Reading Comprehension

Context – Looked After Children:

According to c. 41 of the Children Act 1989, Looked After Children (LAC) are children that have been in the care of a local authority and provided with accommodations for a continuous period of more than 24 hours. A child up is eligible for the LAC designation until they turn 18, return home, or are adopted (National Society for the Prevention of Cruelty to Children [NSPCC], 2021). The education of LAC in England is supported through key legislation and policy:

- The Children and Young Persons Act 2008, which amends aspects of the Children Act 1989 and reforms the care system of LAC,
- The Children and Families Act 2014, which specifies that local authorities must appoint at least one person to support the educational achievement of LAC, and
- Statutory guidance from the DfE (2021a), such as how to promote the emotional and behavioural development of LAC.

As of 31 March 2020, there were 80,080 LAC in England, representing nearly 1 in every 100 pupils attending school (DfE, 2021). While already a striking number, it has been growing year over year since 2008, increasing by over 15% since 2015. The majority of these children are placed in the care of their local authority due to abuse or neglect (63%), while the remaining are placed into care due to family dysfunction (14%), family in acute distress (8%), absent parenting (7%), child's disability (3%), parent's illness (3%), or other issues (2%) (DfE, 2021).

About 10% of LAC move between three or more placements each year, putting them at significant risk regarding their well-being and positive behavioural outcomes. Moreover, a large and growing body of evidence suggests that LAC may suffer from established behaviour patterns developed throughout early childhood that negatively impact their ability to thrive in typical educational settings without specific attention to their social-emotional and academic development. At the same time, LAC are far from a homogenous group of children. They vary by age (ranging from under 1 year up to 18 years), ethnicity, gender, reasons for being looked after, placements (e.g., foster placement, living independently), legal status (e.g., care order, voluntary agreement), locality of placement, and support needs.

The DfE's (2021) most recent data from 2019 on outcomes for LAC finds the following:

- four times more likely to have a special educational need;
- nine times more likely to have an education, health, and care plan;
- lower educational attainment non-looked after children at
    - key stage 1 in reading, writing, and mathematics, and science (26 percent fewer reached the expected standard);
    - key stage 2 in reading, writing, and mathematics (28 percent fewer reached the expected standard), though this outcome appears closely related to the prevalence of pupils with a special education need;
    - key stage 4 in the average Attainment 8 score (44.6 versus 19.1), percentage of pupils achieving grade 5 or above in English and mathematics (40.1 versus 7.2), and English baccalaureate average point score (3.87 versus 1.52).

In general, LAC are more likely than non-looked after children to have mental health issues, additional or special education needs, and lower educational attainment. Finally, after leaving care, they are also less likely to be in education, training, or employment (NSPCC, 2021). See the sources below for more in-depth examinations of the complex and multi-faceted circumstances and outcomes LAC face.

Department for Education. (2021). *Statistics: Looked-after children.* https://www.gov.uk/government/collections/statistics-looked-after-children

National Society for the Prevention of Cruelty to Children. (2021, August 6). *Statistics: Looked-after children.* https://www.gov.uk/government/collections/statistics-looked-after-children

Oakley, M., Miscampbell, G., & Gregorian, R. (2018). *Looked-after children: The silent crisis.* Social Market Foundation.

Sebba, J., Berridge, D., Luke, N., Fletcher, J., Bell, K., Strand, S., Thomas, S., Sinclair, I., & O'Higgins, A. (2015). *The educational progress of looked after children in England: Linking care and educational data.* Rees Centre, University of Bristol.

Title:

Key texts:
Education Endowment Foundations' literacy guidance reports –
https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports
Reynolds (2017). Interactional scaffolding for reading comprehension: A systematic review. *Literacy Research: Theory, Method, and Practice, 66*, 135–156.
https://doi.org/10.1177%2F2381336917718820

Other reading:
http://educationendowmentfoundation.org.uk/toolkit/reading-comprehension-strategies/
Kispal., A. (2008). *Effective teaching of inference skills for reading: A literature review*. National Foundation for Educational Research. https://files.eric.ed.gov/fulltext/ED501868.pdf

Method:

Education Endowment Foundation (EEF): The EEF Teaching and Learning Toolkit currently provides four guidance reports related to reading comprehension: *Improving Literacy in Key Stage 1*, *Improving Literacy in Secondary Schools*, *Preparing for Literacy*, and *Improving Literacy in Key Stage 2*. Each report draws on the best available research guidance related to teaching and learning literacy, including studies included in the EEF's Teaching and Learning Toolkit along with other studies and reviews. Additionally, the guidance reports further incorporate the expert perspectives of academics, practitioners, and other stakeholders.

The literature review below is further informed by (a) individual journals (all peer reviewed) primarily in the area of education, (b) relevant evaluation reports commissioned by the EEF, and (c) grey literature sources that evidenced a clear connection with the research literature and which contributed to current debates and understandings. Sources were selected to illustrate a range of aspects of the theory and a range of research methodologies from international contexts. All incorporated sources were published within the last ten years, except the systematic review by Kispal et al. (2008), which despite being somewhat dated remains a key text.

Overview of the Issue or Subject:

The recent research base for the study of comprehension can be seen to reflect two highly complementary ideas. One idea followed is where researchers are concerned with exploring and understanding comprehension at 'an enriched level of comprehension beyond the literal meaning of a text'. This is referred to as the *reader's situation model*. The other idea is concerned with the cognitive dynamics of text comprehension. This is referred to as the *construction-integration* model in which memory and cognitive processes, such as retrieval and carry-over operations, support comprehension. In this overview of research, these ideas are referenced under a number of themes, from both the cognitive psychological and the socio-cultural perspectives.

Improving Inference Skills as a Means to Improve Comprehension

Many research studies focus on *inference*, as it is considered to be a complex comprehension skill. While there is no general consensus about the types of inference or how they should be named, the most frequently cited types are coherence inferences (also known as text-connecting inferences) which maintain text cohesion, and elaborative inferences (also known as gap filling inferences) which support the enrichment of the mental image, local inferences, global inferences, and online and offline inferences. With coherence inference the reader needs to understand the connection between parts of the text to support meaning, and with elaboration inference the reader draws on their knowledge and experience of the world. Local inferences relate to cohesion with sentences and paragraphs, and global to the whole text. Online inference is drawn whilst reading, and offline is drawn strategically after reading.

To be good at making inferences, the research suggests that a pupil needs to:
- be an active reader who wants to make sense of the text
- monitor comprehension and repair misunderstandings
- have a rich vocabulary
- have a competent working memory

This is also facilitated by:
- having a wide background knowledge
- sharing the same cultural background as that assumed by the text

Metacognition: Explicit Modelling of Higher Order Thinking
Available research into teaching inference points to the importance of teachers modelling through thinking aloud as they read aloud to pupils, demonstrating how they monitor their own reading comprehension, and making the thinking process explicit. Findings from observations of teachers efforts to promote pupils' metacognition suggest that teaching variables such as (a) small-group instruction, (b) skill instruction in comprehension, (c) teacher modelling, and (d) coaching for teachers explained substantial variation in student achievement. A consistent finding is that teachers who emphasize higher-order thinking promoted greater reading growth. In particular, studies suggest that why-questions modelled by teachers were beneficial to children in Years 4 – 8. However, it should be noted that this modelling of teacher self-monitoring is different from the teacher asking pupils questions during reading time. There is research that supports asking questions to help orientate pupils into a text, but this needs to be done only where the attentional demands of the text have been mediated. Advice would appear to be not to interrupt pupils, not to start questioning too soon after reading to allow time for the reader to create their own mental representation, and to focus asking questions on aurally presented texts.

Numerous studies have used the principles of Reciprocal Teaching (RT) as the vehicle to scaffold the role of the teacher as a model. The role of the teacher modelling, for example, using 'think alouds' to illustrate the cognitive process of a skilled reader, and then moving to a coaching role as the children develop their own skills has been found to positively impact pupils' independent use of self-monitoring strategies. Findings from a key study by Palinscar and Brown show that, prior to the study where questions were unfocused or incomplete, after the RT intervention sessions, the questions were linked to the main points of the text and summaries were more developed. Over time the students' questions became more like the tutor's and were inventions, rather than borrowed from the words in the text. The York Reading for Meaning Project put this metacognition into a bank of strategies: re-read, look back, think aloud, mental images, explain and reflect.

Self-Monitoring: Being Aware of Inconsistencies and Using Background Knowledge
Research has emphasised that effective comprehenders spend longer looking at anomalies in the text and monitor their comprehension as they read, whilst those readers with less developed comprehension skills are less able to detect nonsense words or contradictory sentences. However, further studies suggested that this may be because much of what happens in the world for a young learner is typically ambiguous or contradictory. Findings highlight that young readers need to be made aware that text should make sense, and to adopt strategies to centre themselves within a new a text and given strategies to adopt when inconsistency occurs. Being able to draw on background knowledge and relating text to real life (i.e., looking outside the text to elaborate on its message) is a key strategy to focus on with those possessing less developed comprehension skills. The York Reading for Meaning project found that using graphic and semantic organisers supported understanding of new text and exploration of inconsistency or new information, both at word level and text level. Earlier studies have also emphasised the role of activating background knowledge through teacher modelling of making associations between ideas presented in the text based on reader prior knowledge, evaluating and reviewing hypotheses that occurred in earlier parts of the text, and revising prior knowledge that is inconsistent with ideas in the text. Some researchers claim that for the specific development of inference, activating prior knowledge does not play such an important role; however, it has been suggested that there is a clear intrinsic importance in developing background knowledge before embarking on text, as a general support to later understanding.

Understanding at Text Level
A number of studies support the concept of instruction for children in understanding the nature of text, through activities that work to summarise text, to retell, and to identify key words within the body of the text. Taken together, these findings suggest that awareness of text structure appears to improve pupils' comprehension of expository texts (i.e., texts designed to inform or describe). They also suggest that young pupils experience greater difficulty with unstructured text and need appropriate and extensive exposure to expository texts with frequent opportunities to employ comprehension strategies. Introducing

expository text in the primary years can therefore be seen as useful, reinforced by studies that suggest that look at how readers integrate the meaning of words into overall texts (word to text integration). Such studies show the importance of the immediate context in which a word appears in a text, such as the preceding sentence. Less skilled comprehenders appear slower compared to skilled comprehenders in identifying a correct retrieval strategy that enables a word to be understood in relation to what has come before in a text.

If texts are to be used in content areas, it was found beneficial to present them first in a narrative structure, which the young readers found easier to understand. Although pupils comprehended texts about familiar events better than texts about unfamiliar events, structured text effectively benefits comprehension of both familiar and unfamiliar content. Findings also indicate that training in a single text structure does not improve pupils' ability to handle another text structure; therefore it may be necessary to provide explicit instruction on each individual structure. However, it is important also to note that developing an understanding of text structure in order to develop inference needs to go beyond the narrative structure and into the elements within the narrative (e.g., the motives, actions, goals and consequences of events and characters). Research shows that longer stories allow readers to formulate more specific inferences, and that the organisation of teaching and learning opportunities needs to enable readers to engage in this discussion 'offline' (after the reading has taken place).

Understanding at Word Level and Vocabulary Growth
A number of researchers have looked for pressure points in the reading system as a way to inform strategies for improving comprehension, and understanding at word level has been suggested to have particular importance as it can be seen to sit astride two reading systems: one, the word identification system, requires high-quality linguistic and orthographic information to enable rapid word identification; the second, the comprehension system, takes its input from the word identification system to build meaning units (propositions). Knowledge of written word forms and meanings, then, is central to reading and so a pressure point for reading comprehension. They would suggest this to be a prime candidate for a cause of reading comprehension difficulty. This has been supported by other research that makes a strong argument for a reciprocal causal relation between reading and vocabulary that vocabulary growth leads to improved reading comprehension, and the amount of reading leads to vocabulary growth, and that there is a strong role of early vocabulary learning in later reading achievement, describing the importance of vocabulary learning from the age of one to its impact on reading at the age of 16 (tenth grade). In the York Reading Project children who received the most vocabulary instruction in oral and text vocabulary, where new vocabulary was taught as part of the intervention, were found to internalise words they had been directly taught, but also generalized to untaught words (resulting in increased WASI Vocabulary scores). These increases in vocabulary knowledge might be seen as akin to an improvement in verbal IQ in these children and are likely to be of educational significance irrespective of their effects on reading comprehension.

Multiple Context Learning
It should be remembered though that rates of exposure to words in context has also been found in research to be an important factor for vocabulary development. Rates of new word understanding and retention are higher with instructional support and multiple exposures, suggesting that the learning of new vocabulary needs to go in tandem with use of vocabulary in context for a purpose. The York Reading Project developed an approach to the learning of vocabulary through Mnemonic strategies, verbal reasoning, graphic organisers, picture cards in recognition of the role of multiple context.

Developing Oral Language as a Means to Develop Comprehension
Studies have shown that a large portion of the skills needed to comprehend text are shared with our spoken language skills, demonstrating connection between building a mental image from text and understanding of the spoken word. The York Reading project focused on studying training strategies for understanding and producing oral language, based on the findings of earlier studies where improvements on either listening or reading comprehension were found to lead directly to an improvement in the other. This study did indeed find that through vocabulary instruction, reciprocal teaching (dialogue between teacher and child focused on questioning, summarising, clarifying and predicting linked to text), teaching linked to figurative language and spoken narrative showed that confidence levels in the group of children

supported to develop oral language in comparison to the group supported to understand text or in the group supported by combining oral language with text.

Accurate Decoding and Meaning
Although the spoken language may be the main carrier of meaning, it is the retrieval of word meaning through orthographic representations (and their integration with text meaning) that is critical in reading. Word meanings stored in memory (the lexicon) are only part of word comprehension, as they (and other memory-driven associations) are activated during reading and then tuned to what the context (the representation of the situation) demands. Studies into re-examination of text and encouragement to re-read have shown that local inferences improved, suggesting that supporting children to re-read as a mechanism to self-monitor may lead to further success in comprehension. However, this strategy was not found to have significant success when looking at text-external inference, which is dependent on background knowledge.

Multisensory Approach to Supporting Comprehension
Further research into re-reading showed that object manipulation versus re-reading enhanced first and second grade readers' performance. Object manipulation appears to help students draw inferences necessary to construct integrated mental models. A mental model is often conceptualised as a representation that goes beyond information explicit in the text by incorporating a student's inferences and world knowledge: thus, the mental model becomes a representation of what the text is about rather than a representation of the text itself. This research has demonstrated an approach to language comprehension that appears to be a powerful teaching technique—the use of physical manipulation and even imagined manipulation. However, before recommending this technique for classroom use, researchers must demonstrate that it works with longer and more realistic texts and that the results of using the technique do not fade as students become more familiar with the process. Furthermore, research needs to demonstrate that students can be taught to move from physical representations of story-relevant objects to mental images.

Overall Strength of the Evidence
Literature reviews and meta-analyses included in the EEF Teaching and Learning Toolkit suggest that teaching reading comprehension can advance learning by up to five months in a school year. Such research covers a wide range of strategies, including inferring the meaning from context, summarising or identifying key points, using graphic or semantic organizers, developing questioning strategies, and monitoring their own comprehension and identifying difficulties themselves.

The EEF Teaching and Learning Toolkit concludes that:
"Comparative findings indicate that, on average, reading comprehension approaches appear to be more effective than [phonics](#) or [oral language](#) approaches for upper primary and secondary pupils, both in terms of short-term and long-term impact. Once pupils have reached the end of primary school, it may be that children who have not succeeded using phonics previously will benefit from approaches which place a greater emphasis on meaning and context. However, supporting struggling readers is likely to require a concerted effort across the curriculum and a combination of different approaches. It is important to remember that no particular strategy should be seen as a panacea, and careful diagnosis of the reasons why an individual pupil is struggling is very important when identifying possible solutions."

The EEF toolkit also cautions that much of the research has been carried out in the US and on pupils aged 8-18, and that evidence collected in the UK has been less conclusive so far.

Options or Questions Regarding Key Issues and Debates:
The oft-referenced *Simple View of Reading* arguably does not consider the complexity that exists between comprehension of meaning of spoken word and understanding a word when written – orthographic representation. Demands on processing meaning will differ. How might consideration of this difference between decoding for meaning and processing units of text for meaning influence planning and teaching?

There appears to be a causal relationship between vocabulary and comprehension. But learning the vocabulary required to become a good reader is not a choice between direct teaching of vocabulary and

exposure to new words through reading. How does this research on developing vocabulary influence thoughts on planning for teaching reading comprehension?

How do I as a teacher demonstrate metacognition and show explicit skills of self-monitoring of text?

When I ask questions, am I aware of a pupil's need as a reader to construct their mental image of the text before responding with an answer?

Are all levels of text comprehension built into my planning for teaching reading – word, text, self-monitoring, and metacognition?

Potential Implementation Issues to Consider:

Considering the planning of all reading opportunities – individual, small group, and whole class – to reflect cohesion for teaching comprehension strategies is necessary to support progression.

Understanding and reflecting on the assessment of comprehension, in relation to the teaching of strategies, may be a key issue to consider when deciding on approaches for assessment of comprehension without levels.

Are children within the school able to maximise the impact of strategies such as reciprocal teaching: for example, drawing on the ideas of others to self-check and develop their own understanding? How does the teaching and learning culture of the school support this?

Change may need to occur with teachers before it can occur with pupils. Teachers may need to move from teacher-centred to learner-centred classrooms in order to develop the socio-cultural dimension of the teaching of comprehension. Only then may pupils be able to reflect on how the same text can have multiple meanings to a group of peers and begin to self-monitor their own comprehension in the light of ongoing dialogue.

The EEF Teaching and Learning Toolkit has some useful advice about the implementation of reading comprehension strategies:
- *Effective diagnosis of reading difficulties is important in identifying possible solutions, particularly for older struggling readers. Are you confident that the problem(s) a pupil is facing in making expected progress is in decoding the words, understanding the structure of the language used or understanding particular vocabulary (especially in subject teaching)?*
- *How can you focus learners' attention on developing comprehension strategies which they can apply more widely?*
- *A wide range of strategies and approaches can be successful, but these need to be taught explicitly and consistently. How are you going to identify the strategies that will meet the needs of your pupils and how will these be reinforced?*
- *A key issue for teachers is identifying the level of difficulty for comprehension activities that is required to extend pupils' reading capabilities. How will you ensure the texts used provide an effective challenge?*

Overall, they conclude that implementation is very low cost, and comes down to targeted professional development of teachers and resources costs.