experiences, which emphasize the importance of decoding above meaning may contribute to this pattern of scores: for children learning EAL, reading comprehension may therefore be partially constrained, not by inefficient word reading skills, but by a focus on this skill at the expense of meaning.

One factor which had a clear impact on both reading and listening comprehension scores was vocabulary. Children learning EAL had significantly lower expressive and receptive vocabulary scores than monolingual children. Vocabulary was a significant predictor of both reading and listening comprehension for both groups of children. The weaker vocabulary skills of EAL learners therefore place significant constraints on their comprehension of written and spoken text.

The regression analyses highlight the significant contribution of expressive vocabulary skills to the listening comprehension of both children learning EAL and monolingual children. Receptive vocabulary scores made no significant unique contribution. A different pattern emerged for reading comprehension. On this measure,
receptive vocabulary emerged as the only significant predictor for the monolingual children. In contrast, only expressive vocabulary made a significant contribution to the reading comprehension scores of children learning EAL. However, receptive vocabulary made a greater contribution to this measure than to listening comprehension. This suggests differences between reading and listening tasks and important differences between monolingual children and children learning EAL. In tasks of reading comprehension, children are able to return to the text when answering comprehension questions. In this way, the text can be used to support comprehension and language skills, as the information and vocabulary that is needed to answer the questions can be located in the text. In listening comprehension tasks, the text is not available to refer back to. Demands on expressive language skills are therefore greater on tests of listening comprehension than on tests of reading comprehension. Lower levels of vocabulary knowledge suggest that, even when the text is available, EAL learners are less able to take advantage of this resource to support the formulation and expression of responses to comprehension questions. As a consequence, expressive vocabulary remains a significant predictor of reading comprehension for this group of children.

Tests of listening comprehension were included to explore whether reading comprehension difficulties reflect general language comprehension difficulties, or are specific to reading. Using a measure that was parallel to that used to assess reading comprehension revealed significant differences between the groups: the monolingual children attained significantly higher listening comprehension scores on the NARA-R than the children learning EAL. This suggests that many children learning EAL experience a general language comprehension problem.

This pattern was not, however, reflected by the results of the LCTS on which no significant group differences were found. In attempting to understand this, differences between the tests must be considered. Firstly, the LCTS employs multiple-choice and true/false questions, where the NARA-R uses open-ended comprehension questions that require children to formulate and verbally express their answers. As confirmed by the regression analysis, this latter method clearly imposes much greater demands on expressive language skills. The heavy demands on expressive language imposed by the NARA-R may consequently underestimate the comprehension skills of many EAL learners. Work with monolingual, English-speaking children has found that children who score poorly on open-ended comprehension questions perform significantly better on reading comprehension tests with closed questions (Spooner et al., 2004). Further work is therefore necessary to explore the impact of question format on the comprehension performances of children learning EAL.

Though multiple choice and true/false questions may reduce the demands placed on expressive language skills, Cain and Oakhill (2006a) suggest that assessing comprehension in this way is less likely to capture specific comprehension skills, such as inferential processing skills, than open-ended questions. A multiple choice format, such as that used in the LCTS, must necessarily provide an option in which the inferable information is spelled out. In this case, the child does not need to make the inference to answer the question correctly as they can succeed by recognizing that a statement is consistent with a text representation. As Cain and Oakhill (2006a) argue, this is not the same as generating the inference at text presentation; consequently, tests which use this type of question format may be a less reliable measure of specific comprehension skills. Scores on the NARA-R may therefore provide a more accurate reflection of this. It would be of interest for further work to examine comprehension scores more closely by, for example, comparing performance across literal and
inferential question types. Inference generation is a source of difficulty for many poor comprehenders (e.g. Yuill & Oakhill, 1991); clearly, further work that explores specific comprehension subskills including inference making in children learning EAL is necessary.

The NARA-R and the LCTS also differ in the nature of the stimulus they present. The NARA-R is a test of narrative comprehension which uses formal vocabulary and sentence structure, and reflects the type of academic, de-contextualized language typical to tests of reading ability. In contrast, the materials used in the LCTS are more comparable to everyday spoken language communication, including for example, a classroom discussion. It is therefore reasonable to suggest that children learning EAL are more familiar with, and are therefore better able to comprehend, the materials presented in the LCTS.

Differences between the two tests suggest that they are not comparable measures of listening comprehension. Though these results suggest that children learning EAL do not always perform more poorly than monolingual children on tests of listening comprehension, it is clear that, when assessed on measures that are parallel to tests of reading comprehension, children learning EAL attain lower listening comprehension scores. This analysis suggests that comprehension problems extend beyond the reading domain, and reflect problems with understanding regardless of the modality of presentation. NARA-R comprehension scores attained by children learning EAL therefore appear to reflect a general problem with English language comprehension relative to monolingual English-speaking children. As comprehension skill is significantly related to academic attainment (Cain & Oakhill, 2006b), this has considerable implications for many pupils learning EAL. Further work to explore the relationships between performance on the reading and language assessments used here and SATS performance in Year 6 would shed more light on the impact of comprehension and vocabulary on academic attainment for this group of children.

In contrast to previous reports of gender differences in literacy attainment in favour of girls (e.g. DCSF, 2006/07; Sammons et al., 2004; Whitehead, 2006) there was little evidence of gender differences for monolingual English-speaking children and for children learning EAL in the research reported here: girls and boys performed similarly on the measures of reading accuracy, comprehension, and vocabulary. This finding is consistent with other literacy research that has failed to find evidence of gender differences (e.g. Sen & Blatchford, 2001) and may suggest that gender effects are surpassed by other variables such as ethnicity as argued elsewhere (e.g. Connolly, 2006). For the children participating in this project, gender does not appear to be a significant factor in the development of literacy skills.

The results of this study have significant implications for educational practice. Firstly, children learning EAL are often able to develop strong word recognition and decoding skills. In this study, the children learning EAL were able to progress further through the reading comprehension passages, and therefore attempt more comprehension questions, than the monolingual children. As a consequence, there appeared to be no differences in reading comprehension when looking solely at the raw scores; differences were only apparent when scores were adjusted to account for reading accuracy skills. Within the classroom, these children may not therefore be identified as having difficulties in reading; well-developed reading accuracy skills are likely to mask underlying comprehension difficulties.

Secondly, it is clearly incorrect to assume that reading difficulties, and lower levels of reading attainment, necessarily reflect difficulties with decoding. For many children
learning EAL, it is difficulties understanding text that constrain performance. This signals the need for direct and targeted support to address the comprehension difficulties of children learning EAL. Recent research exploring the multifaceted nature of comprehension has identified several components that underlie comprehension skill (e.g. Nation, 2005; Nation & Angell, 2006; Perfetti et al., 1996, 2005; Stuart, 2003). Further work is currently underway to assess the contribution of these components to the comprehension skills of children learning EAL. Despite this developing knowledge-base surrounding the components of comprehension, it has been argued that this knowledge is unrecognized in the National Literacy Framework (Stuart, 2003). To make full use of the emergent understanding of the components of comprehension and the development of comprehension skills, this knowledge must be incorporated into teaching and intervention strategies. Without this, it is unlikely that appropriate and specific support would be typically available even where particular difficulties had been identified.

This research confirms that vocabulary knowledge has a key role in comprehension skill. The lower levels of vocabulary knowledge experienced by many children learning EAL place significant constraints on their ability to understand English text. Oral language skills are often taken for granted in the school setting such that formal instruction rarely takes place in British schools (Stuart, 2003). It is clear from this research that age-appropriate English language skills cannot be assumed for the many EAL pupils that attend English-speaking schools, implicating a clear need to extend vocabulary learning in the classroom. Without instruction, this group of learners will continue to experience significantly lower levels of vocabulary in comparison to their monolingual, English-speaking peers (Cameron, 2002; Hutchinson et al., 2003, 2004). Greater emphasis on language development is therefore needed in the school curriculum to attempt to address the limited language skills of children learning EAL. Furthermore, this needs to begin earlier than Key Stage 2 in order to establish a level of language skill which may support the development of comprehension in Year 3 and beyond.

Lastly, this study suggests that for children learning EAL, a focus on decoding when reading texts contributes to comprehension difficulties. Children learning EAL need a greater emphasis on reading for meaning, brought about through discussion of text within classrooms so that children may learn to make sense of text. Furthermore, the strong reading accuracy skills demonstrated by many children learning EAL suggests that comprehension instruction and a focus on meaning could be integrated into reading practices earlier than Year 3.

References


