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Chapter 18

Learning to Read in Korean: An Application of the Direct and Indirect Effect Model of Reading (DIER)



Young-Suk Grace Kim

Abstract In this chapter I introduce the Direct and Indirect Effect Model of Reading (DIER), an integrative theoretical framework designed to explain reading development across languages, and examine its application in Korean. DIER posits that successful reading comprehension relies on a multitude of interdependent skills and knowledge, including executive functions, orthography, phonology, morphology, vocabulary, grammatical knowledge, higher-order cognitive abilities, background knowledge, and socio-emotional aspects. A review of evidence from Korean-speaking children supports the model's component skills hypothesis and hierarchical relations hypothesis. Despite substantial research on reading development in Korean, however, gaps also remain, particularly in understanding text-level reading and the structural relations among component skills. I also discuss the implications of DIER for assessment and teaching, emphasizing the need for targeted, integrated instruction tailored to individual student needs and developmental phases.

Keywords DIER (Direct and Indirect Effect Model of Reading) · Korean · Reading · Theory

18.1 Introduction

A theoretical model serves as a framework designed to represent and explain complex phenomena by outlining the relations between various concepts and constructs, providing a systematic way of understanding. Such models generate hypotheses that can predict the occurrence of certain phenomena and offer both research and practical applications. In the context of reading, a theoretical model should explain reading phenomena that are common across languages (language-general) as well as those that vary between languages (language-specific). Numerous theories have been proposed to explain how individuals learn to read (e.g., Duke & Cartwright,

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2021; Perfetti & Stafura, 2014). In this chapter, I introduce the Direct and Indirect Effect Model of Reading (DIER pronounced as “dear”; Kim, 2017a, 2020a, 2020b, 2023), an integrative theoretical framework, and review the literature to explore its applications in the context of the Korean language.

18.2 DIER

Figure 18.1 is a graphic representation of DIER. Greater details about DIER and associated evidence are found in Kim (2020a, 2020b, 2023). A key hypothesis of DIER is that the component skills of reading—all the skills and knowledge depicted in Fig. 18.1—contribute to reading and its development, and according to DIER, the following skills and knowledge contribute to reading comprehension:

- Domain-general cognitive skills or executive functions, such as working memory, inhibitory and attentional control, and cognitive flexibility.
- Code-related emergent literacy skills such as knowledge and awareness of orthography, phonology, and morphology.
- Foundational oral language skills such as vocabulary and grammatical knowledge (morphosyntax and syntax).
- Higher-order cognitive skills and regulation such as inference-making, perspective-taking, reasoning, setting goals, and monitoring.
- Word reading and listening comprehension.
- Text reading fluency.
- Social-emotional aspects such as motivation, attitude toward reading, self-efficacy, and self-concept.
- Background knowledge, including content, world, and discourse knowledge.

DIER postulates that these skills are interdependent. In other words, these skills and knowledge are not isolated and do not develop independently. Rather, component skills are structurally related to one another in specific ways. While the interdependence of component skills has been widely observed in the literature, existing theoretical models of reading have not explicitly specified their structural relations in concrete and testable terms. DIER addresses this gap.

The first hypothesis related to structural relations is the hierarchical relations hypothesis, which posits that skills build on each other. Figure 18.1 represents this hierarchical nature well, where the highest-order reading skill, reading comprehension, is built upon all the other skills below it. The two main pillars, word reading and listening comprehension, are each supported by their respective component skills. At the bottom, or foundation, are the executive functions that underpin all of these component skills and ultimately support reading comprehension. Another way to conceptualize the hierarchical relations is by considering reading in terms of subskills, which correspond roughly to linguistic grain sizes. Reading comprehension and text reading fluency are text-level or discourse-level skills, while word reading is a lexical-level skill. This distinction is important, as the skills and knowledge that

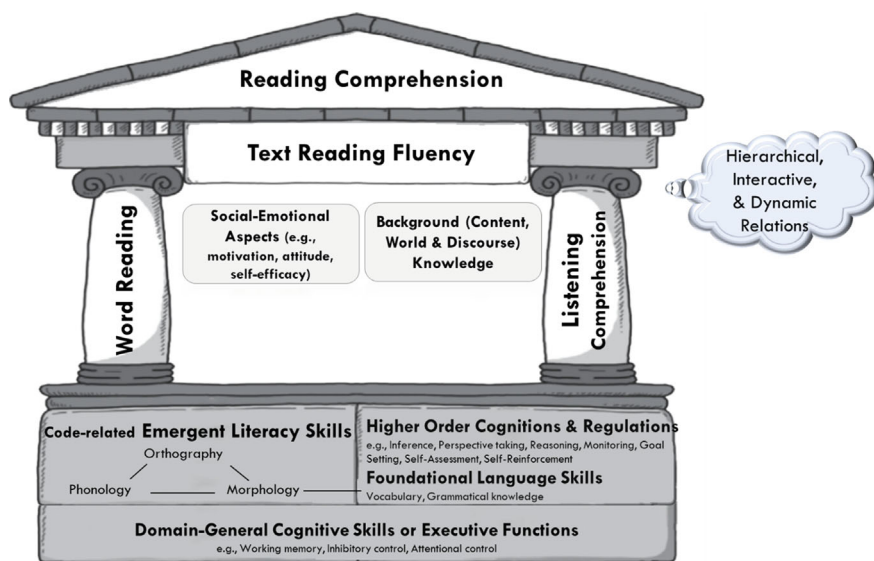


Fig. 18.1 Direct and Indirect Effect Model of Reading (DIER, Kim, 2017a, 2017b, 2020a, 2023). Figure is adapted from Kim (2017b) and copyright owned by Kim (2017a, 2017b)

contribute to reading vary depending on the subskills. In terms of the nature of relations, hierarchical relations organized by linguistic grain sizes involve both direct and indirect connections, such that not all the skills shown in Fig. 18.1 are directly related to reading comprehension. Text reading fluency is the most immediate and proximal direct predictor, along with word reading and listening comprehension.

The second structural relations hypothesis is the interactive relations hypothesis, which posits that component skills influence one another interactively or bidirectionally during development through learning experiences. For example, socio-emotional aspects related to reading develop in close conjunction with children's reading experiences. Difficulties encountered during word reading or text reading, or other less favorable experiences (such as reading being assigned as a punishment rather than as a reward or a positive experience), can negatively affect how a child views reading. Conversely, positive experiences and an absence of difficulty with reading contribute positively to one's perception of reading. The interactive relations hypothesis suggests that these interactions can lead to either a virtuous or vicious cycle among component skills and between component skills and reading skills. Positive interactions promote continual improvement and reinforcement of skills, whereas negative interactions can lead to further difficulties.

The third hypothesis about structural relations is the dynamic relations hypothesis. This hypothesis posits that the relations among skills and the contribution of component skills to reading differ based on developmental phases, as well as activity and task environments. Regarding developmental phases, word reading and its associated

component skills, such as letter knowledge, are more critical to reading comprehension in the early phases of reading development, whereas other skills such as vocabulary and higher-order cognitive skills emerge as stronger contributors in the later phases of reading development. The activity and task environments encompass various factors, such as reading activities, assessment formats, and text characteristics. Dynamic relations as a function of activities imply that the extent to which one relies on component skills varies based on the nature of the reading activities (e.g., reading for deep understanding versus skimming to get a gist). Dynamic relations as a function of assessment characteristics include the format and demands of the tasks. Additionally, dynamic relations as a function of text characteristics involve different attributes of texts, including language, cognitive, and decoding demands.

Another important aspect of text characteristics as part of the dynamic relations hypothesis is the nature of writing systems, orthographic depth, and linguistic features. Writing systems vary in how they represent oral language with written symbols. For instance, many languages use phonography, where written symbols (graphs) represent speech sounds. If the graphs represent syllables, the system is syllabic (e.g., katakana in Japanese). If the graphs represent phonemes, the system is alphabetic. If the graphs represent consonants with omitted vowels, the system is abjad (e.g., Arabic, Hebrew). In contrast, the Chinese writing system is morphosyllabic, where graphs primarily represent morphemes and syllables. Even languages using the same writing systems differ in terms of orthographic depth. For instance, both English and Finnish use the alphabetic writing system where graphs represent phonemes. However, these two languages differ in the consistency of grapheme-phoneme relations (orthographic depth): English is considered to have deep orthography with inconsistent grapheme-phoneme relations, whereas Finnish has shallow orthography with highly consistent grapheme-phoneme relations. These differences in writing systems and orthographic depth have implications for component skills. According to DIER, in writing systems where meaning is primarily and more consistently represented by graphemes, such as Chinese, knowledge and awareness of meaning (e.g., morphology, vocabulary) are more important for reading and spelling words. In contrast, in alphabetic writing systems, knowledge and awareness of sounds (e.g., phonological awareness) are more crucial for reading and spelling words. Many languages such as English and Korean with alphabet writing system also secondarily represent meaning (i.e., morphophonological writing system), and in these languages, knowledge of meaning such as morphological awareness is also important in addition to knowledge and awareness of alphabet letters and sounds (phonological awareness and orthographic awareness).

18.3 Learning to Read in Korean and the Application of DIER

To understand how the DIER model applies to reading in Korean, I review evidence by linguistic grain sizes: word reading and spelling, and text reading (including text reading fluency and reading comprehension).

18.3.1 Word Reading and Spelling in Korean

The Korean language uses an alphabetic writing system where most graphemes (letters or groups of letters) have one-to-one correspondence with phonemes while some graphemes have one-to-many correspondences (e.g., ㅁ representing /b/ or /p/ depending on context; ㅈ and ㅊ representing the same phoneme in modern Korean). Although Korean is widely considered to have a transparent or shallow orthography, to be precise, it has a *relatively* transparent orthography (Kim et al., 2016; Kim, 2011a; Lee & Kim, 2024) due to several phonological shifts (e.g., resyllabification, consonant tensifications, palatalizations, see Kim, 2010; Kim et al., 2016; Kim & Petscher, 2013) and morphophonological writing system. A morphophonological writing system is primarily phonographic, meaning graphemes represent phonemes, but secondarily, it is also morphographic, where morphological information trumps phonological representation in written words. This morphophonological nature creates inconsistency in the grapheme-phoneme correspondences particularly in multisyllabic and multimorphemic words (e.g., Kim, 2011a; Kim et al., 2016; Lee & Kim, 2024 in press). This has implications for the role of code-related emergent literacy skills such that the knowledge of orthography (letters and their compositions), phonology, and morphology (meaning) are expected to play important roles in reading and spelling words in Korean.

Empirical evidence indeed does support the roles of orthography, phonology, and morphology in word reading and spelling in Korean. In fact, there is a substantial body of literature on children learning to read in Korean, published in both English and Korean, which supports the roles of orthography, phonology, and morphology in word reading and spelling in Korean. Evidence for the role of phonological awareness in word reading and spelling is extensive (e.g., 강금화, 황보명, 2010; 강혜진, 2021; 고유경, 김수진, 2010; 구예리 외, 2021; 김봉희, 조증열, 2017; 김기룡, 2010; 김동일 외, 2010; 박순길, 2012; Cho, 2009; Kim, 2007, 2010, 2011a; Wang et al., 2006). Studies also support the role of orthographic knowledge and orthographic awareness: alphabet letter knowledge (강혜진, 2021; 김보배 외, 2018; 김보배, 양민화, 2021; 김애화 외, 2010a; 경혜림, 2018; Cho, 2009; Kim, 2010, 2011a); rapid automatized naming (Altani et al., 2017; Kim, 2011a; 김미배, 배소영, 2014; 김봉희, 조증열, 2017; 김애화, 2016; 김애화 외, 2010a; 박순길, 2012; 최나야 & 이순형, 2008); and orthographic awareness, such as composition of letters and patterns allowed (Cho, 2009; Kim, 2011a). Finally, research confirms the importance of morphological

awareness as well (김송희, 강은희, & 이지윤, 2023; 김순호 & 정경희, 2015; 김애화, 2013, 2016; Cho et al., 2008, 2011; Kim, 2011a; Lee & Kim, 2024).

The relatively transparent nature of Hangul presents particular challenges in spelling compared to word reading, especially for orthographically opaque words. Words in Korean vary in terms of orthographic transparency (Kim & Petscher, 2013). Orthographically transparent words in Korean have a clear correspondence between orthographic representation and phonological realizations (e.g., in the word for “meat” 고기, ㄱ represents the /k/ sound) so that one can spell orthographically transparent words accurately by applying their knowledge of letter-sound correspondences. In contrast, orthographically opaque words have mismatches between orthographic representations and phonological realizations (e.g., in the word for “fish” 물고기, ㄱ represents the /kk/ sound instead of /k/). Reading orthographically opaque words accurately requires recognizing patterns of phonological changes, whereas spelling them accurately involves inhibiting the use of letters that directly correspond to the sounds (i.e., ㄱ for /kk/) and instead using the conventionally correct ones (i.e., ㄱ) considering knowledge of the morphological composition of the word (e.g., 물고기 is derived from 물 and 고기). Studies with Korean-speaking children have demonstrated that spelling accuracy (Kim & Petscher, 2013) and their developmental trajectories (Kim et al., 2016) differ depending on word characteristics.

18.3.2 Text Reading Fluency

Text reading fluency involves the accurate, rapid reading of connected text with appropriate expression (National Institute of Child Health & Human Development, 2000). According to DIER, text reading is built upon lower-level reading skills, such as word reading and its component skills (i.e., orthography, phonology, and morphology). However, word reading alone is not sufficient for proficient text reading (see Fig. 18.1). Additional skills are required, including listening comprehension and its associated component skills, such as foundational language skills, as illustrated in Fig. 18.1. Text reading fluency is a predictor of reading comprehension because it draws on many shared skills as reading comprehension and involves a level of comprehension (i.e., shallow comprehension; see Kim et al., 2021; Kim & Wagner, 2015). However, text reading fluency does not tap into *deep* comprehension, and therefore is not the same construct as reading comprehension (see Kim, 2015a for theoretical explanation and empirical evidence).

There are several related hypotheses concerning text reading fluency, its predictors, and its relation to reading comprehension. The first one is prediction by word reading skill. Text reading fluency is built upon or predicted by word reading skill (in Fig. 18.1, the word reading pillar is connected to and supports text reading fluency). Studies have demonstrated a strong relation between word reading and text reading fluency in Korean (Kim, 2011b, 2015a; Kim et al., 2014; 김동일 외, 2010; 설아영, 2016; 최윤정 외, 2022). Second, a corollary to the relation of word reading to text reading is the relation of code-related emergent literacy skills to text reading

fluency. The knowledge and awareness of orthography, phonology, and morphology are related to text reading fluency because these emergent literacy skills predict word reading, which, in turn, underpins text reading fluency. Therefore, code-related emergent literacy skills to text reading fluency are indirect via word reading (see Fig. 18.1). Research supports these relations. For instance, letter naming fluency, orthographic awareness, phonological awareness, morphological awareness, and rapid automatized naming have all been moderately to strongly related to text reading fluency in beginning Korean readers (Kim, 2015a; 김동일 외, 2010); and letter naming fluency, orthographic awareness, phonological awareness, and semantic knowledge composed of vocabulary were related to text reading fluency through word reading skill (Kim, 2011b).

A third hypothesis is that text reading fluency is predicted by post-lexical semantic processing, such as listening comprehension, in addition to word reading skills (see Kim, 2015a, 2023 for theoretical explanations). According to the DIER model (Kim, 2020a, 2020b, 2023) and the developmental model of text reading fluency (Kim, 2015a; Wolf & Katzir-Cohen, 2001), word reading and text reading fluency are initially very strongly related because text reading emerges from word reading skills. However, as reading skills develop, they become more differentiated, and text reading fluency taps into post-lexical semantic processing, such as listening comprehension (Kim, 2015a, 2020a, 2023; see Kim et al., 2011, 2014 for evidence from English-speaking children). Therefore, the nature of relations among word reading, listening comprehension (or those that are involved in post-lexical processing), and text reading fluency change with reading development (the dynamic relations hypothesis of DIER).

Studies with Korean-speaking children support this hypothesis. Kim and colleagues (2014) used cross-sectional data, and found that for kindergartners, text reading fluency is strongly predicted by word reading fluency but not by listening comprehension. In contrast, for first-grade students, text reading fluency was predicted by both word reading fluency and listening comprehension. Kim (2015a) showed a similar pattern using longitudinal data from Korean-speaking beginning readers. The results indicated that at an earlier developmental stage, word reading was uniquely and strongly predictive of text reading fluency, whereas listening comprehension was not. At a later developmental phase, both word reading fluency and listening comprehension uniquely predicted text reading fluency. These findings highlight that as children's reading skills develop, the influence of post-lexical semantic processing, such as listening comprehension, emerges as a contributor to text reading fluency.

Lastly, according to DIER, text reading fluency is a crucial predictor of reading comprehension and it functions as a mediator between word reading and its component skills, as well as between listening comprehension and its component skills (see Fig. 18.1). In other words, text reading fluency acts as a bridge that connects word reading to reading comprehension, and to a lesser extent, listening comprehension. The nature of this bridging role differs as a function of developmental phrases of reading (see the dynamic relations hypothesis, Kim, 2015a, 2023 for theoretical explanations and evidence) and for word reading versus listening comprehension.

Studies with Korean-speaking students support this concept. At an earlier developmental phase, word reading, text reading fluency, and listening comprehension were all predictive of reading comprehension, indicating that text reading fluency partially mediated the relation between word reading and reading comprehension. At a later developmental phase, text reading fluency entirely mediated the relationship between word reading and reading comprehension (see Fig. 1 of Kim, 2015a).

In summary, evidence from children learning to read in Korean largely supports hypotheses related to text reading fluency, both in terms of its predictors and its relation with reading comprehension, as well as developmental aspects related to these constructs.

18.3.3 Reading Comprehension

Reading comprehension involves understanding written texts by constructing accurate and rich mental models based on the text itself as well as one's content and world knowledge (Kintsch, 1988). It is the highest order of reading skills and relies on all the skills and knowledge illustrated in Fig. 18.1. Research with Korean-speaking children has demonstrated that the skills and knowledge shown in Fig. 18.1 do contribute to reading comprehension: working memory (김애화 외, 2010b; Kim, 2015b, Kim, 2020b), phonological awareness (김애화 외, 2010; Kim, 2011b), rapid automatized naming (김애화 외, 2010b), letter knowledge (김애화 외, 2010b), word reading (김애화 외, 2010b; Kim, 2011b, 2015a, 2015b; Kim et al., 2014), morphological awareness (Bae & Joshi, 2017; Kim, 2011b), vocabulary (김애화 외, 2010b; 설아영, 2016; Kim, 2011b, 2015b), listening comprehension (김애화 외, 2010b; Kim, 2015b, Kim, 2020b; Kim et al., 2014), and text reading fluency (김애화 외, 2010b; Kim, 2011b, 2015a; Kim et al., 2014) are strongly related to reading comprehension.

According to the hierarchical relations hypothesis of DIER, the immediate or proximal predictors of reading comprehension include text reading fluency, word reading, and listening comprehension. Other skills, such as code-related emergent literacy skills, higher-order cognitive skills, and executive functions, are indirectly related to reading comprehension through word reading, listening comprehension, and text reading fluency.

Although a limited number of studies have examined direct and indirect relations in Korean-speaking children, the available research provides supportive evidence. For instance, phonological awareness, alphabet letter knowledge, and semantic knowledge (comprising morphological awareness and vocabulary) were found to be indirectly related to reading comprehension via word reading and text reading fluency in five-year-olds (Kim, 2011b). Further support comes from studies by Kim (2015b), which used data from kindergarteners, and Kim (2020b), which used data from first graders. These studies found that higher-order cognitive skills, such as inference, perspective-taking (measured by theory of mind), and comprehension monitoring, were indirectly related to reading comprehension through listening comprehension. Similarly, foundational oral language skills (vocabulary and grammatical knowledge)

were indirectly related to reading comprehension through both listening comprehension and word reading. Additionally, working memory was indirectly related to reading comprehension via foundational oral language skills (vocabulary and grammatical knowledge), higher-order cognitive skills (inference, perspective-taking, and comprehension monitoring), listening comprehension, word reading, and text reading fluency. These findings illustrate the multi-layered nature of the skills that contribute to reading comprehension, as posited by the hierarchical relations hypothesis of DIER.

18.4 Application of DIER to Learning to Read in Korean as a Second or Foreign Language

The skills and knowledge illustrated in Fig. 18.1 apply to learning to read in Korean as a second language or foreign language (hereafter referred to as Korean as L2). In other words, reading comprehension skill in Korean for individuals learning it as an L2 are determined by their proficiency in various component skills in Korean. For example, their word reading and listening comprehension skills in Korean influence their reading comprehension in Korean. Additionally, their word reading skill in Korean is influenced by their knowledge and awareness of Korean orthography (e.g., letter-sound knowledge), phonology, and morphology. A unique consideration for L2 learners of Korean, compared to monolingual Korean learners, is that L2 learners bring and utilize their knowledge and resources from their first language (L1), such as metalinguistic awareness, in learning to read in Korean as L2. This occurs through a mechanism known as transfer (e.g., see Koda, 2007). For instance, a fairly large body of evidence has shown that phonological awareness developed in L1 transfers to L2 and supports L2 word reading (see Vaughn et al., 2006, and Wawire & Kim, 2018 for causal evidence).

18.5 Implications and Future Directions

As reviewed above, there is a sizable body of literature on reading development in Korean. However, there are a few gaps that require further future research. First, most studies have concentrated on word reading and spelling. These are foundational literacy skills and therefore, the large literature basis is highly encouraging. However, there is a need for more research beyond foundational literacy skills—that is text-level reading, such as text reading fluency and reading comprehension. Second, studies on structural relations are needed. The majority of current research focuses on whether specific skills are important for reading comprehension, but not on how these skills are interrelated taking mediator and moderator variables into consideration. For example, we need studies that explore direct and indirect relations and how these relations

may vary based on factors such as developmental phases, text characteristics, and activity factors, including assessment formats. Another example area of research is developmental relations among skills—whether and how they co-develop over time. Third, while correlational evidence is necessary for causal evidence, it is not sufficient to test causal relations specified in theoretical models. Therefore, causal evidence from the use of controlled studies is needed, but there is a limited number of studies testing the causal roles of component skills using experimental methods. Lastly, there is a need for instructional studies implemented in real-world classroom settings in Korean. There is a growing body of literature that examines instructional approaches, especially for learning Korean as a foreign language (mostly for adults; see a meta-analysis by 백제파, 2018; also see Chap. 21 of this volume). However, it appears that there is a limited evidence basis for children learning to read in Korean. While contextual challenges (e.g., working in the schools) exist, the practical utility of theoretical frameworks is limited if they are not tested and applied in actual educational environments and pedagogical practices. Addressing these gaps will enhance our understanding of reading development and inform evidence-based instructional strategies in the classroom.

18.6 Implications for Assessment and Teaching

Theoretical models have significant implications for assessment and instruction. Although empirical evidence in Korean classroom contexts is still limited, below are reasonable implications based on existing research at large.

18.6.1 *Implications for Assessment*

Children vary in strengths and weaknesses in the skills illustrated in Fig. 18.1. Consequently, they have different instructional needs. Effective reading instruction should therefore be informed by assessment results, targeting areas of need while building on and further strengthening areas of strengths.

According to the hierarchical relations hypothesis, skills develop from foundational to more advanced levels. However, in terms of assessment, the process typically moves from identifying top-level skills down to underlying components. What it looks like would differ depending on readers' developmental phases. For prereaders, assessments would focus on predictors of reading skills, such as code-related emergent literacy skills and predictors of listening comprehension. For beginning readers, assessments should include measures of word reading and listening comprehension, the two pillars that support text reading. If a student shows signs of weakness or risk in either area, follow-up assessments should investigate the skills that predict these skills. Specifically, if a student appears to struggle with word reading, further assessments should examine orthographic knowledge and awareness (such

as letter name knowledge, letter-sound knowledge, and orthographic composition), phonological awareness, and morphological awareness. For students struggling with listening comprehension, follow-up assessments should evaluate higher-order cognitive skills (such as inference) and foundational language skills (such as vocabulary and grammatical knowledge).

When working with more advanced readers, an initial assessment—such as a screening—should include measures of reading comprehension, text reading fluency, word reading, and listening comprehension. If any difficulties or risks are identified, further assessments should be conducted in a manner similar to that described above to determine the underlying components contributing to the difficulties.

18.6.2 Implications for Teaching

One clear implication drawn from the DIER model is that the development of all the skills and knowledge depicted in Fig. 18.1 is essential for successful reading comprehension. Instruction should, therefore, support the development of these various skills and knowledge areas. The development of these skills takes time, and reading development continues into adulthood (Chall, 1983), and therefore, reading instruction is not limited to primary grades or elementary grades.

Research has shown that the component skills in Fig. 18.1 can be taught and improved through instruction. Based on the hypotheses of DIER, there are several key implications for teaching:

1. **Building Foundational Skills:** Developing foundational skills in word reading and listening comprehension is crucial for successful reading comprehension. Weaknesses in these foundational skills can lead to a cascade of difficulties in higher-order skills. For instance, lack of orthographic knowledge and awareness—such as not knowing letter names, sounds, or compositional constraints—can lead to poor word reading and spelling. This, in turn, can hinder text reading fluency and ultimately compromise reading comprehension. The same principle applies to other foundational skills, such as vocabulary knowledge. Therefore, explicit and systematic instruction in foundational skills (those that support the pillars in Fig. 18.1) is essential. Focusing exclusively or primarily focusing on one skill (e.g., word reading or vocabulary knowledge) at the expense of others does not support successful reading development.
2. **Supporting Development of Higher-Order Skills:** Strong foundational skills are necessary but not sufficient for ensuring reading comprehension. Even if a student has robust word reading skills, weaknesses in higher-order cognitive skills, such as inference and perspective-taking, would hamper deep comprehension of texts. Additionally, world knowledge and content knowledge are critical for both listening comprehension and reading comprehension, which underscores the need for instructional support for continual development of knowledge.

3. **Integrated Skill Development:** According to the hierarchical relations hypothesis, skills are interdependent as they build on one another. According to the interactive relations hypothesis, skills are related as they develop together. Therefore, although focused instruction on each skill is necessary, instruction that integrates multiple aspects is needed.
4. **Addressing Differential Needs:** Effective instruction should address the varying needs of different children across developmental phases. For students who are strong in word reading but weaker in listening comprehension, instruction should focus more on skills that support listening comprehension. Conversely, for students who are strong in listening comprehension but weaker in word reading, targeted instruction on word reading and its component skills is needed (e.g., letter knowledge, phonological awareness, morphological awareness). This is important regardless of students' age or grade level (e.g., this applies even to adult learners). Information about individuals' strengths and needs is available through assessment; therefore, differentiated instruction based on assessment results, rather than a one-size-fits-all approach, is essential for effective teaching (see the Implications for Assessment section).

By integrating these approaches, instruction can better support comprehensive reading development, ultimately leading to successful and skilled readers.

18.7 Conclusion

The development of reading skills is a complex, multi-faceted process that draws on a number of skills and knowledge. DIER explicitly specifies such component skills and their structural relations. In this chapter, I reviewed key hypotheses of DIER and empirical evidence in Korean. Overall, studies with individuals learning to read in Korean have provided support for various hypotheses of DIER. While there is growing evidence supporting these principles in the context of the Korean language, further research is needed to explore the structural relations between these component skills and reading skills, as well as to test their causal roles in real-world classroom settings. Ultimately, by applying these insights into assessment and teaching, educators can cultivate successful readers who are capable of deep comprehension and critical thinking through their engagement with the text. Continued research and practical application of these principles will further optimize reading instruction, benefiting learners at all phases of their educational journey.

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