How to help children with word reading difficulties

In a nutshell

- Instruction based on direct teaching of letter-sound connections and how to manipulate, segment, and blend multiple phonemes into words (phonics-based instruction) is the most intensively investigated treatment approach. It is the only approach where effectiveness in reading and spelling performance for children and adolescents

with reading disabilities is confirmed.

- Because phonics-based instruction is heavily based on phonological awareness, phonemic awareness training (learning to divide words into syllables and syllables into phonemes or sounds) is widely recognised as being effective for the remediation of preschool children at risk of reading disabilities.
- Children with reading disabilities need explicit instruction from the teacher. This means providing clear modelling, demonstration, or explanation of what to do and how to do it. Practice needs to be teacher-guided followed by independent practice with timely and effective feedback.

General principles of effective instruction for learners with learning difficulties

Many researchers consider that to help children with learning difficulties such as reading difficulties there needs to be a continuum of services, led by general education. These services should be available to all students who struggle with learning in school as a part of a comprehensive effort to include quality interventions in school.

One generally accepted approach is the multi-tiered system of supports (MTSS). This refers to layered interventions as a continuum that begin in general education classes in regular school[1]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to

intervention. Second edition. New York: The Guilford Press.. Typically, MTSS consists of three tiers to deliver services. Most commonly, the first two tiers occur in the context of general education and the third tier is provided within a special education context. The key is attending to the periodic or ongoing progress-monitoring data that accompany the implementation of interventions. Tiers differ in terms of instructional time, group size, learning environment, and instructional individualisation.

TIER 1 Education for all students includes core instruction, universal screening, and progress monitoring differentiated in the classroom. Students always begin with differentiated instruction in the general education classroom. Instruction occurs as a part of reading instruction and language arts. Through progress monitoring, the teacher can determine students who are making inadequate progress in learning to read, spell, and write. If possible, the teacher may boost learning by creating smaller groups that are more homogeneous in learning these basic skills. It is estimated (in developed countries) that Tier 1 instruction is sufficient for good progress for 75%–90% of students.

TIER 2 This typically changes the learning environment and increases the extent of pedagogical intervention by providing small-group instruction with three to five students with similar educational needs and a teacher. The focus is on specific aspects of reading and writing. Smaller group size increases the explicitness of instruction as well as opportunities to incorporate attention on self-regulation and executive functions that the child has not yet achieved. The student can also receive increasingly precise corrective and motivating feedback from the teacher. It is estimated that about 10%–25% of students may need Tier 2 interventions.

TIER 3 increases time on task by reducing the size of the instructional group. Instruction is often organised as one-to-one at this level; however, groups of two to three students

are also very common. In this tier, there is greater emphasis on individualising the intervention according to the child's specific needs (for example, letter–sound correspondence, decoding, fluency, comprehension, or spelling). This intervention is usually applied for 2%–10% of students.

Instructing learners with learning difficulties

Fletcher et al.[2]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The Guilford Press. have also formulated **10 general principles of effective instruction for students with learning difficulties**. These are briefly described as follows:

1. *Instructional explicitness.* This is described by Torgesen[3]Torgesen, J. K. (2004). Lessons learned from research on interventions for students who have difficulty learning to read. IN P. McCardle & Chhabra (Eds.) The Voice of evidence in reading research (pp. 355-382). Baltimore: Brookes. as 'instruction that does not leave anything to chance and does not make assumptions about and knowledge that children will acquire on their own'. The teacher tells the students what they need to know with direct explanations, formally sharing new knowledge and modelling the use of the skill or strategy. Based on research, children with reading difficulties are better supported by reading programmes that include explicit instruction than programmes with a less explicit approach based on discovery and inductive learning.

2. *Minimisation of the learning challenge*. Instructional design that minimises the learning challenge is accomplished by a task analysis that provides the most efficient method for succeeding with instructional objectives. In reading

instruction, explicit teaching of grapheme–phoneme (letter–sound) correspondences, decoding, comprehension strategies, and automaticity practice as units may promote efficiency.

3. *Proper terminology*. It is important to give students with learning difficulties the vocabulary that essentially captures important concepts and procedures. Once these terms are taught, the teacher and student should use them consistently (for example, what is a phoneme? what is the meaning of the 'main idea' of the text?). Students with learning difficulties quite often have problems with vocabulary and background knowledge.

4. *Speeded practice*. For students with learning difficulties, practice needs to be designed to develop reading fluency. The important automatisation of decoding skill will free limited capacity of attention and working memory for higher order aspects of the tasks, such as reading comprehension. The teacher may ask the child to read the same text repeatedly and measure how long it takes for the child to read the text. This practice will demonstrate to the child that it is possible to read more fluently when repeating reading which will also motivate the child to practice reading.

5. *Cumulative review*. This must be integrated systematically in classroom practices as a way to ensure retention of previously mastered content and skills. New knowledge should be connected to the already existing content and skills.

6. *Simple and direct language*. Students with learning difficulties are often inefficient processors of language. Therefore, the language of instruction must be simple and direct. The teacher should use short sentences, active voice, unambiguous pronoun antecedents, and other methods to communicate simply, clearly, with simplified explanations. One good method is to ask the student to explain in their own words, which enables checking of their understanding of the

material.

7. *Incorporation of self-regulation strategies*. This principle is related to attentional control, self-regulation, and motivation. These may affect task-orientation, persistence, and learning. Because these students have experienced too many failures in learning situations it will cause them to avoid negative emotions and stress in learning situations and block the learning process. Accordingly, intensive intervention should incorporate motivators and positive feedback from the teacher to help students regulate their attention and behaviour. To encourage hard work, tangible incentives are often required.

8. *Comprehensive instructional approach*. Too often interventions are too narrow, or students only practice one isolated skill (for example, focusing only on phonics in reading difficulties). Based on research, we know that instruction is more effective if it is focused on all three major components of learning to read: word recognition, automaticity, and comprehension.

9. *Extended duration and time on task*. Many interventions are too short to provide sufficient time for instruction aimed at students with learning difficulties. Teachers need to monitor carefully how long the student needs support and should continue as long as necessary to support student learning.

10. *Progress monitoring*. In interventions for students with learning difficulties, teachers need progress-monitoring systems that help the teacher know when to adjust the instructional programme and how to generate ideas for productive adjustments.

In contrast to these principles of effective instruction and intervention, Fletcher et al.[4]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The

Guilford Press. summarise the **_characteristics of ineffective interventions_** _for students with learning difficulties_ as follows:

- It does not focus on academic skill,
- It defines academic proficiency narrowly,
- It does not increase instructional time, intensity, or differentiation,
- It does not continually monitor progress and adjust instruction or change programme,
- It teaches for the sake of learning rules, not to master principles,
- It does not engage the child in reading instructional-level material in writing,

It waits for the child to fail and thus leaves the child behind.

Learning to read and word reading difficulties

Based on literature, learning to read for children with reading disabilities is based on the same cognitive processes and developmental steps than for readers without a disability. However, intervention studies demonstrate that dyslexia can be most successfully treated when it is identified early in development and before formal diagnosis. Accordingly, it is possible to prevent early deficits from becoming a disability[5]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The Guilford Press.[6]Denton, C.A. & Madsen, K.M. (2016). Word reading interventions for students with reading difficulties and disabilities. In R. Schiff, R.M. Joshi (eds.) Interventions in

Learning Disabilities. A handbook on systematic training programs for individuals with learning disabilities. (pp.29-45). Springer.

Remedial studies show that foundational skills can be improved in students with difficulties in reading, typically characterised by word recognition difficulties. Results of a meta-analysis[7]Galuschka, K., Ise, E., Krick, k., & Schulte-Körne, (2014). Effectiveness of Treatment Approaches for Children and Adolescents with Reading Disabilities: A Meta-Analysis of Randomized Controlled Trials. PLOS ONE 9(8): e105843. reveal that phonics instruction is the most intensively investigated treatment approach. In addition, it is the only approach where effectiveness in reading and spelling performance for children and adolescents with reading disabilities is statistically confirmed. This finding is consistent with those reported in previous meta-analyses[8]Ehri, L.C., Nunes, S.R., Stahl, S.A., & Willows, D.M. (2001). Systematic phonics instruction helps students learn to read: Evidence from the National Reading Panel's meta-analysis. Review of Educational Research, 71: 393—447.[9]McArthur G., Eve P.M., Jones K., Banales E., Kohnen S., et al. (2012). Phonics training for English-speaking poor readers. Cochrane Database Syst Rev 12: CD009115.. At the current state of knowledge, it is reasonable to conclude that the systematic instruction of letter—sound correspondences and decoding and the application of these skills in reading and spelling activities is the most effective method for improving literacy skills of children and adolescents with reading disabilities.

The most effective way to teach children to read is with a phonics-based method that emphasises the systematic use of phonics. This approach builds on a child's strong foundation of phonological awareness. The explicit instructions focus on the sounds associated with the letters while also focusing on how to manipulate, segment, and blend multiple phonemes into

words. Reading instruction advances stepwise from letter names and shapes to the correspondences between letters and sounds, starting with simple and regular phoneme combinations. This then progresses on to phonological decoding that emphasises the sound of each letter and how these letters blend together into words. This training emphasises repeated reading of syllables, words, and simple texts[10]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The Guilford Press.[11]Denton, C.A. & Madsen, K.M. (2016). Word reading interventions for students with reading difficulties and disabilities. In R. Schiff, R.M. Joshi (eds.) Interventions in Learning Disabilities. A handbook on systematic training programs for individuals with learning disabilities. (pp.29-45). Springer[12]Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. Psychological Science in the Public Interest, 19, 5—51..

Because phonics-based instruction is heavily based on phonological awareness, phonemic awareness training is widely recognised as being effective for the remediation of preschool children at risk of reading disabilities[13]Bus, A.G., & van Ijzendoorn, M.H. (1999). Phonological awareness and early reading: A meta-analysis of experimental training studies. Journal of Educational Psychology, 91: 403—414. However, when phonemic awareness interventions are provided to school-aged children and adolescents with reading difficulties, they may no longer have a significant effect on reading or spelling performance. This indicates that phonemic awareness training alone is not sufficient for achieving substantial improvements; however, the combination of phonemic awareness training and reading practice represented by phonics instruction has the potential to increase the reading and spelling performance of children and adolescents with reading

disabilities[14]Galuschka, K., Ise, E., Krick, k., & Schulte-Körne, (2014). Effectiveness of Treatment Approaches for Children and Adolescents with Reading Disabilities: A Meta-Analysis of Randomized Controlled Trials. PLOS ONE 9(8): e105843..

It may be concluded that consistent with prior research, this analysis demonstrates that severe reading and spelling difficulties can be ameliorated with appropriate treatment. However, it is apparent that there are also many treatment approaches both in the literature and on the Internet that are not based on research findings but promise to help students who struggle with reading. Some examples of these methods are as follows[15]Snowling, M.J. (2019) Dyslexia. A very short introduction. New York: Oxford University Press.:

- Studies that try to enhance reading and spelling skills of children and adolescents with reading disabilities using medication (nootropic piracetam) demonstrated only minor effects, and the mean effect size for reading performance did not reach statistical significance. With the possibility of side effects in mind, the risks of medication seem to outweigh any benefits.
- Auditory training intends to foster reading and spelling by focussing on the underlying causes of poor performance. At first glance, this approach seems convenient, but the results of the present meta-analysis (e.g. 4) demonstrate that auditory training does not significantly improve children's reading and spelling skills.
- Coloured lenses (Irene lenses) could not demonstrate any positive effect on literacy achievement, and many systemic reviews suggest that results in some studies are mainly due to placebo effects.

Prevention of reading difficulties

Prevention programme for reading difficulties typically include (at preschool, kindergarten, or the beginning of school): screening assessment to identify students with difficulties in acquiring foundational skills in word recognition and fluency, and target interventions to address specific deficits. Screening instruments usually include simple tasks that assess the following[16]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The Guilford Press.[17]Snowling, M.J. (2019) Dyslexia. A very short introduction. New York: Oxford University Press.:

1. Phonological awareness (sounds of spoken language: words, syllables, or phonemes; namely, individual sounds as the smallest units of spoken language)
2. Letter knowledge (naming letters or [Letter knowledge](#))
3. Grapheme–phoneme correspondences (letter–sound) also [GraphoLearn](#)
4. Rapid automatised naming (RAN)
5. Verbal working memory
6. Reading accuracy of syllables and short familiar words

Prevention programmes usually focus on children who have difficulties in these screening tasks and are therefore considered at risk of reading difficulties[18]Puolakanaho, A., Ahonen, T., Aro, M., Eklund, K., Leppänen, P., Poikkeus, A., Tolvanen, A., Torppa, M. & Lyytinen, H. (2007). Very early phonological and language skills: estimating individual risk of reading disability. Journal of Child Psychology and Psychiatry, 48 (9), 923–931.. Classroom and tutorial studies

show that early intervention may reduce the number of these students, including those who might eventually be characterised as dyslexic as well as those who are economically disadvantaged and may be poorly prepared to read. Intervention studies that address the bottom 10%–25% of the student population will significantly reduce the number of at-risk students[19]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The Guilford Press..

The acquisition of well-developed reading skills is a fundamental goal of children's early educational experiences. During the initial years of formal education, children need to learn the skills associated with both reading and writing because these skills are utilised later in their education both to transmit and to evaluate knowledge. Studies of children early in their educational experiences indicate substantial stability in children's literacy-related skills. Children who develop good literacy skills early on are likely to be good readers at the end of elementary school, and children who have weak literacy skills early in elementary school are likely to remain poor readers[20]Lonigan, C. J., & Phillips, B. M. (2016). Response to instruction in preschool: Results of two randomized studies with children at significant risk of reading difficulties. Journal of Educational Psychology, 108(1), 114–129..

Because early reading skills predict later school performance, there has been increasing recognition of the significance of the preschool years for the development of later academic skills, including reading. Studies of children prior to school entry have identified the skills (phonological awareness, letter knowledge) that are predictive of later reading ability. These emergent literacy skills are conceptualised as the basic building blocks onto which children's later literacy skills are built. Children with well-developed emergent

literacy skills are those least likely to develop later reading problems.

In preventive interventions, the main focus has been on developing phonological awareness and letter-sound connections. Usually, interventions are organised and conducted in classrooms or small groups, sometimes as one-to-one sessions in early childhood education. Sometimes, direct teaching of reading, spelling, and writing of letters and familiar words are included in these programmes. There are also approaches that try to strengthen oral language skills, such as vocabulary and narrative. One example of these methods is 'dialogic reading' in which the child and the adult read a book together. The adult prompts the child with questions about the story as it unfolds to create a dialogue and increase the child's vocabulary and language comprehension. Research evidence suggests that early interventions delivered by trained teaching assistants can be effective in promoting the foundations of literacy in children at risk of dyslexia associated with poor oral language at school entry[21]Hulme, C., & Melby-Lervåg, M. (2015). Educational interventions for children's learning difficulties. In A. Thapar et. Al. (eds.) Rutter's Child and Adolescent Psychiatry (pp. 533-44. Wiley..

Computer-aided technologies and serious games such as GraphoGame (GG) or GraphoLearn (GL) are also very good research-based methods when combined with traditional teaching to boost the prerequisites of reading skills such as letter–sound connections. There are already versions of the GG/GL games in some African local languages and research evidence that shows the effectiveness of this approach.

Research of early interventions[22]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The Guilford Press. support the idea that early intervention is more effective than remediation after children fall behind,

while the explicit instruction in the alphabetic principle is more effective than providing implicit or incidental instruction. Group size is also important, and based on research, small group instruction (ratio of 1:3) is likely sufficient for many young struggling readers at TIER 2. In terms of instruction methods, the synthetic phonics approaches are effective.

Research briefs

[Effectiveness of Spelling Interventions for Learners with Dyslexia: A Meta-Analysis and Systematic Review](#)

[Effectiveness of Treatment Approaches for Children and Adolescents with Reading Disabilities: A Meta-Analysis of Randomized Controlled Trials](#)

[Helping Children with Reading Difficulties: Some Things We Have Learned So Far](#)

[Sight Word and Phonics Training in Children with Dyslexia](#)

[A Meta-Analysis of Non-Repetitive Reading Fluency Interventions for Students with Reading Difficulties](#)

[The Role of Reading Disability Risk and Environmental Protective Factors in Students' Reading Fluency in Grade 4](#)

[The Role of Part-Time Special Education Supporting Students with Reading and Spelling Difficulties from Grade 1 to Grade 2 in Finland](#)

Videos

[Blending syllables](#)

[Initial phoneme identification](#)

Effective remediation of word-level reading difficulties

Here we will focus on remediation of word-level reading difficulties (dyslexia, reading disability). Primary academic skill deficits that lead to identification of dyslexia involve problems with the accuracy and fluency of decoding and spelling. Cognitive research has identified reliable correlates and predictors of these marker variables. As we have learned, the most robust and consistent are phonological awareness, letter knowledge, rapid naming of letters, and digits, as well as working memory for phonological material. General principles of remediation of learning disabilities are described in the additional reading side panel.

Remedial studies show that foundational skills can be improved for students with learning difficulties in reading (typically characterised by word recognition difficulties). The evidence indicates that there are no 'magic cures' for dyslexia. To improve reading for students with dyslexia, we must teach them to read! This may be a long and arduous process, but it appears there are no quick fixes that do not involve instruction. The effects are most apparent in word recognition, but also show transfer to comprehension if the intervention is sufficiently intense. Fluency gains based on

research are often smaller but vary across studies and may reflect the learner's age and the severity of reading difficulties[23]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The Guilford Press.[24]Denton, C.A. & Madsen, K.M. (2016). Word reading interventions for students with reading difficulties and disabilities. In R. Schiff, R.M. Joshi (eds.) Interventions in Learning Disabilities. A handbook on systematic training programs for individuals with learning disabilities. (pp.29-45). Springer.

There are many phonics-based programmes for reading instruction (one such programme, KÄTS used in Finland. It is important that the intervention is explicit, differentiated according to students' strengths and difficulties, and it must increase time on task. Length of the intervention is also important, and outcomes are specific to the content of instruction. This means that more comprehensive programmes yield better outcomes. Research also suggests that many hours are required to accelerate reading development, especially in older students with dyslexia (grade 3 and beyond).

Considerable research demonstrates that interventions that teach key content *directly and explicitly* are associated with better outcomes for children with word-level reading difficulties than those with less explicit instruction. The most important features of explicit instruction are[25]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The Guilford Press.[26]Denton, C.A. & Madsen, K.M. (2016). Word reading interventions for students with reading difficulties and disabilities. In R. Schiff, R.M. Joshi (eds.) Interventions in Learning Disabilities. A handbook on systematic training programs for individuals with learning disabilities. (pp.29-45). Springer:

- That it involves providing clear modelling, demonstration, or explanation (What to do, How to do);
- That it is guided or independent practice with timely and effective feedback.

When instruction is explicit, students do not have to infer critical content, and students with learning difficulties who are more easily confused are more likely to be successful[27]Denton, C.A. & Madsen, K.M. (2016). Word reading interventions for students with reading difficulties and disabilities. In R. Schiff, R.M. Joshi (eds.) Interventions in Learning Disabilities. A handbook on systematic training programs for individuals with learning disabilities. (pp.29-45). Springer. According to Swanson[28]Swanson, H.L. (1999). Reading research for students with LD: A meta-analysis of intervention outcomes. Journal of Learning Disabilities, 32, 504-532, instructional practices related to positive word reading

- matched task difficulty to student abilities,
- used prompts to guide students in each part, and synthesised component parts,
- faded prompts or cues,
- provided advance organisers. These organisers are implemented prior to instruction to focus the student's attention on information such as instructional objectives, the task they will perform, or materials they will use.

Based on research and practical knowledge, students with learning difficulties require more extensive opportunities to practice newly learned skills than other children. It is very important that teachers provide extended guided practice with feedback (corrective feedback, positive reinforcement, and instructional scaffolding) to these students. Without timely

feedback during guided and independent practice they are likely to *'practice their mistakes'*, automatising incorrect responses and ineffective strategies. According to meta-analysis[29]Hattie, J. & Timperley, H. (2007). The power of feedback. Review of Educational Research, 77, 81-112., providing feedback was associated with an average effect size and effective feedback includes providing cues or reinforcement, providing information about correct responses, and building on changes from previous attempts.

Feedback should be also be provided when students are reading connected texts (not only isolated words)[30]Snow, C.E. & Juel, C. (2005). Teaching children to read: What do we know about how to do it? In M.J. Snowling & C. Hulme (Eds.), The Science of reading: A handbook, (pp. 501-520), Malden: MA: Blackwell.. Students should read orally with a teacher who models the application of word reading skills and strategies and provides purposeful instructional scaffolding and feedback. When a student encounters difficulty with decodable words, the teacher models appropriate use of effective skills and strategies for word reading and/or prompts the student to apply the skills and strategies they are taught. It is also important that the teacher prompts the student to self-monitor their reading and self-correct their errors.

Implementation of interventions

Interventions for students with reading difficulties (TIERS 2 and 3) should be sufficiently intensive to accelerate their rates of progress. Students with more severe and pervasive difficulties (TIER 3) require interventions with greater intensity than those with milder impairments[31]Hulme, C., & Melby-Lervåg, M. (2015). Educational interventions for

children's learning difficulties. In A. Thapar et. Al. (eds.) Rutter's Child and Adolescent Psychiatry (pp. 533-44. Wiley..

Intensity can be increased[32]Denton, C.A. & Madsen, K.M. (2016). Word reading interventions for students with reading difficulties and disabilities. In R. Schiff, R.M. Joshi (eds.) Interventions in Learning Disabilities. A handbook on systematic training programs for individuals with learning disabilities. (pp.29-45). Springer by:

- decreasing group size (whole-class, small group, one-to-one). There is research evidence that interventions given in small groups of 3–4 students are effective.

- increasing the extent of the intervention (number of hours provided). Research provides little guidance related to optimising interventions and scheduling of reading interventions, most likely because these factors are heavily dependent on the degree of students' impairment and how amenable students' difficulties are to instruction, as well as properties of the intervention itself.

- providing explicit instruction that offers students many opportunities to respond and receive feedback.

The quality of teaching and high quality of professional training of the teacher is also an important factor in intensity of instruction. Interventions implemented by researchers often demonstrate stronger effects than those implemented by regular school personnel; however, some results suggest that interventions delivered by school personnel in

authentic school contexts can be highly effective[33]Connor, C.M., Alberto, P.A., Compton, D.L. O'Connor, R.E. (2014). Improving reading outcomes for students with a risk for

reading disabilities: A synthesis of the contributions from the Institute of Educational Science Research Centers (NCSER 2014-3000). Washington, DC: Institute of Education Sciences. U.S. Department of Education..

Fundamental principles for word-level reading difficulties interventions are modified from Fletcher et al.[34]Fletcher, J.M., Lyon, G.R., Fuchs, L.S. & Barnes, M.A. (2019). Learning disabilities. From identification to intervention. Second edition. New York: The Guilford Press.

1. *Teach phonics explicitly in the context of a multicomponent, integrated instructional programmes* that also include spelling, fluency, vocabulary knowledge, and comprehension. Differentiate according to student strengths and weaknesses.

2. *Rely on explicit instruction to firmly establish associations between phonemes (sounds) and graphemes (letters).* This is very simple in transparent orthographies with one-to-one letter—sound connections (such as African local languages). In English, it is more important to address the broad range of phonics patterns and teach these patterns in an orderly way. If there are exceptions in the language, learners should be helped to understand how and why there are exceptions to those associations and patterns. Ensure transfer from word-level competence to text reading by repeated exposure to words and word patterns in text[35]Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. Psychological Science in the Public Interest, 19, 5—51.[36]Aro, T. & Ahonen, T (eds.) (2011) Assessment of learning disabilities: Cooperation between teachers, psychologists and parents. African edition. University of Turku and Niilo Mäki Institute, Jyväskylä, Finland..

3. *Teach larger units of orthography in reading and spelling.*

In transparent languages, syllables are very important units in learning to read and spell.

4. *Teach using multiple modalities* to enhance learning, see the word, say the word, write the word, and use the word in text. For example, you can use self-made letter cards, plastic letters if available, self-made letters, or drawing in the sand.

5. *Enhance learners' reading of instructional level material.* This is a big challenge in Africa, especially when learning and teaching in local languages. It is possible that teachers write books or texts together for different reading levels.

6. *Prevent reading and spelling problems early,* because later remediation is difficult and requires considerable intensity, especially to develop automaticity. This principle highlights the importance of early childhood education in preventing the risk of reading difficulties.

The key message of these principles is the importance of **explicit**, **differentiated,** and **multicomponent** **instruction.**

References

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Additional reading

[Remediation of Reading Disabilities](#)