Reading and Spelling Development Across Languages Varying in Orthographic Consistency: Do Their Paths Cross?

eTale 2022

This study examined the cross-lagged relations between reading and spelling in five alphabetic orthographies varying in consistency (English, French, Dutch, German, Greek). The relations across languages were unidirectional: earlier reading predicted subsequent spelling. Also, significant differences between languages in terms of the strength of the effects of earlier reading on subsequent spelling were found.

Authors: George K. Georgiou, Karin Landerl, George Manolitsis, Minna Torppa, Alain Desrochers, Peter F. de Jong & Rauno Parrila

Source: Georgiou, G.K., Landerl, K., Manolitsis, G., Torppa, M., Desrochers, A., de Jong, P.F. & Parrila, R. (2020). Reading and spelling development across languages varying in orthographic consistency: Do their paths cross? *Child Development, 91(2), e266-e279*, DOI: 10.1111/cdev.13218

This study examined the cross-lagged relations between reading and spelling in five alphabetic orthographies varying in

consistency (English, French, Dutch, German, Greek). Nine hundred and forty-one children were followed from grade 1 to grade 2 and were tested on word and pseudoword reading fluency and on spelling to dictation. The relations across languages were unidirectional: earlier reading predicted subsequent spelling. Also, significant differences between languages in terms of the strength of the effects of earlier reading on subsequent spelling were found.

- There is little doubt that reading and spelling are interrelated skills relying on similar linguistic skills, such as letter knowledge, phonological awareness, orthographic knowledge and morphological awareness.
- However, the direction of impact and whether the direction changes over time is not known.
- The purpose of this study was to examine the cross-lagged relations between reading and spelling in five languages varying in orthographic consistency (English, French, Dutch, German and Greek).

Two competing hypotheses regarding the developmental relations between reading and spelling

- Reading and spelling take turns in influencing each other in distinct phases of literacy development (Frith, 1985).
- Reading and spelling have a reciprocal relationship, and learners' progression through the different phases of reading and spelling acquisition occurs simultaneously (Ehri, 1995).

The study

The present study examines the cross-lagged relations between reading and spelling from the end of grade 1 to the end of grade 2 across a wide range of alphabetic orthographies that were purposefully selected to vary in consistency.

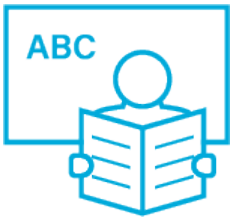
Research questions

- *How is the development of children's reading ability associated with that of spelling?*
- *Does orthographic consistency influence the relations between reading and spelling?*

The participants were 941 children who were followed from the end of grade 1 until the end of grade 2. English speaking (n = 170) and French speaking (n = 254) children from Canada, 113 Dutch speakers from the Netherlands, 175 German speakers from Austria and 229 Greek speakers from Greece were recruited.

Findings

- The models fitted the data well in each language: reading was highly stable, and there were stronger cross-lagged path estimates from reading to spelling than for the other way around in all languages.
- The stability estimates of reading were similar across languages, but there were significant differences between languages in terms of spelling stability as well as in the cross-lagged paths and in the grade 1 correlation between reading and spelling.
- Reading predicted later spelling in all languages, but the strength of the paths varied in different languages.



Implications

- The results support Frith’s hypothesis that there are unidirectional relations between reading and spelling, and that reading skills predict later spelling skills.
- This suggests that, at least among alphabetic orthographies and once children have mastered some basic decoding skills, any differences between languages do not impact the direction of the effects but may impact the strength of the effects.
- The findings suggest that orthographic learning at this point in literacy development is driven by implicit learning from decoding and exposure, rather than by explicit learning from spelling.

Effectiveness of Treatment Approaches for Children and Adolescents with Reading Disabilities: A Meta-Analysis of Randomized Controlled

Trials

eTale 2022

The present meta-analysis extracts the results of all the available randomised controlled trials. The results revealed that phonics instruction is not only the most frequently investigated treatment approach but also the only approach whose efficacy on reading and spelling performance in children and adolescents with reading disabilities is statistically confirmed.

Authors: Katharina Galuschka, Elena Ise, Kathrin Krick & Gerd Schulte-Körne

Source: Galuschka, K., Ise, E., Krick, K. & Schulte-Körne, G. (2014). Effectiveness of treatment approaches for children and adolescents with reading disabilities: A meta-analysis of randomized controlled trials. *PloS ONE, 9*(2), e89900, DOI: 10.1371/journal.pone.0089900

Children and adolescents with reading disabilities experience a significant impairment in terms of the acquisition of reading and spelling skills. The present meta-analysis extracts the results of all available randomised controlled trials. The aim was to determine the effectiveness of different treatment approaches and the impact of various factors on the efficacy of interventions. Twenty-two randomised controlled trials with a total of forty-nine comparisons of experimental and control groups were included. The results revealed that phonics instruction is not only the

most frequently investigated treatment approach but also the only approach whose efficacy on reading and spelling performance in children and adolescents with reading disabilities is statistically confirmed.

- Children, adolescents and adults with reading disabilities (dyslexia) experience a significant impairment with regard to the acquisition of reading accuracy, reading fluency, reading comprehension and spelling skills, which cannot be accounted for by low IQs, visual acuity problems, neurological damage or poor educational opportunities.
- Reading disability has a genetic basis, and the underlying neurobiological and cognitive causes are largely debated.
- A large number of interventions and therapies, derived from various treatment approaches, have been constructed and evaluated.
- The National Reading Panel's (NRP) review found that systematic instruction in learning letter sound relations and in blending sounds to form words is most effective for improving reading and spelling skills in disabled readers.

Different treatment approaches

- Phonemic awareness instruction (n = 3)
- Phonics instruction (n = 29)
- Reading fluency training (n = 5)
- Reading comprehension training (n = 3)
- Auditory training (n = 3)
- Medical treatment (n = 2)
- Coloured overlays (n = 4)

The present study

The present meta-analysis has two advantages over previously published work. First, due to the inclusion of exclusively randomised controlled trials (RCTs), the observed effect sizes can most likely be attributed to the intervention. Second, because all the available RCTs are integrated, it is possible to compare the effectiveness of different treatment approaches.

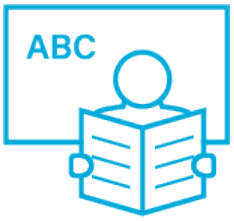
Goals

1. *The first aim is to determine the efficacy of different treatment approaches on the reading and spelling performance of reading-disabled children and adolescents.*
2. *The second aim is to explore the impact of various factors on the efficacy of these treatment approaches.*

The **present meta-analysis** consisted of 22 RCTs. There were 1,138 participants in the experimental groups and 764 participants in the control groups. Treatment approaches were classified into distinct categories based on the description of the intervention in the report, such as phonemic awareness instruction, which included interventions that foster the ability to recognise and manipulate phonemes in words. Another example category was phonics instruction, which systematically teaches letter-sound correspondences and decoding strategies that involve blending or segmenting individual letters or phonemes or dividing a spoken or written word into syllables or onsets and rimes.

Findings

- All the included studies reported the results of reading measures.
- Phonics instruction was investigated most often, and this approach was the only one whose effectiveness on reading performance was statistically confirmed. The mean effect size for phonics instruction was g’=0.322, which suggests a small but statistically significant effect.
- Intervention studies with mild reading-disabled children and adolescents reported a slightly higher mean effect size compared with studies that included moderate or severe reading-disabled study subjects.
- Interventions that lasted more than 12 weeks tended to show higher effect sizes than shorter interventions.
- Ten trials (containing eighteen comparisons) conducted spelling tests before and after treatment.
- Only in the case of phonics instruction was it possible to compute a mean effect size, which was small but statistically significant (g’=0.336).



Summary

- The results revealed that phonics instruction is the most intensively investigated treatment approach, and it

is the only approach whose effectiveness on reading and spelling performance in children and adolescents with reading disabilities is statistically confirmed.

- Thus, the systematic instruction of letter-sound correspondences and decoding strategies, and the application of these skills in reading and writing activities, is the most effective method for improving the literacy skills of children and adolescents with reading disabilities.
- Phonics instruction combines elements of reading fluency training and phonemic awareness training, but neither one alone is sufficient to achieve substantial improvements.

The Role of Family on Pathways to Acquiring Early Reading Skills in Lusaka's Low-Income Communities

eTale 2022

This study examined the role of family in children's acquisition of early reading skills. Participants were 72

grade 1 learners and their parents from low-income Zambian families. Parental reading attitudes and the family literacy environment significantly predicted early reading skills, thus family is an important element in children's processes of learning to read.

Authors: Tamara Chansa-Kabali & Jari Westerholm

Source: Chansa-Kabali, T. & Westerholm, J. (2014). The role of family on pathways to acquiring early reading skills in Lusaka's low-income communities. *An Interdisciplinary Journal on Humans in ICT Environments, 10*(1), 5–21.

This study examined the role of family in children's acquisition of early reading skills. Participants were 72 grade 1 learners and their parents from low-income Zambian families. Parental reading attitudes and the family literacy environment significantly predicted early reading skills, thus family is an important element in children's processes of learning to read.

- The learning process of reading starts long before the child starts school.
- Parent-child interactions affect the transfer of skills from parents to children as they socialise within their families.
- In the formal process of learning to read, decoding is a paramount skill.
- Most first graders in Zambia do not achieve the mastery of reading skills by the end of that year.
- In schools, challenges include poorly resourced infrastructures, inadequate reading materials, large class sizes and low teacher motivation.
- Within the family, the lack of children's books and parents' levels of education, employment statuses and reading attitudes can compromise reading attainment.

The ecological theory of human development

- Developed by Bronfenbrenner.
- Children's early environments: the home (microsystem) and the school (mesosystem).
- The process, person, context and time are interacting elements in the environment that facilitate development.
- *Process* encompasses forms of interaction between the individual and the environment.
- The power of such processes to influence development varies substantially as a function of the characteristics of the developing *person,* of the immediate and remote environmental *contexts* and of the *time* periods in which the proximal processes take place.

The study

This study examined the home environment as a predictor of reading development. Because reading is a mechanism through which children come to understand their environments, this study aimed at identifying family factors that affect children's orthographic awareness and decoding competence, which are skills pertinent to reading development.

Research question

- *What family factors significantly explain variation in children's early reading skills?*

The participants were 72 learners who were randomly selected from 9 schools in Lusaka, Zambia and their primary caregivers.

Measures for reading skills

Orthographic awareness

- Children were asked to choose items that would help them to read. They were shown letters, syllables and simple words from the ciNyanja writing system, as well as non-ciNyanja letters, syllables and words, which served as distractors.

Decoding competence

- Children were asked to match the sound that they heard to the corresponding letter, syllable or word on the paper.

Measures for family environment

Parental reading attitude

- This was assessed through a modified version of the Home Literacy Questionnaire, consisting of ten items, such as “I spend my spare time reading” and “I find reading boring”.

Family literacy environment

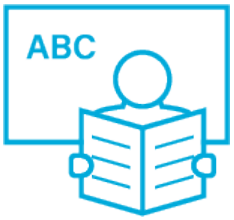
- This was assessed with the Home Literacy Questionnaire and included information on socioeconomic status and family possessions, such as televisions, electricity and reading materials.
- There were also questions on the presence and frequency of exposure to print, oral language and reading and writing activities was asked.

Findings

- Parental reading attitudes and the family literacy

environment significantly predicted children's orthographic awareness and decoding competence.

- Parental reading attitudes explained 40% of the variance in children's orthographic awareness in the pre-test and 17% of the gain scores in the post-test, while the family literacy environment explained an additional 12% and 6% of these, respectively.
- Regarding the variance in children's decoding competence, parental reading attitudes explained 32% of it in the pre-test and 9% of the gain scores in the post-test, while the family literacy environment explained an additional 11% and 8% of these, respectively.
- From the qualitative data, i.e. the interviews, it emerged that academic activities were encouraged, fostered and supported in the home.
- Parents perceive formal education as the channel through which their children can alter their future living conditions for the better.
- The key motivator for parents in encouraging their children to read appears to be economic in nature.
- Parents of high-achieving learners were seen to involve their children in extra literacy-enhancing activities.
- These parents possessed more reading-enhancing materials and explicitly knew how to engage in literacy-enhancing activities at home.



Implications

- Family variables explain substantial variation in the

reading outcomes in both pre-tests and post-tests but are less influential in terms of explaining the gain scores.

- The family variables studied explained a total of 53% of the variance in orthographic awareness in the pre-test, but that decreased to 24% for the gain scores. And similarly, these figures were 44% in the pre-test and 19% in the post-test for the variance in decoding competence.
- Some parents also asked their children to teach them what they had learned in school and, for example, to tell them what a television programme was about. These kinds of activities may also facilitate children's language skills.

Ending the Reading Wars: Reading Acquisition from Novice to Expert

eTale 2022

A comprehensive tutorial review of the science of learning to read is presented, from children's earliest alphabetic skills to the fluent word recognition and skilled text comprehension

characteristics of expert readers. The reason why phonics instruction is so central to learning in a writing system is explained, but research on what else children need to learn to become expert readers and considerations regarding how this might be translated into effective classroom practice are also reviewed.

Authors: Anne Castles, Kathleen Rastle & Kate Nation

Source: Castles, A., Rastle, K. & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest, 19*(1), 5–51, DOI: 10.1177/1529100618772271

There is intense public interest in questions surrounding how children learn to read and how they can best be taught. A wide gap remains between the state of research knowledge about learning to read and the state of public understanding. The aim of this article is to fill this gap. A comprehensive tutorial review of the science of learning to read is presented, from children’s earliest alphabetic skills to the fluent word recognition and skilled text comprehension characteristics of expert readers. The reason why phonics instruction is so central to learning in a writing system is explained, but research on what else children need to learn to become expert readers and considerations regarding how this might be translated into effective classroom practice are also reviewed.

- Reading is the basis for the acquisition of knowledge, cultural engagement, democracy and success in the workplace.
- Illiteracy costs the global economy more than $1 trillion annually in direct costs alone, and the indirect costs are far greater.
- Low literacy is a major contributor to inequality and increases the likelihood of poor physical and mental health, workplace accidents, the misuse of medication,

participation in crime and welfare dependency.

- Thus, a vociferous argument has emerged over how children should be taught to read – a period of exchange that has become known as the ‘reading wars’.
- The pendulum has swung between arguments favouring a phonics approach, in which the sounds that letters make are taught explicitly, and a whole-language approach, which emphasises the child’s discovery of meaning through experiences in a literacy-rich environment.
- A rich literature has revealed a strong scientific consensus around the importance of phonics instruction in the initial stages of learning to read.
- However, this research has been slow to make inroads into public policy.
- There are two major limitations: First, although there have been many reviews describing the strength of the evidence for phonics instruction, it is more difficult to find an accessible tutorial review explaining why phonics works. Second, a full presentation of evidence in a public forum about reading instruction that goes beyond the use of phonics is missing.

This paper is divided into three major parts:

1. We explain why cracking the alphabetic code is so central to learning to read in alphabetic writing systems and why it forms the foundation for all that comes later.
2. We move beyond alphabetic skills, reviewing the latest research on the acquisition of fluent word-recognition skills.

3. We progress to text comprehension, which is multifaceted.

At the end of each major section, the implications of the science we have reviewed are considered with regard to the classroom, and controversies surrounding the teaching of these different aspects of reading are addressed.

Cracking the alphabetic code

- Reading is a learned skill, which typically requires years of instruction and practice.
- When children begin learning to read, they usually already have relatively sophisticated spoken-language skills, including a knowledge of the meanings of many spoken words.
- The challenge of reading is to learn to associate arbitrary visual symbols with those meanings.
- Children need to learn to analyse the printed forms of words and map these onto meanings.
- How this might most easily be accomplished depends on the nature of the writing system.

Writing systems and their implications for learning to read

- All writing systems are a kind of code for spoken language, and learning to read requires children to crack how the code works for their language.
- The code that children must learn varies across different languages.
- There are three major categories of writing system:

alphabetic (in which symbols represent individual sounds or phonemes), syllabic (in which symbols represent whole syllables) and morphophonetic or logographic (in which symbols represent elements of both meaning and sound).

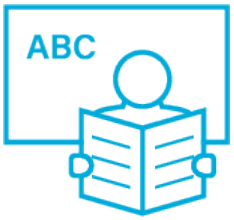
- In alphabetic systems, the phonemes of the language are represented by letters or groups of letters called graphemes.
- If a child learns to decode that symbol-to-sound relationship, then that child will have the ability to translate printed words into spoken language, thereby accessing information about meaning.
- Even among the alphabetic systems, there is substantial variation in their orthographic depth or the transparency with which symbols (graphemes) represent sounds (phonemes).
- Shallow orthographies are characterised by a consistent relationship between graphemes and phonemes (e.g. Italian), whereas deep orthographies are characterised by substantial inconsistency in this relationship (e.g. English).
- Orthographic depth has a substantial impact on acquiring spelling-sound knowledge in the initial stages of learning to read.
- However, we are unaware of any evidence that these initial gains as a result of shallow orthography translate to later advantages in reading comprehension.

The development of alphabetic decoding skills

- Reliable success in terms of the transfer task is only typically achieved when children are trained such that they can a) segment phonemes in spoken words and identify their initial phonemes and b) recognise the graphic symbols that correspond to the key sounds in the transfer task.
- There is a large body of research on the importance of the metalinguistic skill of phonemic awareness in

reading acquisition.

- Thus, children must be able to abstract the relevant phonemic units from the stream of speech they hear. This is a nontrivial task because, in continuous speech, phonemes overlap and run together.
- In addition, children need to learn the visual symbols of the writing system that correspond to phonemes.
- Once children have acquired the alphabetic principle, they can move on to learning the specifics of the relationships between graphemes and phonemes in their writing system and to applying this knowledge in their reading and spelling.
- According to Ehri's phase theory (2005, 2017), children first move into a partial alphabetic phase where they begin to use a rudimentary form of decoding.
- Spelling is an important driver of the transition into the partial alphabetic stage.
- With further instruction and experience in reading and spelling, children move to what Ehri describes as a full alphabetic phase.
- Children now have a much more complete knowledge of grapheme-phoneme relations and can apply this knowledge consistently across a whole printed word.
- Children can now decode unfamiliar printed words, allowing them to access the pronunciations of these and, through them, their meanings (if the words are familiar in oral form).
- In this phase of reading acquisition, the child cracks the alphabetic code.



Implications for the classroom

- Systematic phonics refers to reading instruction programmes that teach pupils the relationship between graphemes and phonemes in an alphabetic writing system.
- Provided that children have adequate vocabulary, this sound-based representation can then be used to access the meanings of these words.
- Thus, systematic phonics instruction should be viewed as a natural and logical consequence of the manner in which alphabetic writing systems represent spoken language.
- Phonics programmes are systematic when they teach grapheme-phoneme correspondences in an ordered manner.
- Such instruction is more straightforward in shallow orthography than in deep orthography.
- The evidence of the effectiveness of phonics instruction is extensive.
- Phonics instruction improves decoding, spelling and text comprehension.
- Synthetic phonics programmes teach grapheme-phoneme correspondences individually and in a specified sequence, and children are taught early on to blend (synthesise) individual phonemes together to make words.
- In contrast, analytic phonics programmes begin with whole words, and grapheme-phoneme correspondences are taught by breaking these words down into their component parts.
- By introducing grapheme-phoneme correspondences individually, it is possible to control the learning environment more effectively and to ensure that each correspondence is taught explicitly and in an optimal sequence.
- For example, English includes a number of high frequency words that are highly unusual, and many teachers address this problem by teaching these kinds of words as ‘sight words’ or ‘tricky words’, together with phonics instruction.
- Teachers may use flash cards with single words printed on them for children to name, activity sheets involving

the words or weekly word lists for children to take home.

- In summary, teaching phonics provides children with the principal means of getting from the printed form of a word to its spoken form, but teaching some sight words can assist here as well.
- Decodable books are texts written for children that consist primarily of words that they can read correctly using the grapheme-phoneme correspondences that they have learned.
- These kinds of books provide children with an opportunity to practise what they have been taught explicitly in the classroom and to allow them to experience success in reading independently very early on in reading instruction.
- Evidence suggests that phonics teaching is more effective when children are given immediate opportunities to apply what they have learned to their reading.

Becoming a skilled word reader

- The acquisition of phonic knowledge is by no means all there is to learning to read, even at the single-word level.
- Skilled readers can generalise: they can read not only words that they are highly familiar with but also new words that they have never seen before.
- There is also substantial evidence that alphabetic decoding processes affect skilled readers' word recognition and comprehension.
- Thus, skilled readers of alphabetic writing systems continue to draw on the systematic relations between letters and sounds when they read and understand words.
- These skills, however, are not sufficient for fluent word reading.
- There are computational models that describe the precise

cognitive operations involved in visual word recognition and reading aloud.

- All the models converge in that they represent two key cognitive processes in word reading: one that involves the translation of a word's spelling into its sound and then into its meaning and one that involves gaining access to its meaning directly from the spelling, without the requirement to do so via phonology.
- Together, they allow the optimal processing of words across the full spectrum, from being new and unfamiliar to a reader, where alphabetic decoding is critical, to being highly familiar, where direct access to the meaning is more efficient.
- This dual-pathway architecture for deriving meaning from printed words is also apparent in the neural implementation of the reading system.
- In summary, cognitive models converge in representing the fluent reading of familiar words as proceeding directly from print to meaning, without the requirement for alphabetic decoding.

The development of fluent word-reading skills

- As children progress toward becoming skilled readers, their heavy reliance on alphabetic decoding gradually decreases.
- That is, children make the transition from being 'novices' and reading words primarily via alphabetic decoding to 'experts' and recognising familiar written words rapidly and automatically and mapping their spellings directly onto their meanings without recourse to decoding, a process that is referred to as orthographic learning.
- Orthographic learning is an umbrella term that encompasses both the acquisition of the word-specific

knowledge required to access a particular word's meaning from print and also the accumulation of more general knowledge about orthographic regularities within the writing system.

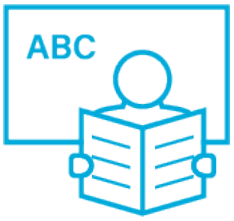
- The most influential theory of the transition to skilled word reading has been the self-teaching hypothesis, which sets out a theoretical framework and provides an experimental paradigm for exploring it.
- The self-teaching hypothesis has alphabetic decoding at its core, the so-called sine qua non of reading acquisition, but it further proposes that, by requiring the child to engage in the effortful process of translating print to sound and therefore to focus on the letters in the word and their sequence, the act of decoding also provides an opportunity to acquire orthographic knowledge.
- This knowledge is then available for future encounters with the word, lessening the reliance on alphabetic decoding.
- Thus, through the combination of alphabetic decoding and repeated exposure, children are able to self-teach through their independent reading.
- The process of acquiring direct mappings between printed words and their meanings proceeds in an item-based fashion: At any particular point in time, a child may read some words slowly and with great effort while recognising and understanding other words rapidly and efficiently, with less reliance on alphabetic decoding.
- Lexical quality is the extent to which a stored mental representation of a word specifies its form and meaning in a way that is both precise and flexible.
- The precision of the representation – knowledge of the exact spelling – is important because it allows a child to distinguish a written word from similar-looking words, permitting direct access to its meaning.
- The flexibility of the representation is important because it allows a child to adapt dynamically to

different print-meaning combinations.

- As children build their experience with print, the average quality of the words in their lexicon steadily increases.
- As lexical quality builds, cognitive resources are freed up for comprehension.
- Understanding text is a complex task that places heavy demands on attention, memory and high-level language processes.
- When lexical quality is high, a reader’s cognitive resources can be largely directed toward this challenging task because individual words are recognised rapidly, automatically and with minimal conscious effort.
- Lexical tuning means that the overall print exposure may interact with the nature of the orthography to shape the development of a child’s word-recognition system.
- The lexical legacy hypothesis posits that the linguistic nature of people’s experiences with particular words is also important, meaning that words that people experience in a range of different semantic and syntactic contexts might yield stronger orthographic representations than words that are repeated in the same contexts.
- Cumulative frequency, the age of acquisition and semantic and contextual diversity have all been shown to affect skilled performance when reading words in isolation and in sentences.
- The acquisition of morphological knowledge presents a dramatic advantage in acquiring the mapping between spelling and meaning.
- Morphological awareness refers to a child’s ability to reflect on and manipulate the morphological structure of words.

Summary of how to become a skilled word reader

- Expert readers can gain access to the meaning of many words directly from their printed forms, and this reading progress is characterised by a gradual transition from a profile of reading words primarily via alphabetic decoding to one of heavy reliance on this direct mechanism.
- Acquiring knowledge of morphological regularities is an important part of this transition, allowing the child to capitalise on systematic mappings between spellings and meanings.
- Exposure to print provides a dynamic database from which children can accumulate detailed orthographic knowledge, supported by a foundation of alphabetic decoding skills.



Implications for the classroom

- Teaching sight words plays a part in what we see as a deeper response to the question of how to promote fluent word reading – getting children to a point where they can read independently as quickly as possible.
- Reading for themselves allows children to build their experience with printed words, which is crucial for building word-reading fluency.
- Ultimately, it is children's own extensive, varied and rich experience in reading that undoubtedly plays the most important role in their transition from novice to expert readers.
- Because of the importance of morphology in relating word forms to their meanings, there is an argument for the explicit instruction of this issue when it applies to classroom practice.

- Several studies have often found an impact of morphological instruction on some measures, including vocabulary, reading aloud, reading comprehension and spelling.
- It is predicted that the benefits of explicit morphological instruction are more likely to be observed somewhat later in reading development, promoting learning as children accumulate the experience necessary to accomplish direct mapping between spellings and meanings.
- Teachers can seek to provide as much exposure to print as possible during classroom activities and homework, but what they can achieve will be minuscule compared with the exposure that children can attain themselves during their independent reading.
- Fostering a love of reading in children and the motivation to read independently has immense value.
- The most effective strategies for increasing children's motivation to read might be maximising the value of reading and making the choice to do so easy.
- Children will value the activity of reading more if they have opportunities to read texts that they are interested in, that their friends are reading or that are of some practical use to them.
- The amount of personal time that children spend reading depends not just on whether they want to read but also on whether they want to do it more than all the other available options.
- Reading material should be made highly visible to maximise the chance that children will pick something up and read it.
- Children are more motivated to read and engage with it more when they are good at it.
- Thus, one clear and achievable means of maximising motivation is to ensure that children have solid basic skills and consider being 'a reader' a key part of their identities.

Learning to comprehend text

- Children need to be able to identify the majority of words contained in a written text if they are to comprehend it.
- However, text comprehension requires much more than the capacity to identify and read individual words.
- The simple view of reading posits that reading comprehension is the product of two sets of skills: 'decoding' and 'linguistic comprehension'.
- There is general consensus that as people read, they construct a mental representation of the situation being described by the text, linking information from the text with relevant background knowledge.
- Thus, meaning emerges from the formation of a situation model that builds dynamically as people read, culminating in a rich representation of the text that goes beyond what is stated explicitly.
- The foundation of the situation model is delivered by the incremental analysis of words and their syntactic roles in phrases or sentences.
- This connects with knowledge drawn either from information provided explicitly in the text or from readers' relevant background knowledge.
- Knowledge is broadly conceived and may include information such as the meanings of words, grammar rules, the knowledge of events and temporal relations, episodes, scenarios, emotions and characters.
- Inferences need to be made beyond what is overtly stated to establish meaning within and between sentences, and these need to draw on background knowledge.

Factors influencing the development of reading comprehension in children

- By the time children learn to read, they already have a

sophisticated language system, which allows them to produce and comprehend oral language.

- Oral language sets a vital foundation for reading comprehension and its development.
- The reading systems framework identifies three constructs that underpin reading comprehension: the first is concerned with knowledge, be it linguistic knowledge, orthographic knowledge or general knowledge; the second describes processes involved in reading, which include decoding, word identification, meaning retrieval, sentence parsing, inferring and comprehension monitoring, along with the interaction of these processes with each other and with knowledge; and the third factor captures general cognitive resources, such as memory.
- A low level of vocabulary constrains comprehension, but limited knowledge itself might be a consequence of differences in processing.
- Knowledge is fundamental to comprehension.
- Overwhelming evidence indicates that vocabulary knowledge matters: understanding the majority of individual words within a text is a prerequisite to understanding that text.
- Oral vocabulary sets the foundation for reading comprehension and successful reading itself and then provides opportunities to expand vocabulary.
- Rich vocabulary knowledge subsumes not just the number of individual words known but also how well they are known and how flexibly they can be used in a given context.
- Beyond single words, text comprehension demands knowledge of multiword utterances, idioms and other figurative expressions that occur frequently in text.
- Alongside lexical knowledge, children need to know how words in a sentence operate together.
- Like vocabulary, grammar and syntax knowledge is part of a child’s spoken-language repertoire.

- Several processes, such as meaning activation, inference generation and comprehension monitoring, are engaged as people read.
- For example, comprehension monitoring is typically defined as the collection of strategies or skills used to evaluate one’s own comprehension, to identify when comprehension has gone astray and, where appropriate, to repair any misunderstanding.

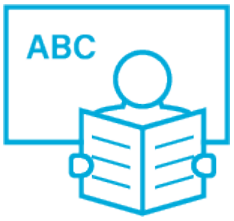
Factors influencing the development of reading comprehension in children

- Executive functions refer to a set of cognitive processes that allow people to plan, organise, control and regulate resources to achieve a goal.
- Working memory, cognitive flexibility and inhibitory control are examples of executive skills and have all been implicated in reading comprehension.
- Working memory can be defined as the mechanisms or processes involved in the control, regulation and active maintenance of task-relevant information in the service of complex cognition.
- The effective control of working memory may allow irrelevant information to be deactivated or suppressed, freeing up resources for ongoing comprehension.
- The availability of working memory resources should facilitate the building of a detailed, rich and well-connected situation model.
- Working memory performance is associated with vocabulary and inference making – key factors that influence reading comprehension.

Summary of how to learn to comprehend text

- Word recognition and high-quality lexical knowledge provide necessary input into reading comprehension, but knowledge and processes beyond the individual word level are vital too.

- A range of oral language skills measured in preschool are closely associated with reading comprehension later on, and this relationship continues through the primary school years.
- In the early years of reading development, reading comprehension is constrained by limitations in terms of word-reading ability.
- As word-reading skills strengthen, reading comprehension becomes constrained by limitations of knowledge and the capacity to build a rich and coherent representation of language, regardless of whether the language is heard or read.
- The key messages highlight the complex and multifaceted nature of reading comprehension and the associated difficulty of separating knowledge, processing and general resources, such as memory.
- High-quality knowledge promotes efficient processing, which places fewer demands on resources.



Reading comprehension: Implications for the classroom

- The assessment of reading comprehension has a place in the classroom, allowing teachers to identify children who may need additional support. This is important because some children find reading comprehension difficult, despite being able to read words at an age-expected level.
- Reading comprehension assessment is not easy to measure: it is not a single entity that can be cleanly and reliably captured by a ‘gold-standard’ test.

- Educators need to be aware of what a particular test is measuring, and this requires some knowledge about what reading comprehension is and why it can vary.
- It is beneficial to explicitly teach children strategies to prompt active engagement with text.
- Some key strategies emerge from the principles of reciprocal teaching, in which children are encouraged to discuss a text with peers and teachers using methods such as clarification, summarisation, prediction and question generation.
- The benefits of strategy instruction appear to emerge after relatively little instruction.
- More consistent effects are seen when strategy instruction is applied in later grades (approximately the fourth grade onward in the United States), probably reflecting the fact that a more reasonable level of reading fluency is needed before children can benefit properly from text-level strategy instruction.
- In a meta-analysis, Elleman et al. (2009) found that although vocabulary instruction led to significant improvements concerning custom-made comprehension passages containing the taught words, the transfer to standardised assessments of reading comprehension was less impressive.
- This points to the utility of teaching content-relevant vocabulary before children are expected to use that vocabulary to learn from a text.
- Instruction that taught multiple and flexible strategies for establishing word meaning (e.g. using contextual cues, synonyms, syntactic constraints) showed a more general treatment effect.
- A fruitful approach might be to focus on specific types of words (e.g. those words that are not yet known but need to be learnt in order to comprehend a variety of texts and curricular topics).
- Likewise, systematic instruction in more formal or technical academic vocabulary holds promise, especially

because such words are rare in speech.
- Inference instruction has been shown to benefit reading comprehension.
- Vocabulary, grammar and narrative skills at school entry and beyond predict later levels of reading comprehension. Even before children can read, interventions that target oral language lead to improvements in reading comprehension.

Conclusions

- Despite extensive scientific evidence, accumulated over decades, in favour of the centrality of alphabetic decoding skills as a foundation of learning to read, there remains resistance to using phonics instruction methods in the classroom.
- Limited knowledge about the nature of writing systems among many practitioners means that they are not equipped to understand why phonics works for alphabetic systems.
- Practitioners know that there is more to reading than alphabetic skills, but a full presentation of the scientific evidence in relation to these more advanced aspects of reading acquisition in a public interest forum has been lacking.

Assisted Repeated Reading with an Advanced-level

Japanese EFL Reader: A Longitudinal Diary Study

eTale 2022

The present study attempts to reveal the inner process of foreign language L2 reading fluency development through repeated reading (RR) for an advanced-level L2 reader. This study was designed to investigate specifically how her reading fluency developed and how her comprehension changed during the course of RR treatment over 14 weeks.

Authors: Etsuo Taguchi, Greta Gorsuch, Miyoko Takayasu-Maass & Kirsten Snipp

Source: Taguchi, E., Gorsuch, G., Takayasu-Maass, M., & Snipp, K. (2012). Assisted repeated reading with an advanced-level Japanese EFL reader: A longitudinal diary study. *Reading in a Foreign Language, 24*(1), 30–55.

Reading fluency has become a priority issue in English as a first language (L1) setting, and also in English as a second or foreign language (L2) setting, because the lack of fluency is considered a major obstacle to developing independent readers with good comprehension skills. Repeated Reading (RR) may be a promising approach for building fluency and comprehension in L2 settings. However, L2 fluency research has not yet demonstrated a strong correlation as in L1 settings between improved reading fluency and enhanced comprehension. The present study attempts to reveal the inner process of L2 reading fluency development through RR for an advanced-level

L2 reader. This study was designed to investigate specifically how her reading fluency developed and how her comprehension changed during the course of RR treatment during 14 weeks.

- Fluent English monolingual (L1) readers usually read texts at 250 to 300 words per minute (wpm), while advanced-level L2 readers with good comprehension skills read texts at 80 to 120 wpm.
- Both L1 and L2 readers vary their reading rate according to task types or text difficulty levels.
- Both L1 and L2 readers of English who have acquired some fluency are likely to engage in a greater amount of reading than those who lack fluency.
- Both L1 and L2 fluency researchers concur that fluent readers engage in automatic, accurate, and rapid recognition of letters, letter combinations, and words.
- There have been multiple approaches to developing L2 reading fluency, such as extensive reading (ER), speed reading, and RR.
- The theoretical backbone of RR is automaticity theory (LaBerge & Samuels, 1974).
- Readers trained to a level of automaticity in word recognition should be able to direct more attention to higher-order resource-demanding comprehension processes.
- In English L1 settings, research has provided robust evidence to support this claim; however, in English L2 settings it is less clear.
- Multiple exposure to texts together with an audio reading model may provide some scaffolding for the beginning-level participants and may also engender motivation to read.

The study

The current study explores some currently unresolved issues. First, it is not known whether L2 reading fluency develops in ways that are similar to or different from L1 reading fluency, nor whether fluency training is effective at the same ages or ability levels. A second issue is what is happening with readers' thinking while they engage in RR. A diary study is 'a first-person account of a language learning or teaching experience, documented through regular, candid entries' (Bailey, 1990, p. 215).

Research questions:

1. *How does an advanced-level L2 learner develop her silent reading rate and reading comprehension with RR?*
2. *What features of RR are beneficial (and what are not) to the reading comprehension of the participant?*
3. *What aspects of using an audio model are beneficial (and what are not) to the comprehension of the participant?*

The participant was a 34-year-old Japanese housewife called 'Naomi', with advanced level English proficiency. She took pre- and post-tests of reading comprehension and time (the training procedure used different texts than those used for the pre- and post-tests).

Training procedure

- The 70 training sessions during the 14 weeks consisted of the following 4 steps:
    1. Read a passage from the RR text silently while timing the first reading time with a stopwatch.
    2. Read the same passage three more times while listening to the audio recording.
    3. Read the same passage again twice silently while timing each reading with a stopwatch.
    4. Write thoughts and comments about the RR session in a diary.

- The self-reported amount of reading for each session varied from 280 to 1364 words of text, with an average of 804 words.

Findings

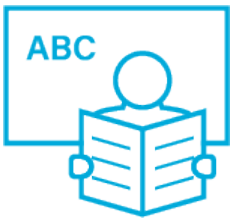
- A pronounced practice effect is shown in how Naomi's mean reading rate increased from the first to the fifth and sixth readings (averaged across the entire course of the RR treatments).
- Her first reading rates reflect transfer of her cumulative practice effect from the previous RR sessions.
- Her reading rate increased from pre-test to post-test by 24 wpm.
- Her comprehension score on the first taking of the post-test was 8/15, doubling her score from the pre-test.
- According to qualitative data, RR benefits reading comprehension in the following ways:
    1. RR enhances overall comprehension of passages.
    2. RR enhances comprehension of specific parts of passages.
    3. RR seems to provide scaffolding.
- However, RR may lead to reader boredom and demotivation and cannot alone lead a reader to better comprehension beyond a certain level.

Beneficial and non-beneficial effects of the audio model

- The audio reading model paces the reader and helps increase reading speed.
- The audio reading model helps with comprehension of

dialogues in the text.

- The audio reading model gives the reader access to the pronunciation of words.
- The audio reading model does not help the reader's comprehension of ambiguous parts of text.



Conclusions and implications

RR improved reading rate and comprehension. Enhanced comprehension may come from the various forms of scaffolding that RR is believed to support L2 readers. The scaffolding may bridge the gap between what a reader can do currently and what they will be able to do in the future. The audio reading model paced the reading and helped the learner to read faster. It also helped her to understand dialogues embedded in the text by providing character-specific prosodic information. Naomi suggested that three re-readings after the initial reading in each session would be sufficient. Readers should also be given the opportunity to confirm the accuracy of the assumed meaning of unknown words and phrases before continuing to the next rereading.

Early Predictors of

Phonological and Morphological Awareness and the Link with Reading: Evidence from Children with Different Patterns of Early Deficit

eTale 2022

This study examines the contribution of early phonological processing (PP) and language skills on later phonological awareness (PA) and morphological awareness (MA), as well as the links between PA, MA, and reading. Children with poor early PP are more at risk of developing deficits in MA and PA than children with poor language. There is a direct link between PA and reading accuracy and between MA and reading comprehension that cannot be accounted for by strategy use at the word level.

Authors: Anna J. Cunningham & Julia M. Carroll

Source: Cunningham, A.J. & Carroll, J.M. (2013). Early predictors of phonological and morphological awareness and the link with reading: Evidence from children with different patterns of early deficit. *Applied Psycholinguistics,* 1–23. DOI: 10.1017/S0142716413000295

This study examines the contribution of early phonological processing (PP) and language skills on later phonological awareness (PA) and morphological awareness (MA), as well as the links between PA, MA, and reading. Children aged 4–6 years with poor PP at the start of school demonstrated weaker PA and MA after 3 years regardless of their language skills. Children with poor early PP are more at risk of developing deficits in MA and PA than children with poor language. There is a direct link between PA and reading accuracy and between MA and reading comprehension that cannot be accounted for by strategy use at the word level.

- Languages of European origin are morphophonemic in structure, meaning words are constructed via a combination of phonological and morphological rules.
- A strong association has been found between reading and spelling of English and both PA and MA.
- Previous research has shown that PP and language skills in early childhood are linked to the development of explicit PA and MA.

Early predictors of PA

- PA refers to awareness of parts of speech (syllables, rhymes, and phonemes) that create meaning when combined to make a word.
- Implicit PA starts to develop before school age, whereas explicit PA develops during the early school years.
- General PP skills are a key predictor of explicit PA.
- PP is defined as remembering, comparing, and learning the sound structures of words.
- Implicit awareness of syllables and rhymes predicts explicit PA.
- It has been suggested that early vocabulary development lead to gains in PA via a process of ‘lexical restructuring’.

Early predictors of MA

- MA refers to awareness of the smallest units of meaning.
- Morphologically complex words are spelled by combining a 'base' word with an affix or inflection.
- One theory is that MA arises from a broad base of oral language skills.
- An alternative view implicates early PP, suggesting that phonological skills underlie the development of syntactic and semantic aspects of language, both of which are represented in MA.

Links between PA, MA, and reading

- The link between PA and reading is well established.
- The link between MA and word reading is relatively under-researched.
- However, many studies have shown that MA contributes variance to word reading independently of PA.
- MA contributes to reading comprehension beyond vocabulary.
- PA generally does not predict reading comprehension once word reading has been controlled.

Study

The present study follows up children initially recruited for a previous study comparing children at risk of reading difficulty with no-risk controls.

Research questions:

1. *What is the predictive effect of early PP and language skills on later PA, MA, and morphological and phonological strategy use for reading and spelling?*

2. *Are PA and MA linked to phonological and morphological strategy use for literacy?*
3. *Is there a direct link between PA, MA, and reading accuracy and comprehension that cannot be explained by phonological or morphological strategies at the word level?*

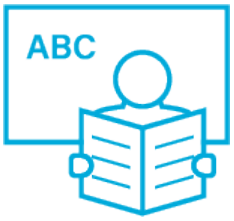
Method

Four subgroups were identified from 198 children initially tested during kindergarten or 1st grade when they were 4–6 years old. In total, 82 children were at risk of reading difficulties, and 116 children had no known risk factors. The final sample tested at Time 2 included 18 with double deficits, 15 with a single PP deficit, 17 with a single language deficit, and 114 with no deficit, from which 24 were placed in the matched no deficit group. Thus, the final sample comprised 74 children for the dynamic tasks.

Findings

- In the case of PA, the mean level was higher in the double deficit compared to the single PP deficit group.
- On the dynamic PA task, children with low PP at Time 1 had significantly poorer PA at Time 2 regardless of language group.
- For the dynamic morpheme task, children with poor PP at Time 1 had significantly poorer MA at Time 2 regardless of language group.
- For phonological reading, the effect of the PP group was near significant, whereas the effect of the language group was not.

- For phonological spelling, the effect of the PP group was significant, whereas the language group was not.
- For morphological reading, neither the PP group nor language group were significant.
- For morphological spelling, the PP group had a near-significant effect, whereas the language group was non-significant.
- In regression analyses, PP significantly predicted PA, MA, and phonological and morphological strategy use for nonword reading and spelling. Language made an additional contribution to MA only.
- PA predicted all four nonword measures, but MA made no significant additional contribution.
- Dynamic PA, phonological reading, and morphological reading were unique predictors of reading accuracy, whereas MA was the only unique predictor of reading comprehension.



Conclusions and implications

The results clearly demonstrated that the two groups of children with poor PP were consistently at risk of difficulties in both phonological and morphological areas. These findings suggest that children with poor language but good phonology at the start of school have relatively good outcomes. As children learn a wider variety of complex words, good PP skill may enable them to detect and process morphological regularities and affixes. Both phonological and morphological strategy use for nonword reading and spelling were predicted by PA but not MA. PA and phonological and

morphological reading made a unique contribution to the prediction of reading accuracy. The results do support the hypothesis that PA has a direct effect on reading accuracy beyond its effect on sounding out unknown words. MA had a direct effect on reading comprehension after the effect of PA and nonword decoding had been partialed out. Based on the results of the present study, teachers may be able to select a clear group for additional support. It may also be beneficial for teachers to include more specific teaching of morphemes such that children learn to link morphology to the reading and spelling of new words.

Comparison of a Reading Fluency Intervention with and without Passage Repetition on Reading Achievement

eTale 2022

The purpose of this study was to compare the effect of a repeated reading and question generation intervention entitled *Re-read-Adapt and Answer-Comprehend* (RAAC) with a modified RAAC intervention without the repeated reading component. All

students made gains in oral reading fluency on independent passages. The modified RAAC programme without passage repetition appeared to be as effective at increasing reading fluency when compared to the RAAC programme with passage repetition.

Authors: William J. Therrien, James F. Kirk & Suzanne Woods-Groves

Source: Therrien, W.J., Kirk, J.F., & Woods-Groves, S. (2012). Comparison of a reading fluency intervention with and without passage repetition on reading achievement. *Remedial and Special Education, 33*(309), originally published online 23 June 2011. DOI: 10.1177/0741932511410360

The purpose of this study was to compare the effect of a repeated reading and question generation intervention entitled *Re-read-Adapt and Answer-Comprehend* (RAAC) with a modified RAAC intervention without the repeated reading component. Participants were 30 students in grades 3–5. Students were randomly assigned to either the nonrepetitive condition or the control repeated reading condition and participated in 50 sessions over a 4-month period. All students made gains in oral reading fluency on independent passages. The modified RAAC programme without passage repetition appeared to be as effective at increasing reading fluency when compared to the RAAC programme with passage repetition.

- Reading is a challenge for many children, with 20% of students having significant difficulties with reading acquisition.
- Reading fluency (defined as the ability to read with speed, accuracy, and proper expression) has been identified as an essential reading skill factor.
- The ability to read a passage fluently is often a stronger predictor of comprehension than direct measures of reading comprehension.
- Repeated reading, ‘a supplemental reading programme that

consists of re-reading a short and meaningful passage until a satisfactory level of fluency is reached' (Samuels, 1979, p. 404) is an extensively researched fluency intervention that has been found to improve reading fluency of students with and without disabilities.

- Repeated reading also has an impact on students' reading comprehension.
- Addressing the need or lack of rereading is critical.
- If rereading is not necessary to improve reading fluency, nonrepetitive interventions are preferable because reading numerous passages instead of rereading a few passages increases students' exposure to vocabulary words, topics, and genre.

Theory of automatic word processing

- This presents a reasoned explanation for the effectiveness of repeated reading.
- Repeated reading provides students with multiple opportunities to master words, sentences, and paragraphs in a passage.

Re-read-Adapt and Answer-Comprehend (RAAC)

- This combines repeated reading and question generation into a supplemental reading programme.
- Students reread until a performance criterion is reached. They then receive formative feedback from a competent tutor on speed, accuracy, and prosody.
- Students read each passage purposefully to adapt and answer question generation prompts.

The study

The purpose of this study was to examine the necessity of passage repetition within the RAAC programme on the reading achievement of students receiving special education.

Research questions:

1. *What is the effect of the repeated reading version of the RAAC on student reading fluency outcomes and on overall reading achievement?*
2. *What is the effect of the nonrepetitive reading version of the RAAC on student reading fluency and on overall reading achievement?*
3. *How do the effects on students' reading fluency outcomes and overall reading achievement compare for each version of the RAAC?*

Participants were 30 students (grades 3–5) receiving tiered services or special education services in reading. Students were randomly assigned to the groups; two students were placed in the nonrepetitive condition for every one student placed in the repeated reading condition. All students were involved in 50 intervention sessions over a 4-month period. The pre-tests were administered during a 2-week period before programme implementation and the post-tests were administered during a 2-week period after programme completion.

Intervention procedure

- Interventions were implemented until a total of 50 sessions each lasting 15 min were completed.
- Students averaged 3 sessions per week and engaged in a total of 12.5 hr of instruction over a 4-month period.
- The interventions consisted of two versions of the RAAC programme: one with repeated and one with nonrepetitive reading.
- The RAAC intervention with repeated reading consists of the following nine instructional steps:

1. The teacher cued the student with the following statement: '*Read this story the best you can and as quickly as you can. Pay attention to what you are reading as you will need to answer these questions*' (the teacher pointed to the cue card questions).
2. A cue card containing generic story structure questions was presented and the teacher prompted the students to read the questions aloud.
3. The student reread the passage aloud until they reached a preestablished number of correct words per minute (cwpm) at least two and no more than four times.
4. The teacher provided corrective feedback on word errors. If the student hesitated on a word for 3 s or omitted a word(s), error correction was provided immediately. Otherwise, error correction was provided after the passage had been read but prior to rereading the passage.
5. After each reading, the teacher provided feedback to the student on the fluency of their performance using the 'How Did I Read' rubric.
6. After reading the terminal passage, the teacher prompted the student to adapt and answer the cue card questions orally. If the student answered the question(s) incorrectly or gave no answer(s), a prompt to look for the information in the passage was given. If the student answered the question(s) incorrectly or no answer(s) was provided after a second try, the answer(s) was provided and the teacher explicitly pointed out where the information could be found to answer the question(s).
7. The teacher asked four factual and four inferential comprehension questions about the passage.
8. The session ended and steps 1–7 were repeated in

the following session.
9. The teacher adjusted the difficulty of the reading material for use in the subsequent session.

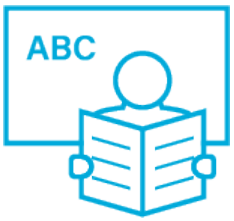
- The instructional steps in the RAAC intervention nonrepetitive condition consisted of the same steps with the following three exceptions:
    1. Instead of rereading passages to set criteria, each passage was only read once.
    2. Each instructional session consisted of two novel passage readings and related steps. Therefore, students read twice as many novel passages as students in the repeated reading condition.
    3. The teacher adjusted the difficulty of the reading material for use in the subsequent sessions.

Findings

- On average, students in the repeated reading condition increased 15.73 cwpm from pre-test (76.83 cwpm) to post-test (92.55 cwpm) when measured using the DIBELS Oral Reading Fluency (DORF) test.
- On average, students in the nonrepetitive condition increased 26.89 cwpm from pre-test (81.42 cwpm) to post-test (108.32 cwpm).
- The difference in the pre- to post-test gain scores for students in different conditions was not statistically significant.
- On average, students in the repeated reading condition standard score increased 3.36 cwpm from pre-test (92.27 cwpm) to post-test (95.64 cwpm) when reading achievement was measured on the WJ-III Broad Reading test.
- On average, students in the nonrepetitive reading

condition standard score increased 5.0 cwpm from pre-test (90.42 cwpm) to post-test (95.42 cwpm).

- Again, the difference in these scores for students in different conditions was not statistically significant.



Conclusions and implications

Students in the RAAC condition with rereading made significant gains in reading fluency from pre- to post-testing. Moreover, students in the RAAC condition without rereading made significant gain in reading fluency from pre- to post-test. Students in both conditions also made significant gains in general reading achievement between pre- and post-testing. There was no significant difference between conditions on pre- to post-test gains in reading fluency and general reading achievement. Despite the lack of statistical significance, the mean difference in reading fluency and reading achievement in favour of the nonrepetitive condition was surprising. Plausible explanations for this difference in favour of the nonrepetitive intervention may involve student characteristics and/or reading material. It may be concluded that reading practice with feedback is the essential component needed to improve reading fluency, and not rereading.

Developing Reading Fluency in EFL: How assisted repeated reading and extensive reading affect fluency development

eTale 2022

The main objective of the current study is to focus on whether (and how) assisted repeated reading with an auditory reading model enhances English as a foreign language (EFL) readers' fluency. Quantitative and qualitative analyses of participants' reading behaviours suggest that assisted repeated reading (RR) is equally as effective as extensive reading (ER) in increasing EFL readers' silent reading rate, and favourably affects learners' perceptions of reading activities. The results indicate the specific role played by the repetition and listening components of assisted RR in facilitating reading comprehension.

Authors: Etsuo Taguchi, Miyoko Takayasu-Maass & Greta J. Gorsuch

Source: Taguchi, E., Takayasu-Maass, M., & Gorsuch, G.J. (2004). Developing reading fluency in EFL: How assisted repeated reading and extensive reading affect fluency development. *Reading in a Foreign Language, 16*(2), 70–96.

Extensive research on reading in a first language has shown the critical role of fluency in successful reading. Cognitive

and metacognitive reading strategies and schemata that readers utilise also play important roles in constructing meaning from text. The main objective of the current study is to focus on whether (and how) assisted RR with an auditory reading model enhances EFL readers' fluency. Quantitative and qualitative analyses of participants' reading behaviours suggest that assisted RR is equally as effective as ER in increasing EFL readers' silent reading rate, and favourably affects learners' perceptions of reading activities. The results indicate the specific role that repetition and listening components of assisted RR play in facilitating reading comprehension.

- There has been sustained interest in promoting reading as a significant and viable means of language development for second and foreign language (L2 and FL) learners.
- ER and RR are two types of reading instruction programmes that have been used in English as a second language (ESL) or EFL settings as effective means of developing reading fluency and comprehension.
- ER is an approach in which readers self-select materials from a collection of graded readers with the goal of reaching specified target times of silent sustained reading.
- In the RR approach, L2 learners read specified passages from graded readers repeatedly to increase learners' sight recognition of words and phrases, resulting in increases in fluency and comprehension.

The study

The present study investigates whether (and how) RR

facilitates fluency development and comprehension. In the current study, one group of L2 learners engaged in an assisted RR programme in which an audiotaped reading model was supplied, while another group of learners engaged in an ER programme.

Research questions:

1. *Is RR effective in developing fluency in beginning-level FL readers?*
2. *Is RR as effective as ER in developing reading fluency and comprehension of beginning-level FL readers?*
3. *How do beginning-level FL readers perceive the effectiveness of each method?*

The participants were drawn from a class of 29 Japanese university students who were learning English as a foreign language. In total, 20 students volunteered to participate in this study. Half of the participants (n = 10) were assigned to the RR group and the other half to the ER group. Participants took pre- and post-tests. The RR group read two books at approximately 4^{th} grade level (United States). Participants in the ER group read three to six books.

Procedure

- This project was conducted over 17 weeks.
- The RR groups had 42 treatment sessions.

1. Students read the previous passage to remember what they had read in the last session.
2. Students timed their first reading of a passage with a stopwatch.
3. Students read the passage twice while listening to the exact audiotaped version with headphones.
4. Students read the passage silently two more times and timed each of their readings with a stopwatch.
5. Students wrote a book report about what they had read in

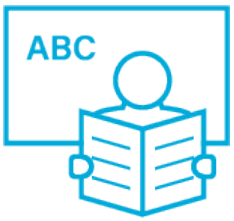
the story passage.

- The ER group engaged in ER over the same time frame that the RR sessions were held.
- ER participants read books of their choice progressively from easier to more difficult.

Findings

- Results seemed to support the hypothesis that RR is effective in developing fluency in FL readers.
- The RR group read at 83.97 wpm (on average) for the first four sessions and their average reading rate increased to 107.04 wpm for the last four sessions, which was statistically significant.
- Overall, participants read faster within individual RR sessions as they read the text repeatedly. The average gain score from the first to the fifth readings within sessions was 31.42 wpm, which was a statistically significant increase.
- Results suggest that RR and ER are comparable in facilitating participants' reading fluency, with the RR group having slightly higher wpm reading rates.
- Both RR and ER groups increased their comprehension scores on both pre- and post-tests as the number of readings multiplied.
- The response data from the questionnaire revealed the following themes: 1) changes in participants' willingness to read long passages; 2) learning to deal with unknown words in a text; and 3) extended exposure to reading input.
- The RR participants' data was further categorised into two themes: 4) the role of repetition in developing

reading fluency and comprehension; and 5) the effect of RR simultaneous audio recordings on participants' listening skill development.



Conclusions and implications

The present study suggests that RR is effective in increasing the fluency of beginning-level FL readers. The RR participants read somewhat faster than ER participants on the post-test; however, this was not significantly different. However, the RR group was not able to enhance their comprehension performance, even after their word recognition skills improved. Both methods increased readers' willingness to read long passages and developed their ability to deal with unknown words. The repetition component of RR possibly provides scaffolding for beginning-level reading. RR is as promising a method as ER for enhancing second and foreign language readers' fluency. As learners become able to read faster, they come to enjoy reading. If they can enjoy reading, their access to language input will increase dramatically, which will further promote their language development.

Reading Fluency Instruction:

Moving Beyond Accuracy, Automaticity, and Prosody

eTale 2022

Because reading fluency is increasingly recognized as critical to students' literacy development, it is important to continue a professional conversation and dialogue on the topic. Instead of focusing just to increase reading rate, repeated reading of rhythmical text should be used to improve performance.

Author: Timothy Rasinski

Source: Rasinski, T. (2006). Reading fluency instruction: Moving beyond accuracy, automaticity, and prosody. *The Reading Teacher, 59*(7), 704–706.

Because reading fluency is increasingly recognized as critical to students' literacy development, it is important to continue a professional conversation and dialogue on the topic. Instead of focusing just to increase reading rate, repeated reading of rhythmical text should be used to improve performance.

- Hudson, Lane, and Pullen (2005) defined and described three key elements of reading fluency: accuracy in word decoding, automaticity in recognising words, and appropriate use of prosody or meaningful oral expression while reading.
- These three components are a gateway to comprehension.
- Hudson et al. gave some solid suggestions for teaching each area of fluency.

- They noted that word accuracy and automaticity should be taught separately from prosodic reading.
- They suggested that accuracy and automaticity are best taught through methods aimed at improving student reading rate.
- Prosody in reading is taught through modelling, performance, focus on phrasing, assisted reading techniques, and explicit instruction on appropriate intonation.
- The author has no quarrel with the methods for teaching fluency; however, he has two concerns about the notion of teaching the components of fluency separately.
- First, dividing this instruction requires extra time to teach each component.
- Second, the concern about the segmentation described is the message it sends to students (and teachers) about the goal of fluency instruction.
- Because improvements in automaticity are determined by gains in reading rate, it is not difficult to see why students begin to focus almost exclusively on improving reading rate as the goal for fluency instruction.
- The result of such focus is faster reading with little improvement in comprehension, which is the goal of reading and reading instruction.
- It is feared that single-minded focus on using repeated reading to improve reading rate without commensurate emphasis on reading for meaning will not have the desired result of improving comprehension.

Good fluency instruction

- Instruction on accuracy, automaticity, and prosodic reading can and should occur in unison in an integrated and synergistic manner.
- The author agrees that repeated reading is one of the best ways to develop fluency.
- What would really inspire me to engage in repeated

reading or rehearsal is performance.

- If performance is the incentive to practice, then we need to ask what kinds of texts lend themselves to expressive oral performance.
- To the author poetry, song lyrics, and plays are texts that are suitable for fluency instruction and repeated readings.
- Using these, teachers expose students to a wider variety of reading genres, and by practicing and performing them, students gain in accuracy, automaticity, prosody, and comprehension.
- Classroom research has shown that this approach to repeated readings has helped students make remarkable progress in reading rate.
- General growth in reading and enjoyment of reading have also increased.
- Martinez, Roser, and Strecker (1999) found that students completing repeated reading with Readers' Theatre (reading plays aloud) made twice the gain in reading rate than a comparison group.
- The Readers Theatre students also made substantially better progress than the comparison group on an informal reading inventory (a measure of reading that includes reading comprehension as well as fluency).

Conclusions and implications

Repeated reading is a key instructional method for developing reading fluency. The aim of repeated reading should be meaningful and expressive oral interpretation or performance

of text, not faster reading. Teachers should be looking for texts that lend themselves to oral interpretive reading.

Assessment as a Strategy to Increase Oral Reading Fluency

eTale 2022

This article highlights the use of assessment as a strategy to achieve more effective reading fluency outcomes. Appropriate and thorough assessment practices can identify underlying difficulties that manifest as slowed oral reading rates. An intervention that systematically addresses the word reading difficulties often associated with a lack of oral reading fluency is described.

Authors: Maria S. Murray, Kristen A. Munger & Sheila M. Clonan

Source: Murray, M.S.; Munger, K.A.; Clonan, S.M. (2012). Assessment as a strategy to increase oral reading fluency. *Intervention in School and Clinic, 47*(144), originally published online 7 October 2011. DOI: 10.1177/1053451211423812

For students with reading disabilities who experience difficulties with oral reading fluency, school-based interventions frequently focus on increasing speed through

interventions such as repeated reading of texts. This article highlights the use of assessment as a strategy to achieve more effective reading fluency outcomes. Appropriate and thorough assessment practices can identify underlying difficulties that manifest as slowed oral reading rates. An intervention that systematically addresses the word reading difficulties often associated with a lack of oral reading fluency is described.

- Reading fluency data are increasingly being collected in schools.
- These data are valid in alerting educators that students' fluency may not be developing as expected; however, they are not useful in determining the possible sources of underlying problems.
- Nonetheless, many educators have come to believe that fast reading is the main goal in fluency assessment and intervention.
- A common course of action then becomes the automatic implementation of interventions focusing on faster reading.
- Instead, additional assessments are often needed to determine possible underlying reasons for a slow oral reading rate so that subsequent interventions are more likely to be effective.
- Many definitions acknowledge that fluent reading requires two tasks that must be performed at the same time: decoding and comprehension.
- They further emphasise that the aspects of speed and prosody are indicators that fluent reading is taking place.

Skills assessed

- Letter-sound correspondences
- Word recognition
- Decoding
- Oral reading fluency
- Reading comprehension

The study

This article is concerned with students whose fluency difficulties are rooted in inaccurate and laborious reading of words. To illustrate how an intervention aimed at improving the accurate, effortless, reading of words and text can improve fluency (and comprehension), an example case is provided. This example highlights the value of using assessments to look closely for the underlying cause (or causes) of non-fluent reading when designing an effective intervention. In the intervention, graduate-level practicum students (tutors) are paired with children who experience problems with reading. Using specific assessments, the tutors come to understand the connection between word reading difficulties and slowed or poor fluency as well as how to develop targeted and effective interventions. For one semester twice a week, tutors met one-on-one with students.

Case sample 'Devan'

- Devan was in second grade and was not making adequate progress in reading; nor was he responding to the fluency intervention implemented in his school.
- Devan's tutor Nina discovered that he exhibited avoidance behaviours toward reading.
- Devan did not enjoy reading because of his inability to read stories.
- Nina observed that Devan was not only reading text slowly but also reading many of the words inaccurately.
- Devan read only 50% of the 2nd grade level words correctly.
- For 1st grade level reading passages, Devan correctly answered all comprehension questions. Therefore, it

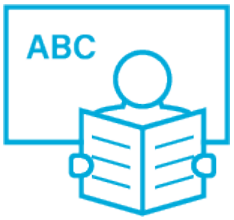
appeared that when he was able to read the words in the passages, he was able to comprehend the meaning.
- Nina knew she had to intervene where there would be maximum benefit; that is, focusing on helping him both accurately and effortlessly recognise words.

Devan's intervention

- The intervention selected for Devan was adapted from *Road to Reading: A Program for Preventing and Remediating Reading Difficulties* (Blachman & Tangel, 2008).
- This was selected because of evidence of its effectiveness and the fact that it has been used in both individual tutoring and classroom settings with successful outcomes in teaching students to decode.
- The programme provides systematic phonics instruction, as its levels are sequenced according to the six syllable patterns.
- Teaching the six syllable patterns in the English language provides a highly efficient way for students to decode approximately 86% of the words they encounter.
- By the end of tutoring, Devan made significant progress toward becoming an independent reader.

The six syllable patterns

- Closed: one vowel followed by one or more consonants
- Silent-e: one vowel followed by one consonant, followed by the letter e
- Open: one vowel at the end of the syllable.
- Vowel team: two vowels that make one sound
- R-controlled: one vowel followed by r
- Consonant + le: one consonant followed by le



Conclusions and implications

Like many students with reading disabilities, Devan had a slow reading rate. The school's intervention consisted primarily of repeated practice reading-level texts. However, Devan failed to make the type of progress he needed to catch up to his more fluent peers, suggesting that he was not responding to the repeated reading fluency-only intervention. It was only after more targeted assessment and intervention addressing his underlying word reading difficulties that Devan showed improvements in reading rate, word recognition accuracy, and reading comprehension. Helping students become more fluent readers is too often misconstrued as a 'need for speed' and is addressed with interventions based on the singular goal of increasing students' reading rate. Without adequate background assessment, many teachers may not realise the limitations of oral reading fluency data, and they may also fail to gather additional data to assist them in making effective instructional decisions. Professional development providing support to educators is necessary to help them appropriately link assessment and instruction. Such opportunities would help to bridge the research-to-practice gap demonstrated in the example provided here, and increase the likelihood that readers like Devan receive interventions that target areas of need leading to significant, meaningful growth.