

Reading methods and learning difficulties

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This article, which accompanies the training seminar "Methods of reading and learning difficulties: exchanges between research, mediatisation and training", organized by the INRP [in December 2007](#), draws up a panorama of recent research and debates on learning to read and the difficulties associated with it. Starting out from the controversies of 2006, this selection of documents, for the most part accessible on line, leaves little room for certain references, such as for example the constructivist tradition (Emilia Ferreiro, Jean-Marie Besse, etc.).

We have chosen to target work, texts and regulations which concern children aged between 5 and 8, or the second cycle of the primary school, in the French education system.

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Warning to readers

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According to the definition suggested almost ten years ago by the Observatoire national de la lecture, "To learn to read is to develop skills in two fields: identifying written words, and handling meaning so as to understand texts" (ONL, [1998](#)). For anyone who has been following the debates on reading methods in France in 2006 or elsewhere at other times, this definition brings together all the aspects of the debates, research and attempts at approaches to what learning to read could or should be.

In the PISA 2000 survey (Programme for International Student Assessment) reading literacy "is understanding, using and reflecting on written texts, in order to achieve one's goals, to develop one's knowledge and potential and to participate in society" (Kirsch *et al.*, [2002](#)). In our societies, reading and writing abilities are always linked, even if they are evaluated in distinct ways.

This complex construction, which enables both decoding and understanding, is not self-evident: it supposes cognitive, social and linguistic skills, which have been developing from the earliest years (Fayol & Morais, [2004](#)).

The key concepts in learning to read are decoding and understanding. Debates and/or differences of opinion relate to how code and meaning work together and to the methods used to learn to read. Teacher trainers and teachers who teach children aged between 5 and 8 (cycle II in the French system) must therefore be able to weigh up scientific results, institutional regulations, available tools and teaching preferences.

Theoretical background

Before dealing with the various contributions relating to the methods of teaching children how to read, we have attempted to sum up recent research on learning to read.

For an overview of the state of French research on learning to read over the last ten years or so, the report of the 2004 national reading observatory days (*Observatoire national de la lecture*) may be referred to (ONL, [2004](#)). To this may be added the summary by C. Gaux, F. Lacroix and L. Boulc'h on "learning to read and its difficulties", in which they describe the process of decoding, the concepts of phonological awareness and orthographical awareness, as well as the various theories concerning dyslexia and the implications for professionals; this is backed up with examples (Gaux *and Al*, [2007](#)).

At a European level, M.-C. Nyssen and S. Terwagne have produced, for the European commission, a summary which examines the contributions made by the various scientific disciplines concerned with learning to read: cognitive psychology, developmental psychology, didactics and teaching skills. To this list can be added the contribution made by neurosciences. The methodologies encountered are experimental, descriptive or ones involving action. Two objectives emerge from the work explored: identification of problems encountered and the search for solutions to improve teaching effectiveness. However, it

is not the same scientific fields, nor the same methodologies, that are used to deal with the one or the other. Certain pieces of research are inappropriate for answering the problems and certain recommended solutions are not based on scientific validation but on specific experiments (Nyssen & Terwagne, [2001](#)).

The recommendations which conclude this European state-of-the-art are as follows:

- develop basic research in order to contribute to our understanding of the psychological mechanisms of reading;
- adopt a comparative approach to take into account the role played by the diversity of languages;
- allot more resources to studies on teaching reading;
- create a network of researchers with a view to sharing complementary methodologies.

In this rapid overview of the results of recently published work (mostly from 2004 to 2007) which provide a theoretical background, we have selected two approaches: that based on the lexicon, very often involving work on children as of the earliest years, and that based on neurosciences, which provide apparently unambiguous information, in particular on dealing with reading difficulties.

□ Building the lexicon and the relation between oral comprehension and writing

It is known that knowledge of syntax is acquired early, as the basics are already in place from the age of two. Linguistic basics are acquired at around age 4-5 but develop throughout one's lifetime. Finally, as available oral vocabulary determines reading comprehension, it is important to encourage the acquisition of a minimum lexicon before beginning to learn to read, to attenuate the impact of cultural variables (Fayol & Morais, [2004](#)).

A. Bentolila and B. Germain took part in the preparation of the Education for All Global Monitoring Report 2006. In their working paper, they state the need for initial training in reading in the native tongue, even if this is not the official language. *"Schools' priority is to enable a maximum number of pupils to master the language of social advancement, but it has to be made clear that this cannot be built upon the ruins of their mother tongue."* (Bentolila & Germain, [2005](#)). This consideration, though it above all refers to concerns in the fight against illiteracy, must not be neglected in investigating the difficulties of learning to reading encountered by allophone children, as will be seen in the section on learning disorders.

In the United States (Hart & Risley, [2003](#)), according to a study made on a sample of 42 families (children monitored from age 9 months to 3 years), 3 year-olds from underprivileged socio-economic backgrounds were exposed to 30 million occurrences of words less than the other children. This variation accentuates the differences between these children in terms of experience.

Teaching that aims to enrich vocabulary must take into account the cultural aspects that are specific to each child (motivation to indulge in reading as an activity, cognitive and linguistic skills). For G. Chauveau, the development of a personal project as a reader and a minimum understanding of how the written language works are "teaching fundamentals" (Chauveau, [2004](#)).

In his mission report on vocabulary acquisition in the primary school, **A. Bentolila recommends that a vocabulary learning programme of 365 new words per year should be set up as of the first year of nursery school** (Bentolila, [2007](#)) but a word may be understood without being able to use it in conversation: studies made by language psychologists do indeed distinguish the ability to receive (the number of words understood by children increases at a rate of several words per day between the ages of one and half and three) from the ability to use (which implies a different kind of mastery: syntax, interlocution, categorization) (Florin, [1999](#)). A. Bentolila ([2006](#)) draws together the linguistic conventions of the spoken language and the written language: whoever is familiar with the first can master the second.

In France, this recommendation concerning the need for "word lessons" in nursery school was taken up by Gilles de Robien, then minister for education. E. Charmeux criticises A. Bentolila for believing that it should be enough to learn the greatest number of words to have a command of the language, while for her, language mastery has nothing to do with a dictionary. Our language reservoir is more like a set of "chunks of texts". It is not "word lessons" which will enrich children's vocabulary, but reading, exchanges and thoughtful observations. In addition, as words are not the same in French in the spoken language and in writing, the tonic accent makes it harder to guess how phonemes and graphemes correspond. This brings us to the need for letting children discover the written language as soon as possible and develop their language memory through texts. **It is not a question of accumulating words but of reorganizing the semantic field of the newly-learned word each time:** "transforming knowledge that is already there" (Charmeux, [2007](#)).

From studies and observations of first and second year primary classes (in Belgium), J.-M. Braibant and F.-M. Gerard deduce that children who do not speak French with their parents understand less well than they read but that their decoding abilities are as good as the other children's. It should here be remembered that the level of vocabulary, syntactic abilities and semantic abilities seem to play a great part in the comprehension test; the conclusions that can be drawn from this as for the teaching method to be used will be seen later (Braibant & Gerard [1996](#)).

□ See also

- Center Yola ([2005](#)). *Beginning reading: a balanced approach to teaching literacy during the first three years of school*. London : Continuum International Publishing Group.

□ Preparing for learning to read

The approach to learning to read cannot do without thinking or analysis of prerequisites. Much research shows the need for starting to learn to read as young as possible, by developing certain skills and working on both the spoken and the written language. It is not a question of making each child into an early reader but **of opening up phonemic and phonological awareness, by taking the cultural, social and psychological contexts of everyone into account**. The child must have become aware of the "alphabetical principle", i.e. he must have understood that the alphabet encodes sounds of the spoken language and that awareness of the sound value of letters will enable him to find the spoken pronunciation of the word by combining these sounds with each other. This discovery of the "alphabetical principle" does not mean that the alphabetical system of the language has been mastered, but it allows learning to take place.

M. Fayol and J. Morais use the concept of orthographic lexicon, which makes it possible to identify words from their graphic representation. The phase of breaking down the words, or decoding, supposes that the *alphabetical principle* has been acquired (the fact that the letters encode sounds and not meanings, which is not obvious for children). This allows progressive

mastery of the various graphophonemic (letter/sound) correspondences, characteristic of the alphabetical system in which learning is taking place (Fayol & Morais, 2004).

The discovery of the alphabetical principle is the foundation on which learning to write can begin. Systematic work aiming at identification, manipulating and becoming aware of syllables and rhymes is recommended as of the nursery school, as well as an extension of the child's vocabulary relating in particular to the acquisition of words of similar meaning. Memorizing the spelling of words supposes that one has encountered them on several occasions in meaningful texts; it is advisable to confront the child with corpus of words the frequency of which is close to that occurring naturally in the spoken language (ONL, 2007).

L. Rieben considers it insufficient to exploit the relationships between early practice in writing and learning to read. It would be useful to develop work on these problems, at the interface between psycholinguistics and didactics (2004). Traces of work relating to learning the spoken language and writing at the nursery school, in Canada, in Scandinavian or Anglo-Saxon countries, and also in France (Martinet & Rieben, 2006) can be found. It should be recalled that as a back-up to curricula, the French ministry of education published the document "Language at the nursery school", helping teachers to facilitate communication, the development of the spoken language, and awareness of writing and books. The construction of the alphabetical principle is accompanied by drawing and writing activities (MEN, 2006).

There remain areas of debate surrounding the means of predicting how successful learning to read will be and how these should be implemented: is phonological awareness a cause or an effect of learning? Does knowledge of letters help learning?

❑ Contribution of the neurosciences: literacy and the brain

Another approach, which was much talked about at the time of the debate on methods in France, through the work of Franck Ramus and because of the publication, at the same period, of a report by the INSERM on dyslexia, is that of neurosciences.

As M. Fayol & J. Morais (2004) suggest, expert reading hinges "upon a set of specific, automatic and unconscious mental processes" which is set up "on the basis of conscious, intentional and controlled use: phonological decoding".

The report of the centre for research and innovation in teaching (OECD) coordinated by the sociologist Bruno della Chiesa (2007) explains how cerebral operation influences learning and proposes lines of thinking for the educational community. Research into this "learning brain" derive from seven years of analyses and screen all the crucial issues related to our knowledge of the brain and its activity in learning mechanisms.

The conclusions to the chapter devoted to literacy show the emergence of an "educational neuroscience", which could, in certain fields, help with learning, even though the authors believe that neuroscience is not in a position to solve educational problems. This science should not, however, be set aside from the educational debate since it sheds light on complex questions of learning and skills.

Even if it appears that certain mental skills, such as learning to read, can develop throughout life, neuroscientists put forward the idea that certain periods are more favourable to certain types of learning, in particular for learning grammar. It might therefore be necessary to "adjust" favourable periods and teaching content in order to find the right moment to develop the necessary skills for reading, in particular pre-reading at the nursery school.

The cognitive process of learning to read, unlike that of the spoken language, does not start automatically in the child. Experiences with writing set up the neuronal circuits that build reading skills. The ability to identify written words therefore calls upon a quite specific part of the brain, located in the *fusiform gyrus* of the left hemisphere (Morais, 2005).

Research shows that the parts of the brain used for learning to read evolve according to the pupil's age and experience, that "literacy is built up in the brain by progressive development" and that the reading level is evaluated more effectively using formative assessment.

In addition, a better knowledge of how the brain works helps us to understand why the semantic approach combined with the phonological approach appear necessary for learning to read. The conclusions of the American [National Reading Panel](#) confirm the effectiveness of a mixed method, the ideal balance varying according to the languages.

Stanislas Dehaene, a teacher at the Collège de France, declared on March 9th 2007: "It is not from neurosciences that the choice between the analytical or synthetic (i.e. syllabic) method will come. Everything functions in two directions. The activated zones address both graphophonemics and morphology, the letter and the meaning. Neurosciences should not be used as an alibi for a policy. Their practical utility is still fairly limited, and their knowledge very fragmentary".

We have looked at two fields of research on learning to read to attempt to back up thinking on reading "methods". Since it is the manner of teaching which, at the end of the day, concerns those who are responsible for helping children to read, write and understand, it is necessary to take stock of the debates on reading methods, in both French- and English speaking countries.

The "methods" under debate

Experts believe that a method for learning to read is a set of principles which organize how teaching reading is directed and implemented (ONL, 2005). This approach derives mainly from research in linguistics, psychology and neurosciences.

A. Bentolila and B. Germain distinguish "learning" and "teaching" reading. A teaching method goes beyond mere principles and proposes approaches with an appropriate progression and tools. For Bentolila and Germain, the teaching methods derive from experts who have their "philosophy" of education and who make policy choices. **Whatever it is, "a reading method may therefore be based more on an ideology and an educational policy than on the objectivity alone of work on learning"** (Bentolila & Germain, 2005).

A short historical overview: debates in the twentieth century

The quarrel over methods re-appears regularly in the media. In the United States, the first "great debate" goes back to 1955 with the publication of the work of Rudolf Flesch *Why Johnny can't read*. It was already underlined by Jeanne S. Chall in 1967 in *Learning to read, the great debate* (J.S. Chall). In the years 1960-1970, it was the whole word method (or audio-visual

method, without any breaking-down) which was controversial in the United States, whereas in France, it was the syllabic method. A.-M. Chartier and J. Hébrard follow these "Views on reading" over time and put them into perspective with official texts, quarrels between disciplines and educational views (Chartier, Hébrard, 2000). As time went by, the debate turned to look at the importance given now to meaning (comprehension), now to decoding (technique). The publication in the early eighties of a new edition of the work of Jeanne Chall and of R. Flesch's book, *Why Johnny still can't read*, revived the defence of decoding (*phonics method*) in the United States, and modelling of the act of reading pleaded in favour of the "double path". The question was whether words are recognized by phonological mediation (decoding) or by direct orthographical recognition ("global reading"). The period consolidated approaches that blended the two methods, both in the United States and in France.

In *L'école et la lecture obligatoire*, A.-M. Chartier (2007) stresses that these debates about method were the effect of the revolution in methods dating from the years 1850-60 when writing was taught at the same time as reading, and not only once the latter had been acquired. Writing is a synthetic procedure (words are written letter by letter), so that writing exercises (copying letters, syllables and words) had feed-back effects on reading. From the 1880s (with classes for children to learn how to read and write), reading lessons could concentrate on the analytical dimension (starting from sentences/words), with writing taking over the other dimension.

An attempt at typology: the French-speaking approach

E. Charmeux (2007) explains the existence of several methods for learning to read in the following way.

Learning to read is learning how to recognize words:

- by deciphering: synthetic methods, the "ascending" model (from grapheme/phoneme units to words);
- by global memorizing: "global" methods and the descending model (from texts to word units);
- by mixing both systems: mixed methods.

Learning to read is understanding written texts so as to be able to use them:

- by writing: the natural method by C. Freinet, developed by J. Fijalkow;
- by reading always in project situations: J. Foucambert and the AFL (French association for reading);
- by linking up project situations with analysis work and rigorous learning to develop the skills put into play in these situations: Charmeux, B. Devanne, J. Giasson.

A detailed presentation of these methods is to be found on the site *bien(!)lire* (Germain, 2003).

□ The synthetic method

B. German defines this method as the progression from awareness of units (letters/sounds) to the combination of these (written/oral syllable) and the combination of syllables into words. This approach, which requires the child to segment and discriminate between the minimal units of the spoken language to make them correspond to the written language is not natural but necessary in order to reach a sufficient degree of phonological (phonemic) awareness. The child must understand the alphabetical principle and then use combinatorial analysis to move to syllables then to words.

Several approaches may be chosen:

- a **grapho-phonological approach** which is based on the construction of correspondences between phonics and graphics and graphics and phonics, and the automation of decoding/encoding procedures;
- a **syllabic** approach which moves from the unknown code (the combinations of letters) to the known code (the sequence of sounds in the spoken language); this is the B-A-BA, or alphabetic method);
- a **phonological** or **phonographical (phonics)** approach which involves developing the perception of minimal units of the spoken language (the sounds and the phonemes made up into spoken syllables) transcribing them into the corresponding written units (graphemes, written syllables). The teacher starts from what the child is familiar with: the spoken language, to help him discover what he is not familiar with: the written language. Learning involves developing phonemic awareness (the child observes what he is saying)

Bentolila and Germain use the expression "**indirect method of access to meaning**". We also find the notion of **method by the indirect reading path** (decoding). Another expression encountered is the gestural **method** (Braibant & Gérard, 1996), by which children learn, using gestures, to memorize associations of letters and sounds to form syllables and then combine these into words.

No synthetic method works like this today: teachers attempt to build words with known syllables and get the children to very quickly decipher the sentence.

□ The analytical method

This moves from the large written units of meaning (the text, the sentence) towards their component parts (the word) and then the units without meaning. Each sentence or each word is an entity which has its own identity and its associated meaning. It encourages hypothesizing about meaning and comprehension activities. The approaches based on this method postulate that it is "*complete and contextualized written messages that are simple to understand, not abstract linguistic units*" (Cèbe & Goigoux, 2006).

In Belgium, Braibant & Gérard (1996) use the notion of **functional method** (functions of the written language) to speak of the **global method**, or analytical method: memorizing sentences which have a meaning and then analyzing these texts to progressively isolate the smallest elements: according to this definition, there is no analysis at a level lower than that of the word, even once the first stages of learning are over (cf. below: mixed methods). This Belgian definition of the "global method" is not the definition used in the French tradition, but it is close to the American definition of the "whole word method". Reading is defined as a construction of meaning and not as the result of a preliminary decoding process. As a contrast to the *voie indirecte* method, one also speaks about the *voie directe* **method** (rapid perception of words). The ideovisual approach is one of the *voie directe* methods.

For Jean Foucambert, who is very attached to the idea of encouraging understanding of the text, there cannot be two distinct actions in the reading activity but there truly is interaction: taking away information "in the text" is a part of the processing operation by information already in the memory. He considers that the direct approach has been diverted from its true mean-

ing and that there is no simultaneity as long as the *voie indirecte* remains the preferred approach, of initial recognition of the word by phonological mediation and the *voie directe*, that of its later use without phonological mediation (Foucambert, 2002).

□ The mixed method

"The mixed methods, arising as a result of practice, partly combine the principles and the practices of the synthetic and functional approaches. Texts and sentences are the starting point for learning activities and the children have been trained to formulate hypotheses of meaning. During the year, when the opportunity arises, they received explicit lessons on the most current and simplest rules of correspondence between graphics and phonics (without using the corresponding gestures). These rules are introduced without following a pre-established programme" (Braibant & Gerard, 1996).

This method links logographic work with an initial approach to grapho-phonological deciphering. Two approaches are traditionally undertaken:

- the mixed sequential approach. Initially, the pupil encounters the written language via the ideovisual method; he then breaks this down to switch over to the syllabic method;
- the conjunct mixed approach. Both approaches, analytical and synthetic are used simultaneously.

An attempt at typology: the English-speaking approach

□ Phonological awareness, Phonemic awareness and Phonics

Steven Stahl (2003) indicates that, since the study by Jeanne Chall (1967), research into learning methods shows that nothing has really changed. But research does justify the differences between one approach and another, as for example the principle of phonological awareness, a notion which is a little more recent than the phonics methods but that has led to just as much ink being spilled. Keith Stanovich (1991) calls phonological awareness "one of the major contributions that psychology has made over the past 25 years", while Smith (1999) qualifies this notion as an inconsequential artefact. Phonological awareness is the intuitive ability of the child to recognise and distinguish different sounds (non-significant sounds: syllables and phonemes) and to combine them to form words. Phonemic awareness is more centred on recognising phonemes and the ability to distinguish the different sounds of them. It may vary greatly, depending on how "transparent" the language is, i.e. to what extent there is almost perfect correspondence between pronunciation and writing.

Stahl defines *phonemic awareness* as the capacity to grasp units of language that are smaller than syllables. This concept is based more on the spoken language than on writing, unlike *phonics*, and supposes that the pupil mentally analyzes these units which are non-transparent from the spelling standpoint, in particular in English (monosyllabic words). This ability to perceive phonological units is thought to be a better indicator of success than knowledge of the alphabet. (Stanovich, 1991). Stahl suggests that *phonic awareness* is built up as of the first steps in learning to read, at the same time as letters, the grapho-phonemic relationship and the "mixture" of letters that form a word whose meaning is known are identified.

In connection with phonemic awareness, A. Hillairet de Boisferon *et al* (2007) examine the effects of activities with 5 year old children based the use of the alphabet by haptic exploration, i.e. tactile discovery of the letters (a procedure already used by Maria Montessori), and visio-haptic exploration. These methods, compared with other experiments, show that the haptic dimension makes it possible for children to have a more in-depth awareness of letters and also to better decode words. Adding the haptic and visio-haptic method to decoding is beneficial for learning.

The same conclusions are reached when the experiment is tried simultaneously by researchers and teachers, with children from underprivileged socio-economic backgrounds (Bara, Gentaz & Colé, 2007). They obtain the same results: even if they have a language acquisition handicap which holds them back in learning to read, children show that visio-haptic exploration of the alphabet gives them increased phonemic awareness and allows them to develop better decoding skills.

□ In Australia, the dichotomy between the two methods is a non-issue

The DEST (*Department of education, science and training*) published a study entitled *Teaching Reading* (2005). The results are presented by the *National Inquiry into the Teaching of reading*, an Australian government committee which makes recommendations and sets objectives for reading.

In addition to the fact that the author believes that the traditional dichotomy between the global method and the syllabic method is a non-problem, this study clarifies the effectiveness of an approach to reading based on explicit (but not exclusive) learning of the following 4 elements:

- *phonics* (the relationship between letters and sounds);
- *phonemic awareness* (the ability to identify and manipulate sounds orally);
- *vocabulary knowledge* (understanding new words);
- *text comprehension* (understanding of what is read).

The "**whole language**" method used alone is not the best approach for learning to read, especially for pupils who have shown limited reading aptitude. In addition, if the teacher does not use the "*phonic*" method at all, or if he uses it unsystematically, the results of the survey show that the pupils will pile up difficulties that they cannot easily overcome for comprehension, spelling and for learning to write.

The second point of the survey deals with teacher training and the criterion of quality teaching. Teachers should be prepared during their initial training and then during in-service training. The committee believes that this training should be based on "good practices" and that it should be evidence-based.

In addition, it feels that evaluations are necessary as soon as pupils enter the school system, in order to identify so-called "at risk" children or those who are progressing less quickly, as soon as possible. There should be many of these evaluations, and they should be regular, to allow both parents and teachers to monitor pupils and to provide rapid and personalized remedial work for readers in difficulty.

The committee draws attention to the **relationship between the level of general health of the child and his level of literacy**. Locating these problems at the beginning of schooling should pave the way for more adequate support. **The final main idea relates to parents' involvement in the development of their preschool child's literacy when they introduce regular reading activities at home.** However, according to the author, teachers play a central role in this "learning to read", that has more impact than the home environment and the socio-cultural background of the pupils, even though parent-school relations are not to be neglected. Ken Rowe recommends providing parents with the means (guides,

workshops, etc.) to enable them to accompany the linguistic development of their children and to measure their progress (2005).

□ The “synthetic phonics” method

In the United Kingdom, the “Rose report” (Rose, 2006) recommends increased learning of vocabulary and listening techniques as of the nursery school, in order to build up as many phonemic occurrences as possible. The author puts forward the *synthetic phonics* method which links writing, spelling and reading.

He defines 5 factors to be taken into account for drawing up an effective and quality learning programme:

- good reference practices which can be implemented for pre-primary education with the *synthetic phonics* method;
- methods for integrating these practices within the framework of the National Literacy Strategy “framework for teaching”;
- adapting the *synthetic phonics* method to help students in difficulty;
- educational leadership to help teachers to be effective for learning to read;
- the cost and the return on investment.

□ Transparent languages and the others: a different method for each language?

In their crossover study on the acquisition of the written language, in several languages, the researchers of the COST A8 network listed the problems of language structure and degree of transparency between the spoken and the written language which can explain learning difficulties. They believe that teaching methods can be another factor explaining differences in performance: the *synthetic phonics* method is effective in German whereas in Scotland the use of mixed methods combining work on vocabulary and decoding shows that these methods would be better suited for non-transparent languages (Seymour *et al.* 2003).

In France: the latest quarrel over methods

The declarations relating to the various reading methods and how they are used, the damage they can cause and the beneficial effects they can provide have been reproduced over and over again and it is difficult to make a selection. The debates were included in an article in the review *Éducation et Devenir* (2006), but other reviews, reports or articles provide evidence of the 2005-2006 quarrel (Café pédagogique, 2006). The work of Laure Dumont tells the story of how the debate was covered by the media (2006).

Should meaning be given before, during or after decoding? For some, the child must above all become aware of the sound differences between words (phonemic or phonological awareness, in more erudite terms). In spite of the difficulty of isolating the pronunciation of each phoneme, it proves to be essential to work on listening to syllables, rhymes and words as of the nursery school, otherwise serious reading difficulties may occur (Reichstadt, 2007).

It should no doubt be pointed out that research work does not necessarily use, or even avoids using the terms “reading methods”. Instead, one speaks of methodologies, learning paths, tools or models. It is not a question of prescribing “a” method but of understanding the learning process of the spoken and written language and, while respecting the child’s native tongue, of helping him or her to find a strategy for being able to read words and understand them, whatever the text or the context.

Longitudinal studies are relatively rare. It would seem necessary to be able to use overall models, with larger scale data, on populations of varied ages, taking linguistic characteristics into account. And yet these models cannot be “absolute guides”, since they do not take into account the very individual difficulties of a given child (Rieben, 2003).

Laurence Rieben has on several occasions (2004, 2005), assumed that breakthroughs in research on learning to read could put an end to “sterile controversies”. For her, researchers are tending to agree on the processes of word identification and the processes of written comprehension. Moreover:

- it is necessary to go beyond the simple decoding-understanding dichotomy and finer analysis made of it;
- word identification happens either through an indirect (phonological) process, or through a direct (orthographical) process;
- the link between oral and written comprehension requires long-term training (ONL, 2000);
- learning difficulties must be diagnosed and dealt with as early as possible.

Defining “good practices” (see also below the Rose report): three criteria determine the principle of “good practice”:

- it must be transferable from one expert to other institutions or other environments;
- it must be possible to be implemented and maintained without additional cost;
- it must make clear what skills and knowledge are necessary for the teachers and everyone in charge of implementing the method (Seymour *et al.*, 2004).

Learning to read: longitudinal, comparative and/or institutional studies

In the United States

The *National reading panel* was set up in 1996 by the minister of education to determine what methods were “effective” and what were “good practices”. The [report](#) produced in 2000 is one of the most often quoted and commented upon. The results of this meta-analysis continue to impact the implementation of so-called “effective” methods for learning to read.

One of the key objectives was to analyze the conclusions of the previous report published by the *National reading Council* (Snow, Burns & Griffin, 1998) and in particular to compare the extent of the effects of the “*systematic phonics*” method compared to a non- “*systematic*” or non- “*phonic*” method (38 studies were analyzed and cross-referenced: on this subject, see the articles by L. Ehri *et al.*, 2001a, 2001b). While the effect of the *phonics* method on the level of young readers seems moderate, the positive effects were found to last after the end of the learning period, and the earlier learning began the more beneficial they were (in nursery school, before the first year of primary school), especially for decoding, understanding words and texts and spelling. These effects were even more positive for at-risk pupils from underprivileged backgrounds or for whom English was the second language. The benefits are also great for comprehension (the relation between letters and sounds), vocabulary and fluency. Lastly, these results also take into account the importance of the pleasure of reading, which needs to be stimulated as reading skills continue to develop.

The report concludes that the *systematic phonics* method proves to be the most universally effective, that it should be included in teaching programmes to prevent and cure difficulties related to learning to read and that teachers should be trained in this.

Michael Presley (2001) openly criticises the conclusions of the NRP, insinuating (during the 2001 *National Reading Conference* in Chicago), that the Panel had deliberately ignored scientific results that had been validated by research into learning at home (reading books, for example), the effects of television, private lessons or tuition, the introduction of *whole language* methods, special reforms related to schools, etc. Many scientifically credible pieces of information, according to him, had been pulled out of the American national debate, in spite of their beneficial contribution. Skills related to literacy are acquired in many ways during compulsory schooling. Effective learning to read is the fruit of a blend of professional skills, a holistic approach (reading wholes rather than units) to texts and to the accumulation of experiences with writing.

In contrast, L. Ehri (2003) comments positively on part of the report of the NRP (2000), which deals with scientific research on learning to read with the *systematic phonics* method. She explains how the systematic phonics method works more effectively if it is used during the first year of school.

These results are confirmed but with some reserves in another meta-analytical summary performed by Camilli, Vargas & Yurecko (2003), on the *phonics (direct instruction)* and *whole language* ("constructivist") methods based on 40 studies: a combination of the *phonics* methods during initial learning accompanied with reading activities of the *whole language* type (which introduce work on the meaning of texts) produced in certain cases up to four times more positive results than the *systematic phonics* method used on its own. The authors conclude that **learning should not be based on phonics methods alone.**

According to empirical research, the programmes must initially use the principles of phonemic awareness and *systematic phonics* in order to build the mechanisms of deciphering, introducing, in a second stage, approaches calling upon "global" approaches which allow more individualized learning.

For Greg Brooks (2003), **the Phonics method is necessary but insufficient**, in particular for English which has a very complex spelling organization. He makes some recommendations to amend the conclusions of the NRP:

- carry out research in order to differentiate between two types of *phonics* methods: those which teach how to read and those which teach how to decipher;
- reorganize certain stages of this method;
- modernize the pronunciation sequences.

A meta-analytical survey carried out by Monique Sénéchal (2006) and published by the *National Institute for Literacy (NIFL)* aims to show how and why the involvement of parents in teaching children aged 3 to 6 to read is a decisive factor for success. The author reviews 14 scientific studies, including control groups, which support this theory which determines three types of family involvement:

- the first requires commitment from the parents in their children's school environment;
- the second requires active participation from parents in following up their children and communicating properly with teachers (in order to detect weaknesses and difficulties more easily and quickly);
- the third requires thorough participation from parents in the reading learning activities at home.

One of the activities supposed to improve the child's level of literacy in the child, whatever his socio-cultural background is parents and children reading together: 17 studies show that this has a positive effect, especially when parents use resources indicated by teachers.

In the majority of the studies quoted however, Sénéchal regrets the lack of statistics concerning the parents' level of literacy and their social status.

In Canada

Within the context of a similar concern, M-F. Morin and I. Montésinos-Gelet looked at the phono-grammatical skills in writing in the nursery school. Their comparative study, which relates to 373 French children and 202 French-speaking Canadians, shows that inculcating an awareness of copying words as of the age of 3 gives an advantage to the French children over the young Canadians, who start school only one year before the first year of primary school (2005).

In the United Kingdom

These remarks echo the conclusions of the English report *Teaching Children to Read* (2005), published by the *House of Commons* which recommends:

- using the phonics method, in particular for pre-school learning,
- developing the concept of pleasure (teacher training, home environment),
- evaluating the current program *National Literacy Strategy* in order to modify and to improve the phonics" approach used in the United Kingdom (which is the best phonics method? from what age should it be used? etc).

A summary of research, financed by British DfES (Torgerson, Brooks & Hall Jill 2006), compares various learning methods and their effectiveness, on the basis of random controlled test, of meta-analyses, etc. The *phonics* method has a significant positive effect on the reading level but the results do not show a reduction in the differences between children with an average level and those said to be "at risk of failure". This summary confirms the conclusions of the study published in the USA in 2001 (Ehri *et al.*, 2001) which found the *phonics* method to have a significant positive impact compared to the *whole language*. The authors did not, however, demonstrate any difference in effectiveness between the phonics methods according to whether their approach was *synthetic* ("syllabic") or *analytic* ("global" in the European sense).

In 2002 the *Office for Standards in Education (OFSTED)* published a [report](#) giving an account of their reading learning programme: the *National Literacy Strategy (NLS)*. This reform, founded in 1998, aimed for 80% of the pupils to succeed in the evaluation tests at the start of the first year of secondary school. Her Majesty's inspectors show that this reform is an effective one, but not sufficiently so as to reach the hoped-for 80%. They recommend better preparation for teachers of the first year of primary school to use the phonics method. When it is effectively implemented, the NLS is a source of improvement, raising the level of literacy and the quality of teaching in general.

This is also the opinion of S. Twiselton (2007) who stresses the importance of teachers' being familiar with the literacy curriculum during their initial training. Her article highlights the opportunity of dissecting all the aspects of the NLS in order to adapt this apparently effective reform as flexibly as possible in front of the pupils. She quotes the Scottish teacher training system which has already taken on board the importance of this principle.

In Scotland, R. Johnston & J. Watson (2005) underline the impact and the effectiveness of the *phonics* method on teaching reading, after studying, over a seven year period, 300 pupils of elementary schools (in Clackmannanshire) divided into three groups subjected to three forms of *phonics* methods: the synthetic method (gr1), the analytical method (gr2) and an analytical method in conjunction with a phonemic approach (gr3). The pupils of group 1 were on average 7 months ahead of the others in terms of their reading and deciphering level. **The authors point out that the synthetic method has not only an immediate impact on reading and deciphering but that its effects are lasting in the long term.** They conclude that this method is all the more effective as it belongs to the curriculum and that it is used as of the first year of primary education.

In Europe

In 2004, P. Seymour, M. Aro and J. Erskine, in collaboration with the COST Action A8 Network, highlighted the contrasted results of children in the first and second years of primary school (aged 5-7 in sixteen countries representing thirteen different languages. While the scores are fairly equivalent as far as the correspondence between letters and sounds is concerned, the results diverge considerably in reading words and pseudo-words, English children obtaining scores of about 34% (reading words) and 29% (pseudo-words) against 85% on average for the other countries, because of difficulty of the English writing system. The Danes, French and Portuguese took a little more time than the others, who were "more efficient" in gaining command of the written language (Seymour *et al.*, 2004). These data give a good illustration of the analyses made by cognitive sciences (psychology, neurosciences, etc.), such as that of J. Morais, during the conference "Reading: learning and citizenship", namely that the degree of transparency of a language has a great influence on the speed of learning. This influence is also reflected in the reading process itself. Languages with transparent codes will be read on the basis of smaller units (letters) and the less transparent using broader units (rhymes) (2005).

In one of the rare French-speaking longitudinal studies, Braibant & Gerard (1996) show the paramount role of the teaching factor. The statistical analyses relating to Belgium state "that the predictive capacity of pupils' initial skills is twice as low as that of the school variable". Differences in results according to the method of reading are very marked. As of the end of the first term, children who learned how to read with the gestural method in the first year of primary schools obtain better results than those who learned with the mixed method; the latter obtain better results than pupils who learned with the functional method, in particular for decoding.

Evaluation of reading skills

In France, more than 10% of young people who took part in the defence call-up day in 2006 had reading difficulties including 4.8% who experienced serious difficulties (MEN, 2007).

According to the international evaluation PISA 2003 "17% of pupils in France (and 18% on average in the countries of the OECD) are probably able to read in the technical meaning of the term but encounter serious difficulties in using reading as a tool to extend and improve their knowledge and their skills in other fields. They are unable to implement, on a regular basis, knowledge and the most elementary skills that PISA seeks to measure". In addition, the OECD published a document on the characteristics of pupils with regard to school, taking into consideration their reading performance. This document (OECD, 2004) also shows the characteristics of the context and the system (teacher motivation, use of books, etc.).

The high council for the evaluation of school has studied how reading and writing skills have changed, through national evaluation systems since 1979. The populations observed are primary school and secondary school pupils. This report takes stock of French, British and American evaluations and also international ones (PISA, PIRLS, IEA), with some considerations on protocols and methods used (Céard, Rémond & Varier, 2003).

Research based on longitudinal studies gives complementary and/or different results, often less up to date than national and international evaluations, but this is worth consulting for the interest of the methodologies used. Work by the Belgians J.-M. Braibant & F.-M. Gérard (1996) is used as a reference for a fair number of researchers, as well as that of L. Ehri *et al.* (2001a, 2001b). They were quoted by L. Sprenger-Charolles and P. Colé in one of their contributions to the "debate on methods" (Sprenger-Charolles & Colé, 2006).

See also

- For a definition of the PISA international evaluation criteria: OECD (2006). *Compétences en sciences, lecture et mathématiques : Le cadre d'évaluation de PISA 2006*. Paris : OECD.
- Claus Philippe & Megard Marie (2007). *Note sur le suivi de la mise en oeuvre de l'évaluation des élèves à l'entrée de la première année du cours élémentaire (CE1)*. Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche, Délégation interministérielle à l'aménagement, Inspection générale de l'éducation nationale.

Learning difficulties

Dysphasias are specific learning disorders affecting the spoken and written language. The following can be distinguished: dyslexia, dysorthographia, dyscalculia and dysgraphia.

In 2007, the social security services for freelancers asked the INSERM (national medical research institute), to perform a survey "on the state of recent scientific knowledge that would help to gain better understanding of specific school learning disorders". (INSERM, 2007). As far as learning to read is concerned, the eleven experts who contributed structured their work around several questions:

- state of knowledge regarding "normal" reading acquisition;
- definition of learning disorders (dyslexia or others);

- principal explanatory theories;
- contributions made by neurosciences; remedial methods;
- possible strategies for detecting and treating

To answer these questions, they used somewhat more than 2.000 articles mainly written in English. With regard to reading learning disorders, the INSERM study enumerates a number of criteria appearing in the international classification of diseases (common or specific diagnostic criteria) (p .13-16).

Some of the experts who contributed to this report also took part in the National reading observatory day in February 2005, on "reading learning disorders" (ONL, [2005](#)). Contributions to this day related to "the cognitive, neurobiological and genetic origins of dyslexia" (F. Ramus), mental development dyslexias and visuo-attentional disorders (Sylviane Valdois) and dyslexia as a disorder of phonological perception (Willy Serniclaes).

Dyslexia

According to the INSERM ([2007](#)) study, **in France, dyslexia concerns between 3 and 5 % of children around the age of 10 (or 1 child per class of 25 pupils on average)**. Statistics on the number of dyslexia sufferers vary considerably, however, according to language and to the criteria used to assess learning disorders.

From a political and economic standpoint, the difficulty of counting the number of dyslexic children, which depends to a great extent on parents' willingness to recognise that their child has this problem, leads to a failure to take into account the special educational needs that these children have (longer times required for examinations, for example).

The results of studies on groups of dyslexic children show common characteristics, whereas they are of normal intelligence (and their failing cannot be put down to any particular learning method):

- phonological deficiency: the child cannot make use of their lexical knowledge (reading rare words or pseudo-words) and are confronted with "opaque" writing (spelling far removed from the spoken form);
- lexical deficiency;
- phonemic analysis deficiency;
- short-term phonological memory deficiency;
- deficiency during naming tests (evaluation of the accuracy and speed of access to the lexicon).

Certain studies have examined other types of deficiency:

- deficiency in processing visual sequences: for the INSERM experts, the results of work on these deficiencies are not conclusive, because of the conditions of analysis and too few cases examined.
- difficulties in memorising the visual form of words.

However, research show that there are different forms of dyslexia and that it is frequently associated with behavioural problems or emotional disorders, linked to learning difficulties and exacerbated by a home social or psycho-emotional environment.

This multiple aspect of dyslexia has resulted in two different theoretical approaches, one phonological and the other sticking more to sensory or driving symptoms. For F. Ramus, this latter approach has the advantage of taking into account all aspects of dyslexia, whereas the first, once the problems of a phonological nature have been stated, takes into account the other factors only as comorbid markers (one or more associated disorders). (Ramus, [2007](#)).

It has been seen that the phonological procedure of reading implies being able, initially, to move from the written code to the oral code (phonemic analysis) – in French: associating graphemes and phonemes – and then to assemble the units decoded (short-term phonological memory) to arrive at the words of the oral lexicon (INSERM, [2007](#)).

It is based on the fact that reading is a language activity. The word is a basic unit of writing. Reading skills are located at the level of written word identification procedures, through the acquisition of automatic reflexes. In alphabetical writing, this identification involves either decoding (phoneme/grapheme correspondence), or the lexical procedure (words). This procedure is neither global nor purely visual; it allows the expert reader to arrive at the phonological and semantic code of the words (INSERM, [2007](#)).

One of the assumptions of the phonological theory is that deficiencies could be related to a lack of phonemic discrimination (telling the difference between "vat" and "bat"). In contrast, dyslexias might perceive differences which are not useful ones (allophonic perception).

The INSERM report points to another dimension of dyslexia: the visual dimension. **Phonological and visual disorders might occur concurrently**, but studies do not make it possible to bring to light a link between the two deficiencies, nor the treatment to be proposed (INSERM, [2007](#)).

The area of the brain which encodes orthographical structures is activated independently of the typography of the written words. When learning to read, it is activated in correlation with the skill of graphophonological decoding. In dyslexic children, phonological type remedial work will increase the activation of this area of the brain (Morais, [2005](#)).

There has been much work done on dyslexia. The literacy team of the [LEAPLE](#) laboratory (CNRS) is looking at the "acquisition and pathologies of learning to read and write in the development of the spoken language and functioning of the written forms and spelling". One of the topics relates to dyslexia, dysorthographia and deafness. Much of the work of L. Sprenger-Charolles, who collaborated in the INSERM report and who was involved in the debate on the reading methods, comes within this research framework

For F. Ramus, this scientific literature on dyslexia and neurobiological reading disorders puts an end to beliefs whereby reading learning difficulties can only be of social or educational origin (Ramus, [2005](#)), but it does not make it possible to account for all learning difficulties.

□ See also

- [Enfance \(2004\)](#). Dossier « Les dysphasies chez l'enfant : approche francophone ». Vol. 56, n° 1.

Other learning difficulties

It is not a question here of dealing with disorders of a neurobiological or psychological nature, but rather with all the reading learning difficulties which children may encounter between the ages of 5 and 7.

Some have criticized the INSERM study for not taking into account socio-cultural factors and of "making learning difficulties into pathologies": "If one tends towards this view, one absolves society and school from the responsibilities of learning difficulties. The risk is of marginalising and shutting out underprivileged families. The social fabric is weakened still further; and it is well known that these trends are already hard at work in our society" (Jarraud, 2007).

J.-M. Braibant has shown that **decoding and comprehension contribute independently to reading success and that they can be perfectly well dissociated, as can be seen from the observation of children who master one of the two abilities but who have serious difficulties with the other.**

Even in Finland, a country where pupils' performance has been recognised for many years, difficulties of learning to read remain. According to statistics based on Finnish criteria, although Finnish has a regular spelling system, 6% of children have difficulties and 3% serious difficulties (Lyytinen and Erskine, 2006). For researchers at Jyväskylä university, early learning in linguistic and phonological skills is a means of preventing reading learning disorders, as can be seen from their longitudinal studies on "preschool experiences" (*Finnish Center of Excellence in Learning and Motivation Research*). In the official instructions, given that three languages are spoken in Finland (Finnish, Swedish and Lappish) the texts which govern learning to read specify that children must learn how to read in their mother tongue. Going beyond this principle, a whole chapter is devoted to the teaching of the native language of foreign children (Godenir, 2001).

At European level, the institutional recommendations for taking the individual differences of children into account will be seen below. As more original examples, the instructions of Denmark should be noted: these recommend considering the child from the developmental point of view, i.e. observing the strategies used by children in difficulty and getting them to adopt other strategies. In Portugal, the instructions are to integrate what is already known about the pupils and to allow them to adapt new skills (Godenir, 2001).

In the accompanying document to the French programmes (MEN, 2006), a chapter is devoted to children with special needs, whether they are non-French-speaking, or children with learning difficulties or disorders. This guide provides warning indicators to help teachers locate the difficulties, as well as encouragement to call upon the assistance network and to talk to the families.

□ See also

- Puolakanaho. A., Ahonen T., Aro M. *et al.* (2007). « Very early phonological and language skills: estimating individual risk of reading disability ». *Journal of Child Psychology and Psychiatry*, vol. 48, n° 9, p. 923–931.

Action

Finnish researchers have compared the development of children at risk from dyslexia and that of children not at risk, in order to identify precursors (related to dyslexia) and predictors (useful but non-necessary correlates) of dyslexia. These evaluations took into account vocabulary and phonology development and also motor development, visual-spatial abilities, memory and environmental factors (how reading is considered within the family circle). Observation of the perceptive sensitivity of very young children - shortly after birth - shows notable differences according to phonemic duration: "the duration of consonants is a sub-phonemic feature with short and long variants which are semantically distinct in Finnish, and the spelling difficulties of Finns with dyslexia are often concentrated on this feature". **In a child at risk, the delay in language acquisition at age 2 is to be found at the age of learning to read, whereas this delay in children who are not at risk is ironed out. The same observation was made for naming speed.** Lastly, environmental factors have an unfavourable influence that is more marked in children at risk (Lyytinen *et al.*, 2004).

This approach might be in contradiction with other work or reports. A document distributed to French teachers (MEN, 2006) mentions, in the course of a chapter devoted to specific language disorders "the diagnosis of dyslexia cannot be made before a certain time spent learning to read has elapsed (eighteen months is the generally accepted time)".

During the national observatory of reading day on reading disorders, a roundtable on the detection of disorders saw discussion between the medical and the educational point of view. For C. Billiard, a neurologist, dyslexia must be detected at the very beginning of the first year of primary school, but not necessarily before this because some disorders disappear in the years which follow - this is in keeping with the analysis of the Finnish team. Nursery school children are sent to speech therapists for speech disorders and then for reading disorders as of the second term of the first year of primary school. For doctors and neurologists, teachers tend to adopt a wait-and-see approach in their teaching practices, through lack of knowledge; they know little about their pupils' shortcomings and may even adopt a reassuring attitude with respect to parents. During the summing up of this day, J. Hébard agreed that for those involved in state education, the greatest difficulty is undoubtedly "to accept that their teaching models, even when they are of great quality, can contribute to lock certain children up within their handicaps" (ONL, 2005).

Identification, detecting and diagnosis are carried out by different people. At nursery school, the teacher can identify speech disorders; in the first year of primary school he can observe what has been learnt and any shortcomings. Because it accommodates all children in the same age range, school is the ideal place for identifying disorders, first by school doctors then by the RASED (assistance networks specializing in pupils in difficulty), for example. Diagnosis and diagnosis tools are the province of multi-disciplinary teams (doctors, speech therapists, psychologists, etc.). At school level, studies (mainly English-speaking ones) show the preventive effect of phonological training, or more exactly training in phonological awareness (see above).

This short description of the difficulties of learning and possible actions does not deal with the work undertaken by speech therapists and only skims over learning difficulties which are not due to difficulties of a psychological, motor or genetic nature, i.e. difficulties related to the family, the cultural or social context. These questions find an echo in work on the lexicon, for example, with different approaches. Expectations are high for action by educational teams and parents.

□ See also

- In the section "Summary and recommendations" of the INSERM study (2007), it is interesting to read through the account of the meeting/debate on this area of expertise (p. 82-96), in January 2007, during which the group of experts discussed with researchers, those involved in associations, institutions, etc.
- US Department of education (2005). *Helping your child become a reader*. Ed pubs.

Instructions and institutional objectives

What are the broad outlines to be remembered from the latest exchanges on learning to read and the "right method"? The need for support for the beginning teacher who, after several years of training in literature, for example, discovers how little he knows about learning to read, how little he can do for poor readers, and turns against the teacher training institute (Goigoux, 2005). This shows the importance of teaching the psychology of reading (Fayol & Morais, 2004, p. 53) and the need for devoting time, in initial training and in-service training, to the understanding of the process of learning to read and taking into account children's differences and difficulties.

In France

The latest instructions relating to learning to read follow on from the [circular of January 3rd, 2006](#) on the implementation of primary school curricula. This circular specifies "the conditions for learning to read quickly and well". It was followed by a brief modification of primary school curricula, accompanied by ad hoc documents and a guide ("Apprendre à lire", 2006) ("Learning to read") distributed to all primary teachers in 2005-2006.

In November 2006, the state education inspectors handed in a report on implementing the circular of January 2006. This evaluation, which was centred on the first year in primary school, noted many positive points: a large amount of time devoted to learning to read and write; thinking by teachers on the media used; the commitment of the majority of the teachers in work on the alphabet code. The report nevertheless points out some problems: the continuity between the final year of the nursery school and the first year of the primary school is not very well maintained: nursery school teachers often introduce a "book of sounds" which is not used by the primary school teacher; there are few or no meetings for primary teachers; ignorance of what pupils have learnt when they enter the CP; fewer writing activities than are recommended; work on comprehension is said to be imperfectly grasped: few teachers mention organising debate around texts read, or reformulating them, little relationship between decoding and reading, the use of pictures in comprehension exercises; difficulty managing mixed-ability classes (Bouysse, Claus *et al.*, 2006).

In the circular of January 2006, the minister for state education stated that "**researchers, in France and abroad, are in agreement: learning to read involves decoding and identifying words leading to their comprehension**" and, further on, "*for word recognition to become an automatic reflex requires systematic exercises connecting letters and sounds and could not result from merely memorising the photograph of the shape of the words which is a feature of global reading: I therefore expect teachers to resolutely reject these methods which saturate pupils' memory without giving them the means to learn to read autonomously. Deciphering words in order is an essential skill, but it is not enough: the goal of reading is to access the precise meaning of words, then sentences, then texts and not just the sound of words.*"

The scientific references on which the minister of state education based his remarks (National seminar, [March 2006](#)) are:

- a report by the national reading observatory and the general inspectorate ([November 2005](#)), which recommends developing a national initial training plan devoted to learning to read, of at least 50 hours, highlighting the role of the nursery school in the development of the spoken language and phonic awareness, as in the construction of the alphabetical principle and the practice of writing.
- The work of: Alain Bentolila, Stanislas Dehaene, Jean-Emile Gombert, José Morais, Liliane Sprenger-Charolles and Johannes Ziegler.

In Europe

A. Godenir has studied the official instructions in the countries of the European Community. This comparative study, published in 2001, needs further work since it does not take into account the most recent texts, published in France, Belgium or England for example. The broad outlines still remain valid, however. While the majority of countries consider learning to read as of the age of six, certain curricula are concerned with reading as of the 4 age of four (Ireland, Northern Ireland) or 5 (England, Wales, Scotland), whereas others consider it only when education becomes compulsory, i.e. at the age of 7 (Denmark, Sweden, Finland). Teachers have a free choice as to the method and textbooks used (there are no instructions in the curricula), except in Greece where textbooks are provided free of charge by the state, and in Luxembourg where the state provides a guide for the teachers and textbooks for the pupils. The time devoted to language teaching represents between 20 and 45% of the time devoted to the lesson and can be fixed on a weekly or yearly basis (Godenir, 2001).

This update has been done for the French-speaking community in Belgium, where learning to read is guided by a decree of 1997 (school missions) to which were added a document on core skills, in 1999, and the curricula, in 2002. At the request of the ministry of the French Community, A. Lafontaine and M.-C. Nyssen analyzed and/or observed the official curricula and teaching practices. 54 % of teachers say that they use both an analytical method and a synthetic method, in the interests of variety and "dip into this and that". In first year of primary school, activities are diversified, either technical, or related to reading strategies of, by encouraging the acquisition of grapho-phonological correspondences. Teachers use several textbooks, at various time of the year, to help pupils progress. Teaching practices, primarily frontal (87%), make little use of IT resources or children's literature, but require homework; the authors of the study observed few innovations to meet the needs of pupils in difficulty (Lafontaine & Nyssen, 2006).

This concern for taking individual differences into account was already present in the comparative study by A. Godenir, to which M.-C. Nyssen had provided a theoretical section. Three types of recommendations are to be found in the official instructions in Europe: matching objectives to children's abilities (England, Wales, Scotland); flexible grouping of pupils, (Belgium, Germany, France, Ireland); and remedial work including individual tuition, currently not sufficiently widespread (French-speaking Belgium, Germany, Greece, Luxembourg, Austria, Portugal). In certain countries (Netherlands, etc.), this goes as far as providing multicultural education, integrating children with a different cultural background (Godenir, 2001).

In the United States: success for all?

The American programme providing assistance in learning to read, *Reading First*, aims to encourage the use of conventional teaching methods, approved by the official instructions. Each child, by the age of 8, must know how to read, according to the official objective. Thanks to *Reading First*, states and districts receive funding to allow schools training necessary for teachers. This funding is granted to states which meet with certain criteria. Only "scientifically approved" methods are allowed to be used in classes benefiting from this grant. The money is allotted according to the number of pupils aged between 5 and 17 residing in the state from families whose incomes place them below the poverty line. This funding is also used for teacher training, for the dissemination of effective methods and the evaluations of these methods and the progress of the young readers.

A publication by the *Center on Education Policy* (CEP) (Scott, 2006) takes stock of the impact of *Reading first* since it was set up in 2002 and sums up in six main areas the progress made, especially:

- *Reading first* has had a significant impact on schools which integrated many changes in their teaching methods, their curricula, their timetables and their evaluations;
- most states consider that *Reading first* has led to progress and success in literacy;
- the implementation of *Reading first* requires change in mentalities in the school.

The conclusions of another recent report of the CEP (Scott, 2007) echo the positive evaluation of this programme, especially at state and district level. In spite of the reservations made by the federal government as to the effectiveness of the *Reading First program*, the report shows that this initiative is recognised as an educational success by local and state officials: they affirm that *Reading First* allows the pupils involved in the programme to raise their level of literacy and of reading..

More than 3/4 of the states and 2/3 of the districts benefiting from *Reading First* funding think that this initiative is largely beneficial and that its impact goes beyond the schools concerned. More than half of the schools who did not receive funding used methods and techniques from this programme to help learning to read.

One of the most widespread programmes is **Success for all (SFA)**, intended for the pupils whose first language is English or Spanish. It was designed to prevent difficulties in children at risk.

The main features of this programme are individual tuition, a low pupil-teacher ratio for reading lessons and evaluations every eight weeks. **This programme uses a mixed method (phonics and whole language) at the beginning of the course and recommends that the pupils are "impregnated" with reading (storytelling) as of the nursery school.** Graphemes and then phonemes are presented, later forming words and sentences in a decoding phase. After acquiring and validating basic skills, the pupils continue to learn with the CIRC (*Cooperative Integrated Reading and Composition*) or *Reading Wings*, which stresses comprehension and meaning strategies, vocabulary acquisition and writing.

This method is assessed regularly via investigations which are based on rigorous protocols inspired by clinical methods on controlled populations (*randomized control trials*). A recent publication by Slavin *et al.* (2006) gave a progress report on *Reading first* as they wind up an investigation of this type: the authors agree that this method, that has undergone very many studies and very much research, is extremely effective.

The effectiveness of *Success For All* had already undergone longitudinal research based on a sample of 23 schools, compared with as many pilot schools (Slavin & Fashola, 1998). The evaluations showed a very clear positive effect; pupils who had taken part in SFA had gained over one year of schooling on average by the time they reached secondary school. The implementation of the programme in its entirety made SFA more effective, in particular in schools in very underprivileged districts. SFA requires three days of teacher training. These teachers are also followed up in the field two to three times a year.

Other examples of American programmes:

• **Direct instruction (DISTAR), or Reading Mastery Series (SRA)**

This programme is designed to be taught to pupils from very underprivileged backgrounds. The "phonics" method is used with very precise instructions for teachers. Pupils progress according to 6 qualification levels corresponding to 6 series of teaching materials made available to them. Learning follows a slow progression, from a syllabic approach (rhythm, identification of letters and sounds, graphemes and phonemes) to the comprehension of meaning.

- Effectiveness: the *Direct Instruction* programme is assessed by the *Follow Through* programme and shows very beneficial effects.
- Teacher training: 2 to 4 days so that the teachers learn and practice the processes, in conjunction with collaborative practice.

• **Exemplary Center for Reading Instruction (ECRI)**

The aim of the ECRI is to train teachers to use teaching methods aimed at preventing pupils from failing to learn to read. This training programme has been approved by the American minister of education for teachers from the 1st to the 10th grade.

The teachers work with small groups of pupils. Learning time is equivalent to practice time. During practice time, the teacher works using an individualized approach. The ECRI is a Direct Instruction programme and, for this reason, requires very precise instructions (there is little room for teacher autonomy) and frequent assessment.

- Effectiveness: several studies have shown that this programme is very effective for pupils in difficulty and underprivileged pupils.
- Training: a 3 to 5 day seminar for 30 to 40 teachers, in order to explain the method and the material used; the training includes workshops.

• **Open Court (OC)**

The objective of the OC is to make pupils independent in their reading activities by using the "phonics" method. The programme focuses on the alphabet, phonemes and syllables by using special books containing a great number of phonemes learned during the programme. Activities are focused on decoding.

- Effectiveness: this programme has been in use for 30 years but was only very recently evaluated and only from the standpoint of the tools used for nursery school and 1st and 2nd grade levels. The results of pupils using OC were compared with those of pupils following a *Whole language* programme: they are much better.
- Training: 1 day to show and explain the material (toolbox), discuss comprehension strategies and phonic techniques. Provision is made for follow-up work and accounts of experience. Training courses are also possible during the summer.

- **Carbo Reading Styles Program (CRSP)**

This method is the fruit of research by Marie Carbo which shows that children have different "styles" of reading, making them tend to prefer one technique or learning material over another. Everything is based on the techniques and how they are integrated and presented to the readers.

- Effectiveness: two main studies have shown that this method has strong positive effects, especially in the early stages of learning.
- Training: on the site all the equipment required can be purchased and training requested. The NRSI proposes 3 types of training programmes: the *Comprehensive training plan* (4 days of training and 7 days of follow-up and technical assistance), the *Basic plus training plan* (4 days of training and 4 days of follow-up and technical assistance) and the *Basic training plan* (4 days of training and 1 day of follow-up and technical assistance).

Evaluating tools and methods

Seven years after the publication of the results of their longitudinal study, J.-M. Braibant and F.-M. Gérard carried out an analysis on the influence of reading methods on pupils' level of acquisition in the second year of primary school. They state that they must undergo a two-stage assessment: of decoding and written comprehension (Braibant & Gérard, 2004).

Their first work (Braibant & Gérard, 1996) helped them to determine the structural variables which might explain reading difficulties or differences in results:

- time devoted to reading sequences: considerable but moderate differences in results;
- many children per class: no significant link;
- doing the 1st or 2nd year at primary school again is a discriminating variable. "*The decoding and written comprehension ability of pupils who have done a year again is significantly lower than that of their classmates who are "on time" or "in advance"*";
- regular assessment of reading out loud helps learning;
- the use of a textbook: teachers who use a textbook or methodological guide definitely obtain higher results.

"Without denying the importance of the other factors, it appears clear that differences in acquisition in reading are related to the effectiveness of the methods used" (Braibant & Gérard, 1996).

For A. Bentolila, learning to read is truly a professional business. In the *Orthomagazine* review, he explains that just because reading is mainly the combination of letters to make syllables does not mean that anyone can teach it. But he calls into question both initial and in-service training, accusing them of negligence which might have caused "approximate practices", "heterogeneous and insufficient knowledge" and which might have inculcated a mistrust of the textbook in young teachers (Bentolila, 2006).

The national reading observatory wrote several reports on textbooks: observation of textbooks in the context of learning to read (2007), and methodical analysis guide (Germain *et al.*, 2003).

G. Chauveau, analyzing the "war of methods" notes, if there were still any need to, that many external factors come to bear on the effectiveness of methods and that the role of teachers and their teaching on a daily basis are paramount (Chauveau, 2007).

At a European level, M.-C. Nyssen and S. Terwagne suggest going beyond the codes/meaning dichotomy and adopting a new model using reader/text/context. The individual differences between apprentice readers must be taken into account by transformations of context, working by ability groups, changing teaching practices, making parents more aware and taking account of social and family anchoring (Nyssen & Terwagne, 2001).

This recommendation seems to us to sum up the whole of recent work, which tends to go beyond the quarrel about methods to focus instead on the difficulties of reading and more still on the need for differentiated education in learning to read and in language learning in general.

As we indicated at the beginning, this literature review is restricted to the basics of learning to read. Literacy is not just teaching reading to 5 or 6 year-olds. The assessment of skills (cf. above) shows that there are failures well beyond this (Nonon & Goigoux, 2007), but these would require another article.

In 1996, at the time of their longitudinal study, Braibant and Gérard wrote: "*For many years, the debate on reading has been an ideological battle which has split the world of teaching. It has not been able to become a scientific debate, i.e. to submit its positions to the verdict of facts. This is what we attempted to achieve in this work. We dare to hope that it may fuel, as peacefully as possible, a debate which concerns all the citizens of tomorrow*".

The latest exchanges, in France, have shown that scientists had been "summoned" into the debate without the ideological aspect disappearing completely. The elements of a constructive dialogue between researchers, teachers and people responsible for educational policies are there. The publication of the report [PIRLS 2006](#) (Progress in International Reading Literacy Study), which shows a fall in the results of French children will doubtless trigger off the debate once more. How can parents be reassured, and above all, how can children be helped to succeed?

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