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Teaching reading

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Series preface

This booklet is about reading development and instruction. It has been prepared for inclusion in the Educational Practices Series developed by the International Academy of Education and distributed by the International Bureau of Education and the Academy. As part of its mission, the Academy provides timely syntheses of research on educational topics of international importance. This booklet is the twelfth in the series on educational practices that generally improve learning.

The authors are distinguished scholars:

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The officers of the International Academy of Education are aware that this booklet is based on research carried out primarily in economically advanced countries. The booklet, however, focuses on aspects of reading and instruction that are universal. The practices presented here are likely to be generally applicable throughout the world. Indeed, they might be especially useful in countries that are currently less developed economically. Even so, the principles should be assessed with reference to local conditions, and adapted accordingly. In any educational setting or cultural context, suggestions or guidelines for practice require sensitive and sensible application, and continuing evaluation.

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Introduction

What is reading? Reading is about understanding written texts. It is a complex activity that involves both perception and thought. Reading consists of two related processes: word recognition and comprehension. Word recognition refers to the process of perceiving how written symbols correspond to one's spoken language. Comprehension is the process of making sense of words, sentences and connected text. Readers typically make use of background knowledge, vocabulary, grammatical knowledge, experience with text and other strategies to help them understand written text.

Much of what we know about reading is based on studies conducted in English and other alphabetic languages. The principles we list in this booklet are derived from them, but most also apply to non-alphabetic languages. They will have to be modified to account for the specific language.

Learning to read is an important educational goal. For both children and adults, the ability to read opens up new worlds and opportunities. It enables us to gain new knowledge, enjoy literature, and do everyday things that are part and parcel of modern life, such as, reading the newspapers, job listings, instruction manuals, maps and so on. Most people learn to read in their native language without difficulty. Many, but not all, learn to read as children. Some children and adults need additional help. Yet others learn to read a second, third or additional language, with or without having learned to read in their first language. Reading instruction needs to take into account different types of learners and their needs. Research has shown that there is a great deal of transfer from learning to read in one language to learning to read in a second language.

The principles outlined below are based on studies of children and adults, native speakers as well as those learning to read in a second or foreign language. They deal with different aspects of reading that are important in the planning and design of instruction and materials. The practical applications are based on general learning principles, as well as on research. Briefly stated, these learning principles start with the learner in mind. The type of learner will affect the type of methods and materials to be used. The context of learning is also important. For instance, children and adults who are learning to read in a language different from their native language will also need to

learn about the culture of the second or foreign language. Because texts are written with a specific audience in mind, cultural knowledge is present in texts and it is assumed that the reader is familiar with such knowledge.

Both research and classroom practices support the use of a balanced approach in instruction. Because reading depends on efficient word recognition and comprehension, instruction should develop reading skills and strategies, as well as build on learners' knowledge through the use of authentic texts.

References: Bernhardt, 1991; Bernhardt, 2000; Hulstijn, 1991;
Kamil, Mosenthal & Pearson, 2000;
Snow Burns & Griffin, 1998.

1. Oral language

Early progress in reading depends on oral language development.

Research findings

Normally developing children raised by caring adults develop speech and language abilities naturally and without effort. Learning to read is a different process because it involves learning about a symbolic system (writing) used to represent speech. Before children begin to learn to associate the written form with speech, they need to learn the vocabulary, grammar and sound system of the oral language. Research has shown that there is a close connection between oral vocabulary and early reading ability. The ability to attend to the individual sounds within words (phonological and phonemic awareness) is also an oral skill that is closely associated with reading ability.

Practical applications

- The home is the ideal place where young children develop language skills in their interactions with adults and other children.
- Teachers can provide opportunities for children to develop their oral language through story-telling and show-and-tell activities.
- Young children should be encouraged to use oral language to express themselves while learning about print and books both at home and in school.
- Shared book reading to groups of students using Big Books is an effective instructional strategy that introduces books and reading to children, while encouraging them to talk about what is being read.
- Class dictated stories make use of children's oral language in structured reading and writing activities with the help of the teacher. First, the children tell a story in their own words. The teacher writes this down on the blackboard for the children, and then reads their story back to them. Students take turns practising reading the story as well.
- For older students and adults learning to read in a second or foreign language, developing proficiency in the target language is very important. This means having opportunities to speak and use the language extensively.

Suggested readings: Snow, Burns, & Griffin, 1998; Bernhardt, 2000.

2. Phonological and phonemic awareness

Phonological and phonemic awareness are closely associated with reading ability.

Research findings

Phonological awareness refers to the ability to attend to the sounds of language as distinct from its meaning. Studies of both alphabetic and non-alphabetic languages show that phonological awareness is highly correlated with reading ability. For alphabetic languages, phonemic awareness is especially important because the letters of the alphabet map onto individual sound units (phonemes). Children who are able to attend to the individual phonemes in alphabetic languages are much more likely to learn the alphabetic principle (how letters map onto phonemes) and, therefore, learn to recognize printed words quickly and accurately.

For alphabetic languages, many studies have shown that phonemic awareness is closely associated with reading ability in the early and later years of schooling. Furthermore, reading instruction and phonological awareness mutually reinforce each other. Phonological awareness helps children to discover the alphabetic principle. At the same time, learning to read alphabetic script also develops phonological and phonemic awareness.

For non-alphabetic languages, such as Chinese, research has shown that phonological awareness is also associated with reading ability. Regardless of the writing system, there appears to be a universal phonological principle in reading.

Practical application

- Phonics is based on the systematic teaching of sound and letter relationships, as well as sound and spelling patterns. This is helpful in beginning English reading instruction. Children who have learned to read prior to formal schooling do not need such instruction. Older readers do not benefit as much from phonics instruction.
- Teaching students to identify phonemes with or without the use of letters is effective.

- Teachers can develop students' phonological skills through a wide variety of activities. Rhymes, alliteration (words which start with the same sounds) and poetry can be used to draw children's attention to individual sounds in the language.
- Teachers can focus on individual syllables and sounds in language in the context of book reading. It does not have to be taught in total separation from other reading activities.

Suggested readings: Adams, 1998; Cunningham, 1990; Juel, 1991.

3. Fluency

Fluent readers read with accuracy, ease and understanding.

Research findings

Fluency is important because it is closely related to comprehension. Fluency in reading means being able to read text accurately, quickly and with expression. Fluent readers can do this because they do not have problems with word recognition. As a result, they can focus on the meaning of a text. Recent research shows that fluency also depends on the ability to group words appropriately during reading. This means fluent readers recognize words quickly, but also know where to place emphasis or pause during reading.

Word recognition is necessary but not sufficient for fluent reading. The reader must construct meaning from the recognized words. Fluent readers can do both tasks at the same time. They can do this because of efficient word recognition and oral language skills. Guided practice in reading generally increases fluency.

Practical applications

- Teaching word recognition skills is an important first step. The second step is to ensure that students can develop speed and ease in recognizing words and reading connected text.
- To assess fluency, teachers need to listen to their students reading aloud. They should provide feedback to the students about their reading. They also need to determine how much is understood.
- The reading of texts with high frequency words will encourage fluency if the texts are interesting and meaningful to the reader.
- For non-native speakers of a language, word recognition ability must match their oral language development.
- Repeated reading and paired reading (also called buddy reading) are examples of activities that promote fluency through practice. (See Part 12: Practice, for more suggestions.)

Suggested readings: Clay, 1985; Allington, 1983; Pinnell, et al., 1995.

4. Vocabulary

Vocabulary is crucial to reading comprehension.

Research findings

Many studies have shown that good readers have good vocabulary knowledge. In order to understand a text, readers need to know the meanings of individual words. They construct an understanding of the text by assembling and making sense of the words in context. Vocabulary knowledge is difficult to measure. It is, however, very important in learning to read and in future reading development. Words that are recognized in print have to match a reader's oral vocabulary in order to be understood. This is important for children who are developing oral proficiency, as well as for non-native speakers of a language. In later reading development, when students read to learn, they need to learn new vocabulary in order to gain new knowledge of specific subject matter.

Practical applications

- Vocabulary should be taught directly and indirectly. Direct instruction includes giving word definitions and pre-teaching of vocabulary before reading a text. Indirect methods refer to incidental vocabulary learning, e.g. mentioning, extensive reading and exposure to language-rich contexts.
- Repetition and multiple exposures to vocabulary items (e.g. through speaking, listening and writing) are important. This should ideally be done in connection with authentic learning tasks.
- Vocabulary learning should involve active engagement in tasks, e.g. learning new vocabulary by doing a class project.
- Word definitions in texts aid vocabulary development.
- Multiple methods, not dependence on a single method, will result in better vocabulary learning.

Suggested readings: Nagy, Herman & Anderson, 1985; Nagy & Scott, 2000; Shu, Anderson & Zhang, 1995.

5. Prior knowledge

Readers use prior knowledge to understand texts.

Research findings

Having more prior knowledge generally aids comprehension. There are many aspects to prior knowledge, including knowledge of the world, cultural knowledge, subject-matter knowledge and linguistic knowledge. A reader's interest in a subject matter will also influence the level of prior knowledge. All of these factors are important to different degrees, depending on the reading task.

A reader's knowledge of the world depends on lived experience. This is different in different countries, regions and cultures. Reading tasks and reading instruction should be sensitive to the types of prior knowledge that are needed for the reader to understand a text.

Practical applications

- When choosing books, it is important to consider the students' interests, as well as the subject matter of the text.
- In the classroom, teachers can focus on words and concepts that may be unfamiliar. This is especially important for non-native speakers.
- Discussing new words and concepts with students before reading a text is generally helpful. It helps to activate prior knowledge and improve comprehension.
- Asking students to tell everything they know about a topic is a useful way to begin to get students to activate their prior knowledge. They should then begin to think about what they don't know. After reading, they should summarize what they have learned about the topic.

Suggested readings: Afflerbach, 1990; Droop & Verhoeven, 1998; Stahl, Jacobson & Davis, 1989; Ogle, 1986.

6. Comprehension

Comprehension is an active process in the construction of meaning.

Research findings

Comprehension is the process of deriving meaning from connected text. It involves word knowledge (vocabulary) as well as thinking and reasoning. Therefore, comprehension is not a passive process, but an active one. The reader actively engages with the text to construct meaning. This active engagement includes making use of prior knowledge. It involves drawing inferences from the words and expressions that a writer uses to communicate information, ideas and viewpoints.

Recent studies have focused on how readers use their knowledge and reasoning to understand texts. The term 'comprehension strategies' is sometimes used to refer to the process of reasoning. Good readers are aware of how well they understand a text while reading. Good readers also take active steps to overcome difficulties in comprehension. Students can be instructed in strategies to improve text comprehension and information use.

Practical applications

- Instruction can improve comprehension by focusing on concepts and the vocabulary used to express them.
- Comprehension can also be enhanced by building on students' background knowledge, e.g. by having a group discussion before reading.
- Teachers can guide students by modelling the actions they can take to improve comprehension. These actions include: asking questions about a text while reading; identifying main ideas; using prior knowledge to make predictions.
- Teaching a combination of different strategies is better than focusing on one.
- Different methods have been found to be effective in teaching text comprehension. Teachers can use combinations of the following:
 - Co-operative or group learning;
 - Graphic organizers (e.g. flow charts, word webs);
 - Asking and answering questions;
 - Story structure;
 - Summarizing;
 - Focusing on vocabulary.

Suggested readings: Durkin, 1993; Block & Pressley, 2002; National Reading Panel, 2000.

7. Motivation and purpose

There are many different purposes for reading.

Research findings

A reader reads a text to understand its meaning, as well as to put that understanding to use. A person reads a text to learn, to find out information, to be entertained, to reflect or as religious practice. The purpose for reading is closely connected to a person's motivation for reading. It will also affect the way a book is read. We read a dictionary in a different way from the way we read a novel. In the classroom, teachers need to be aware of their students' learning needs, including their motivation for reading and the purpose that reading has in their lives.

Practical applications

- By talking to students about the different purposes for reading, they will become more aware of what to focus on as they read.
- The use of different types of texts (stories, news articles, information text, literature) promotes different purposes and forms of reading.
- The use of authentic texts and tasks will promote purposeful reading.
- Books and reading materials that are interesting and relevant to students will motivate them to read more.
- Make connections between reading and students' lives.
- Develop a love for reading, because it extends beyond academic success.

Suggested readings: Turner & Paris, 1995.

8. Integrated reading and writing

Reinforce the connection between reading and writing.

Research findings

Reading and writing are closely related. Developing reading skills through writing is an effective strategy. For young children, learning to write and spell helps to develop their awareness of print conventions. It also makes them aware of the symbolic nature of print. Writing also helps to establish the connection between oral and written language. Research has shown that it is helpful to guide children through the process of writing down what they can say about what they have experienced. Language experience makes concrete the connection between reading and writing through oral language.

Teachers and parents often complain that students do not adopt the goals they hold for them, and that they do not follow up on their well-meant advice. For example, Stefano's father tries to prevent him from doing his homework with the radio on, believing that music affects motivation and performance negatively. Current research does not support this view. Yet, such conflicts of interest lead to the frustration of Stefano's need for autonomy. Often, teachers (and parents) try to push their own goals along, thus fueling the child's struggle for autonomy. For decades, schools, teachers and researchers narrowed educational goals to learning and achievement, which only frustrated students' social goals.

Practical applications

- Language experience: An adult writes down a child's words as she talks about something she has experienced (e.g. a family celebration). The child then learns to read what the adult has written down. This form of language experience establishes the oral and written connection.
- In cultures with a rich oral tradition, children can be encouraged to write down stories, myths and traditions.
- For adults, developing reading and writing skills for specific purposes means focusing on specific language (e.g. academic language) and text types (e.g. scientific reports).
- Allow time to work with the results of pilot projects to plan expanded efforts and/or new pilot projects.

Suggested readings: Clay, 2001.

9. Texts

Choose texts of the right difficulty and interest level.

Research findings

Texts of the right reading level are neither too easy nor too hard for a particular reader. Choosing texts of the right difficulty and interest levels will encourage children to read and to enjoy what they are reading. Vocabulary, word length, grammatical complexity and sentence length are traditionally used to indicate the difficulty level of a text.

The subject matter of a book is also an important factor. For instance, readers with substantial prior knowledge of a subject will be able to use their knowledge to read more difficult texts. Cultural factors are important when choosing books for non-native speakers. Some children's books may contain references to situations, objects and experiences that are unfamiliar to non-native speakers.

For both children and adults, native and non-native speakers, it is important to use authentic texts. This means materials written with readers in mind, not texts constructed to illustrate specific vocabulary or word forms. It is also important to use a variety of authentic texts, including both information texts and narrative or story texts.

Students often have an easier time reading information texts when they can use their knowledge of the topic.

Practical applications

- When assessing the difficulty level of a text, it is important to consider the language used, as well as its subject matter, interest level and assumed cultural knowledge.
- Apart from text difficulty, choose books that are well-written in terms of style and language.
- Choose reading materials that utilize students' local context. For instance, books about what students enjoy doing would be a good starting point.
- Use information texts that contain topics with which the students are familiar. This will allow them to use their prior knowledge and to learn more about the topic.
- Introduce reading materials of different types (genres) and topics. A lack of variety of materials leads to a limited reading and language experience.

Suggested readings: Alexander, Jetton & Kulikowich, 1995; Bormuth, et al. 1970; Carver, 1994.

10. Assessment

Use assessment to provide feedback and measure progress.

Research findings

There are two forms of reading assessment. The first is to find out how well children are reading in order to help them improve (diagnosis). Diagnostic assessment is about giving feedback and assistance to learners. The second is to measure how much progress has been made. Both forms of assessment are needed for effective reading instruction. In beginning reading, assessment is normally done by listening to students reading aloud. Teachers assess word recognition and fluency in this way. Beyond this stage, assessment should focus primarily on text comprehension.

Text comprehension is usually assessed through questions. Questions should focus on main ideas and viewpoints, not minor details. These are called higher order questions. Methods of assessment vary with the types of responses students make to the questions. The students' responses can be spoken or written. Written responses can be in the form of a multiple-choice response, short answers or extended pieces of writing. Materials used for assessing reading should ideally be authentic. They should reflect the type of reading normally encountered in daily life.

Practical applications

- Use assessment to find out how well students are reading, and also how to help them read better.
- Choose a method of assessment appropriate for the level and type of student.
- Higher order questions take the form of 'how' and 'why', rather than 'what'.
- When choosing materials for assessing non-native speakers, be mindful of words and concepts that might be unfamiliar. (See Part 11: Cultural factors.)

Suggested readings: Clay, 1985; Caldwell, 2002; Garcia & Pearson, 1994.

11. Cultural factors

Cultural knowledge affects reading comprehension.

Research findings

Reading comprehension is about relating prior knowledge to new knowledge contained in written texts. Prior knowledge, in turn, depends on lived experience. Topics that are familiar and openly discussed in one culture may be unacceptable in another. Children growing up in rural communities will have different experiences from those from urbanized, developed countries. Because having more prior knowledge generally facilitates comprehension, having more cultural knowledge has the same effect. Having rich but different types of cultural knowledge will also affect our understanding and appreciation of written text. For example, jokes and humour depend on shared cultural knowledge between the writer and reader.

Practical applications

- Choose reading materials that are culturally appropriate. However, it is also important to remember that television, movies and pop culture may be widespread in many places, except for remote, rural communities. This may broaden the choice of appropriate materials.
- Choosing reading materials that draw on students' lives, experiences and interests is a good starting point.
- Some common, high-frequency words in one culture may refer to unfamiliar concepts for students from another culture. Examples of American English words include: *prom*; *snowboard*; *spam (food)*; *dirt (soil)*; *potluck*.
- Sensitivity to cultural factors also means taking time to discuss and explain unfamiliar concepts and vocabulary.
- In foreign-language teaching, it is helpful to present cultural information in the students' native language. This serves as background knowledge before the students attempt to read in the foreign language.

Suggested readings: Abu-Rabia, 1996; Gee, 2001; Steffensen, Joag-Dev & Anderson, 1979.

12. Practice

Readers make progress by reading more.

Research findings

It is well established that good readers read with ease, accuracy and understanding. Good readers also read more, and by reading more, they increase their vocabulary and knowledge. This in turn helps them to make further gains in reading and learning. Once children can recognize written words in their language with relative ease, they need to develop fluency in reading. Fluency develops with both oral language development and print exposure. The more children read, the more vocabulary and knowledge they acquire, and the more fluent they become in reading. Having opportunities to write will also improve reading ability.

Practical applications

- Students should have access to plenty of books and reading materials at home and at school.
- Sustained silent reading programmes can be used to promote reading practice.
- Encourage students to read independently and extensively.
- Encourage students to read different types of texts.
- Teach students how to choose books of the appropriate reading level.
- Develop students' interest in reading by connecting reading with their interests, hobbies and life goals.

Suggested readings: Shany & Biemiller, 1995; National Reading Panel, 2000.

Conclusion

There are many considerations in teaching reading. What we have presented in the preceding sections is a set of what we believe are the most important principles. However, each of these principles must be adapted for a specific context, for a specific language, and for students of differing abilities.

Teaching reading and writing is difficult work. Teachers must be aware of the progress that students are making and adjust instruction to the changing abilities of students. It is also important to remember that the goal of reading is to understand the texts and to be able to learn from them.

Reading is a skill that will empower everyone who learns it. They will be able to benefit from the store of knowledge in printed materials and, ultimately, to contribute to that knowledge. Good teaching enables students to learn to read and read to learn.

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