

## IS IT POSSIBLE TO EFFICIENTLY TEACH READING AND WRITING TO ALL FIVE-TO SEVEN-YEAR-OLD CHILDREN?

When I decided, about thirty years ago, to find a research subject which might make a contribution to society, reading appeared to me to be a wonderful candidate. In those days, acquiring reading skills was not considered in France as a noble enough subject for academic purposes, so many people were astonished by this interest. Nevertheless and happily, I pursued. I began by a review of the international literature, and was surprised to see just how many children had difficulties in acquiring reading.

Comparing this fact with what I knew from my former studies in oral acquisition, I was surprised. Little by little, as I thought about this difference, I was more and more convinced that there was no natural reason for such a discrepancy between these two realities: most children succeed in acquiring their mother language at home in a relatively short time, whereas at school a large number of them encounter difficulties in acquiring reading. Thirty years later, and after a lot of research in literacy – inquiries, experiments, and so on –, my position is unchanged: I firmly believe that there is no natural reason why a child who is able to communicate in a given oral language cannot easily learn to use the same language in its written form. Consequently, for me the problem is not with the child. If we accept that assumption, it means logically that the problem is with the schools. In other words, there is something that does not work in the school environment, something that impedes a natural and easy acquisition of reading and writing, as easily as the acquisition of oral language. This is my fundamental position.

Nevertheless, such a psycholinguistic approach is not sufficient, for speaking about “the child” in such an abstract way is an idealistic point of view. Children are socially very different from each other when they start school and, as researchers, we must take these differences into account. Concretely speaking, it is well known and largely documented that there are strong differences in the acquisition of reading according to the social status of the family (minority or mainstream), the social background (underprivileged or middle class) or the gender of the child (boy or girl): in fact, all over the world, children from minority groups, underprivileged backgrounds and boys have more difficulties in becoming literate than children from the societal mainstream, the middle class and girls. If we agree that all these characteristics are not biological but cultural, this information allows us to more accurately refine the previous assumption. Instead of saying that the school system is

generally unable to teach all children efficiently, we can now say that it is less efficient for children with these specific characteristics.

At this point, in order to be useful to society – i.e., helping to reduce difficulties in acquiring literacy –, two paths were open: either trying to explain why these specific characteristics are tied to so many difficulties, or trying to solve these difficulties directly in the reading class with teachers and children themselves. I was younger and fearless, so I decided to work in both directions. These two paths could also be called, respectively, fundamental research and applied research. Of course, they were not absolutely separate in my work, for when I learnt something in research I could use it in the schools, and, conversely, when a hypothesis sprang from the classroom, I was eager to verify it experimentally. In other words, I decided to work alternatively in two fields: academia and the school context.

I don't have enough time to develop here what I have done over many years on the academic side of my research, so I will only speak about the second path, which I will call the action-research path.

Table 1

<i>Date</i>	<i>Place</i>	<i>Number of classes</i>	<i>Population</i>	<i>Institutional support</i>
1977-78 1999 >	Israel	2 > 200	Urban underprivileged	Ministry of Education
1980-83	Toulouse: School for the deaf (France)	2 to 7	Deaf children	Ministry of Health
1982-83	France Spain Quebec (Canada)	3	Urban Underprivileged	University of Toulouse : International Relations, Ministry of Education
1983-84	Québec (Canada)	2	Rural underprivileged	University of Montréal

1985-87	Toulouse (France)	2	Gypsies, North African background	Ministry of Education (national level) : Elementary school administration
1987-89	Tarn (France)	2 secondary schools	Educational Priority Zone	In-service teacher training: Ministry of Education (local administration)
1987-96	Toulouse (France)	About 15	Educational Priority Zone	European Community, French Ministry of Education (national level)
1989-94	Aude (France)	About 180	Varied	In-service teacher training: <i>Conseil Général</i> (local government)
1992-95	Ariège Tarn & Garonne Creuse (France)	About 20 About 20 About 15	Varied Varied Rural	Pre-service and in-service teacher training (local level)
1998-2003	Brive (France)	6	Varied	Local educational authorities, National Institute of Pedagogical Research (INRP)
2001-2008	Castres (France)	About 18	Educational Priority Zone (ZEP)	Local school district
2002-2006	Cuq-Toulza (France)	School-wide	Varied	Local school district
2003 >	Cahors (France)	School-wide	Educational Priority Zone (ZEP)	Local educational authorities

Over these 30 years, I have had many opportunities to work directly with teachers, in different countries and with different institutional support, as you can see it in Table 1 which retraces my itinerary of action-research. Some remarks :

- I began this kind of work in 1977.
- I had opportunities to work in different countries: Israel, Canada and, of course, mainly France
- In France, the regions varied all around the city of Toulouse
- The number of classes differed: from 2 to more than 200, or sometimes entire schools
- Populations also differed: most of the time they were children struggling with reading who were underprivileged, but for different reasons —minorities, social problems, hearing handicapped...
- Institutional support also differed: most of the time it came from national or local authorities, but also on occasion from foreign countries.
- In most cases, these action-research activities were “double free”, i.e.,
  - 1) Free because there was no budget allotted,
  - 2) Free from an academic point of view, since this kind of research is not considered by the French universities as true research.

*What conditions are necessary to undertake an action-research project?*

- Most of the time, action-research happens because a local actor in the academic system (often a remedial teacher) learnt that I was ready to help teachers who had difficulties with their children and wanted to improve their way of teaching
- Sometimes, less often, the demand came from an official national or international project.

*What's necessary to work with teachers and children?*

There are two fundamental features on the organizational side:

1) Regular visits of the classrooms by the researcher: each class is visited about half an hour to see what happens —how the teacher manages her group, how the children behave, who are the children who have difficulties, etc.

These visits occur weekly if possible; if not once every two weeks.

2) Regular meetings with the teachers directly involved in the project. These meetings immediately follow the visits, since they are based on the problems perceived in the classrooms. Problems are discussed, along with possible solutions.

These meetings generally take place after school, during the teachers' free time.

*What have been my aims?*

One of them is pedagogical and the other research-oriented:

- 1) To see if it is possible to drastically reduce the number of children who have difficulties in reading,
- 2) To try to understand why some children have so many difficulties in acquiring literacy.

These aims are NOT

- 1) To create THE method of teaching reading and writing able to definitively solve all problems,  
since I believe that teaching is an open and variable activity, dependant on the social environment, including local traditions and teachers' personality.
- 2) To generalize to an entire population something that was done locally,  
since action-research, for me, is an informal method of research and not a commercial or ideological product

### **What is the present state of this action-research?**

I'm not sure that the researcher himself is in the best position to explain what is most important in his work, but I will try. In spite of the fact that the contexts have changed superficially from time to time or from place to place, it seems necessary to state **some general principles** which could be said to have been constant from the beginning.

#### **General principles**

1. The main **decision maker** in learning to read and write in the school system is the child herself: she decides if she wants to become literate or not.

Unfortunately, this central actor is generally neglected or minimized by adults – whether teachers or parents or anyone else– with the exception of some of those who are in charge of remediation.

2. The **social and affective context** of the classroom is the second most important factor, for it conditions what happens at school.

Unfortunately, this factor is underestimated by research in reading which is strongly, if not exclusively, cognitively-oriented.

3. Written language is a language; in order to be learnt easily it should be taught naturally, which means in **communicative** situations.

Unfortunately, schools are very old institutions, filled with traditions, habits, rules and so on which are very **conventional and/or artificial**, even if it is difficult for an observer to be fully conscious of this feature.

4. On the cognitive side, **understanding** the nature and structure of written language is the first and most difficult problem to be solved by a child for it is the first time she meets such a complex system (with three distinct aspects: graphic, phonological, meaning).

**Learning** comes after. In fact, the relationship between understanding and learning is probably circular: a child, with what she has understood can learn something new, and, with what she has learnt, is able to understand something else, and so on. Cognitive clarity about written language is a necessity in order to acquire reading.

Unfortunately, at school, learning to read is generally seen something which can be learnt **directly**, and not after having understood what written language is and how it is constructed.

### **Pedagogical aspects**

*I will use the term “pedagogy” when I speak about aspects not specific to reading and writing, and the term “didactic” when specifically referring to reading and writing.*

The organization of the classroom is a fundamental issue if we accept that it is the foundation of what can happen in the learning process, to the extent that learning is a function

of the social context in which it occurs. So the first issue is that of classroom arrangement, since the seating plan of the students determines the social life of the classroom as a microcosm. Whatever the nature of the grouping, it determines the type of relationship among students and between students and teacher.

In our experimental classes, the core group is not the whole class as a single group, as in the dominant pedagogy, but groups of four students. For example, in a class of 24 students, there will be six groups of students. Moving from a class as one group of students to a class with several small groups is a social if not revolutionary change for many teachers.

### *Structure and implementation*

The first question is **who** will decide on the makeup of these groups: the teacher or the students? The choice could be totally free, i.e. decided by the students themselves, with changes occurring whenever desired, or it could be decided by the teacher alone. If we want to allow students to feel good at school, we have let them decide for themselves with whom they want to work, but we must also take into account the teacher's opinion, being the classroom manager.

Another issue is the choice of **criteria**. Academic level is one possible criterion – certainly the one preferred by teachers all over the world – but it isn't the only one, nor is it the most important one. We feel that affinities between children are more important and do not necessarily preclude academic criteria.

To respond to these two considerations we use a **sociometric test** designed to make it possible for the children to combine both affinity and responsibility in saying with whom any one individual wants to work.

On a **practical** level, to make up the groups, each child writes the names of three children with whom she would like to work (excluding the teacher —that isn't always easy! ☺), three names of children with whom she would *not* like to work, and the same thing for children with whom she would, and would not, like to play. Each child thus gives 12 responses. A computer program (developed in our research team) treats all the collected responses and proposes all possible groups, and the teacher then chooses which groups she prefers. In summary then, the groups are first made by the children and secondly —and definitively— finalized by the teacher based on her own criteria.

Finally, because affinity among children, as among adults, is a changing matter, the groups must be periodically reviewed. Once every two months seems to be a good rhythm.

Thus, the sociometric test is repeated several times a year, roughly once every two months, allowing the groups to be changed at will.

### *Operation*

How do the children in small groups and their teacher work?

- Each group is considered as a workshop. The class is organized into two kinds of workshops: one of them is a strategic workshop (with the teacher) and the others are autonomous workshops (without the teacher).

### *The strategic workshop*

The teacher presents a task which is **a problem to be solved**, then helps the children to discover what strategies would make it possible to do so. The task is generally reading a text never seen before or writing one, but in both cases, texts of a specifically defined nature.

#### 1. **On the social side,**

- the children work together to solve the problem, so that a strategic workshop works like a team in which each child is personally involved.
  - the teacher acts as an expert who plays **different roles**: she is in turn
    - a mediator between children and the problem to be solved (a guiding role in the teamwork)
    - a mediator between children (an arbitrating role)
    - an interlocutor when a particular child addresses her (a role in maintaining dialogue)
    - a source of information (a role of knowledge provider)
- ⇒ This form of teaching has the **advantage** of allowing the teacher to interact with all the children in one session, rather than with only a few as in a traditional classroom setting where the class is seen as one voice.

2. **On the cognitive side**, what happens in a strategic workshop is a discovery process, since the aim of the teacher is not for children to learn to read or write a particular unit – whether a word or anything else – in order to memorize it, but rather to help children

- understand by doing what reading or writing are
- discover which strategies can be used to successfully read and write

#### 3. **On the organizational side,**



- there is a **golden rule**: When the teacher works with a strategic group, she does not respond to the requests of children in the other groups and does not run from table to table as a "school waiter / waitress". The agreed rule is that "it is forbidden to seek help from the teacher when she is working with another group", so that she can devote herself entirely to the group with which she is involved.
- **After about a quarter of an hour**, the teacher moves to another group with the same task, and so on, so that she is able to work with all the groups during a period of an hour and half. One might think that she repeats the same thing six times, but in reality, an experienced teacher interacts differently in each case, depending on the children making up each group.

### *The autonomous workshops*

Before beginning the session, the teacher put a battery of different short worksheets (at least one for each child) on a bench or a table. There are several piles of worksheets, one per type of activity. The worksheets are different every day, and each one requires reading and writing. At the beginning of the school day, children in the autonomous groups choose their sheets (one at a time or several at the same time). This choice may be individual or several children can decide together on the same worksheets.

In an autonomous workshop, children deal with the problem corresponding to the sheet they have chosen, and work to solve it without the aid of the teacher. They can seek assistance from the other children in their group and/or use various personal or collective reference tools (texts read previously, alphabet...). Strategies to successfully perform the task have been encountered in earlier strategic workshops, so the activities in the autonomous workshops entail practice rather than discovery. Even if the task is individual work, children interact, but they are the ones who decide when, what and why. A student may choose, for example, the same worksheet as another and ask for help at one time or offer to compare her work with that of a fellow student. Interactions are thus neither prohibited (obligation to keep silent) nor compulsory (obligation to participate in group work), but are merely possible. In fact, extensive use is made of this opportunity, as can be observed from the level of noise in the classroom —more like a hive than on a playground. It is the natural noise of people working side by side.

Once the worksheets have been completed by students, they are put away in order to be examined by the teacher after class. They are neither assessed nor annotated, in order to

maintain the autonomous nature of the work done in the workshop. They simply give the teacher feedback on each child and on the whole class, as an aid in planning future activities.

Three features of this approach should be stressed:

- Complete freedom of choice: every student can take the worksheets that she wants;
  - Complete freedom of action: students are free to work on a card as long as they wish, can leave one to take another, choose an easier or more difficult one, etc. This freedom is facilitated by the total absence of control on the teacher's part before students choose worksheet, during the problem-solving activity, as well as after (no direct assessment of work).
  - To be effective the pedagogical material must **respect** several conditions: it must be attractive, offer a wide choice, and provide diversity (different levels, especially for the less advanced children).
- ⇒ This type of organization goes against the idea that all children should acquire the same skills in the same order —one determined by competent adults. It aims to respect individual differences, letting each child choose what she can understand or learn at her own level of development. This arrangement thus allows all children to progress at their own rate in their discovery of written language.

To summarize this approach in a few words, then, this type of organization is an equilibrium between the constraints of teaching and liberty in learning. One might feel that constraints are too strong or that there is too much liberty, but in the present-day French context, this type of organization represents the utmost limit to which such experimentation can be pushed.

## **Didactic aspects**

### *Children's literature*

The recent development of children's literature makes it easier to leave behind the school tradition which, since Antiquity, has introduced children to the written language through the grapho-phonetic code. Children's literature makes it possible to present the child with a whole range of language instead of one simply reduced to its grapho-phonetic aspects. It is with whole language that parents now talk to their children learning to speak, even if in

the past they frequently spoke “baby talk”. Accordingly, as far as can be judged, the development of children’s language is richer today than in past generations. We can only hope that the same dynamic will occur with written language.

The plentiful and often high quality children’s literature makes it possible to offer young readers texts whose narrative structure and cultural value can stimulate them more than the too often poor texts of primers.

### *Reading situations*

Children's literature constitutes the environment of the class with children aged 5 to 7. Three types of daily rituals, or situations, show how books can be made a permanent reference.

#### 1. Starting the class with a quarter of an hour of independent reading

In this situation, there are as many boxes of books as groups of children. These books come from the local library. Each group uses a different box every day. Children take books at their convenience, with one single instruction: "Read." Meanwhile, the teacher —this is crucial— also reads, since her example serves as a model.

This time allows the children to gradually and easily enter into their school work. It is a buffer zone between home and school.

It also lets them anticipate the pleasure of reading before actually being able to read, creating an opportunity for positive contact with books.

Between the ages of five and seven, the time devoted to independent reading passes gradually from reading images and individual worksheets in the beginning to later reading text and to shared reading activities.

#### 2. Continuing on with a quarter of an hour of reading by the teacher

A difficult text is chosen by the teacher in order to familiarize the child with demanding language, making this moment an introduction to future encounters with texts written in a language less accessible than the everyday spoken register.

The sequence ends with a brief discussion with the children to raise awareness of the basic criteria of the structure of narrative —who? where? when? what is the problem to solve? what are the different episodes? A final summary reflects the structure of the narrative, sometimes presented as a diagram. This collective building of the narrative schema constitutes preparation for future activities of reading and writing narrative texts.

### 3. Finding time for reading for pleasure

The purpose here is to read books to young children when there is free time, for example at the end of a half-day. This is another way to ensure that children can enjoy reading books.

Beyond these three daily rituals of reading, there can also be occasional readings of various other texts. Such is the case of the teacher who writes a text on the blackboard for silent reading by the children: birthday wishes, information for the class, narration of a dream or an upcoming event at school. The teacher may also provide a text (letter, newspaper, advertisement ...) that can give rise to a reading activity on an *ad hoc* discovery basis, with no subsequent work attached. This "reading to learn" helps children to understand some of the essential functions of reading.

All of these activities are intended particularly for children from disadvantaged social backgrounds in an effort to encourage cognitive clarity, to help see how reading is a life skill. They see the teacher as a reader. On other occasions, they will also see her as a writer.

#### *A basic book*

In addition to these rituals, accompanied more or less frequently by occasional readings, a carefully selected work of children's literature remains the basis for reading and writing activities for two to three weeks. This book should please the teacher just as much as it must appeal to the children. Moreover, it should always relate to situations and issues that are part of the children's world, such as relationships with parents, the world of animals, fear of sleeping, hating school, Christmas, etc. Librarians and booksellers are indispensable partners.

This book serves as a starting point for reading activities, without necessarily being the sole source. Indeed, from ages five to seven, children may be able to understand a book if an adult reads it, but may have difficulty reading it themselves for reasons of syntax and vocabulary. In other words, there may be a problem of readability. We can then distinguish two cases.

- If readability is not a problem, the text can be directly used as readable material.

- In other cases, when the language of the book seems too remote from the child for easy reading, a new text closer to the children's level, and with good clarity, is created. This new text then becomes the basis for subsequent reading and writing activities. This is referred to as the "reference text", and is particularly useful for children whose level of oral language is poor.

Note that, in general, it is always interesting to create a reference text with children of kindergarten age and the beginning of first grade, whereas, later, the text of the book can be read directly.

To take children's literature as a starting point is a bridge between the stimulating stories that were read to the children and the actual texts that they themselves have to work with.

### *Building a reference text*

The book is discovered page by page, beginning with its cover. The teacher explores the illustrations, asking the children to anticipate the narrative from them. She asks for different hypotheses, and finally reads the text. Her reading will validate some of the latter and invalidate others. It is another way to understand what is in a text and how it can be used.

When a significant segment of the book has been read in this way, there then comes a time of oral work. Children are invited to go beyond what appears in the text of the book and to imagine other things. For example if the character is a boy, one imagines, relying on the illustrations, where he lives, what he does, thinks, etc.. The teacher guides the discussion and writes down verbatim what has been said by the children.

In the evening, after school, alone or better still with other teachers, a text is written with the words that the children produced in class —a guarantee that the text will be readable by the students. Thus, the reference text is co-written by the children and the teacher. Simple but correct, it has maximum readability and provides a good basis for reading and writing; partly new, it also allows for discovery through reading. Finally, it also avoids the disadvantages of two other options:

- Using text from a book: written in literary language and often unreadable by the youngest children or children from disadvantaged families;
- Using a text dictated by children: if the text is already familiar to the children, true reading discovery is not possible.

The reference text built in this way has four to six sentences at the beginning, and is the basis for reading and writing activities over several days. The first activity is the reading discovery which takes place at the beginning of each class to allow students to get into the text and find what they need to carry out the practice activities on subsequent worksheets.

After a few days, another cycle begins: making hypotheses on the narrative from the illustrations, testing, complements to the narrative, developing a new reference text, reading discovery, reading and writing activities.

### An expository book

Based on the chosen work of children's literature, different types of texts (historical, geographical, biological, practical, etc...) are then open to explore. A theme is selected and, if possible, an expository book is chosen to be read. This context respects the principle that reading is knowing how to read everything, and therefore learning to read is also learning to read everything.

Using an expository book serves two purposes:

1. Not limiting the children to linear reading, which is suitable for narrative texts, but to help them acquire early on several reading behaviors, or the ability to read texts as diverse as possible, both in their structure and content.
2. Broadening the functions of reading. Limiting reading only to narrative texts can deprive children of the opportunity to understand that there are other reasons to read in addition to nourishing their imagination. In particular, they need to understand that one can also read to satisfy curiosity about the world and to thereby acquire knowledge. While children's literature targets imagination, informative books targets learning; this distinction is particularly important for children at risk.

### *Writing*

Writing is as important as reading, if not more in the action-research described here.

In a few words, writing is considered as

- A discovery, so it is a process of searching guided by the teacher
- A skill that should be social before being individual, so writing activities should be done collectively in the beginning
- A communicative activity, so writing always starts from a meaningful segment of language

- An activity which moves from oral to written language.

Practically speaking, with *preschool or first grade children*, a writing sequence works like this: in a small group with the teacher,

- a student says the text to be written aloud,
- the teacher then asks for the first word to be isolated ("It starts with what?"). To do that, three different situations are possible:

1. If the word is in a text which was read previously, the teacher asks questions to find out:

- the text
- the segment of the text where the word is to be found
- the word itself (a child reads the sentence to find the word)

Once the word has been identified,

- the teacher copies it where all the children in the small group can see it (a small blackboard, a large sheet of paper...);
- the word is then written down by the children

2. If the word itself has not yet been previously encountered, but a similar word is known,

- the process is the same to find the word
- analysis is carried out to isolate the common part between the desired word and the existing one.

Ex. writing => write; song => sing

NB This kind of exercise must be more an introduction to morphology than to phonology or to visual similarities, even if analyzing oral language and using inner speech are very important components.

3. If the word is not in any text or a similar one, its spelling is gradually discovered step by step through

- an analysis of its sound: segmentation of the oral form to discover a unit already encountered – a syllable or a shorter unit...– ("What do you hear in the beginning?")
- hypothesizing on what the written form for the segmented oral unit might be
- spelling of the unit.

NB The difficulty here for the child is focusing temporarily on the oral form rather than on the meaning.

Practically speaking, *with the oldest children* (aged seven), we can observe five steps:

### 1. Oral planning

- To frame the writing that to be produced in terms of meaningful communication: who is the writer? To whom does she want to write? What kind of writing?

- To sketch out the contents: what do we want to write, i.e. declaring verbally what we want to say

NB How to write it is another issue to be treated later.

### 2. Oral verbalization

The adult asks for different proposals, for comparisons among them, and finally writes what is agreed on by the students (on a blackboard or via more modern technological means).

NB The difficulty here for the teacher is not to correct what the students have said, but to write their proposals as they are made, without reformulating or transforming them, as long as they are syntactically acceptable. Consequently, the written text looks like a student's text.

The time spent on this is very important: the point is to lead children to engage spoken language in the act of writing, i.e. saying what is to be written before actually writing it. A young writer cannot produce a text without this prior verbalization time. Certain blocks in writing appear to result from skipping this essential step.

### 3. Critical reading

Each student reads "in his head" (inner speech) the text written on the board to identify what should be changed to improve the writing.

### 4. Rewriting (possibly the next day)

The teacher reads aloud one sentence after another, asks for changes, listens to proposed changes (substitutions, expansions, reductions, solutions to avoid rehearsals, terms ensuring logical or chronological cohesion...), acts as a referee, proposes herself what could be improved, rubs out what was written and replaces it with what was decided. Rewriting stops when the product appears to be a good adult example of the kind of text.

NB During this rewriting period, many reflective activities related to language take place which will hopefully be used later by children on individual writing tasks during autonomous workshops.

5. Individual writing (independent workshop): a collective writing session is followed by an independent writing session. Each child individually writes a text of the same kind as that which was written as a group.



NB This alternation of collective and individual writing should ensure that the child will be able to write not only collectively but individually. The collective writing should not create a dependency, but provide temporary scaffolding.

The didactic assumption underlying this approach is based on the socio-constructivist principle that a function appears twice, the first time outside a person's head, and the second inside her head, so that learning takes place in two stages: first with others, then alone.

## **Evaluations**

We tried many times to evaluate the pedagogical efficiency of this action-research, but have succeeded only recently, with three evaluations where it was possible to guarantee the necessary scientific rigor.

### *First evaluation*

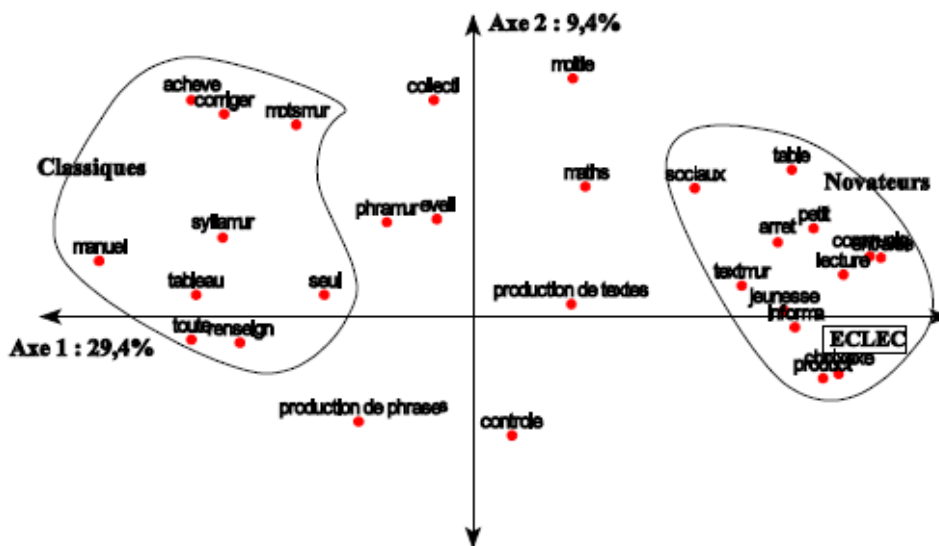
*Author: Le Bastard et Suchaud, 1999, IREDU (Institut de Recherche sur l'Economie de l'Education : Institute of Research in Educational Economics)*

*Field* : Schools from the France departments (administrative divisions) of the Aude and the Haute-Garonne

*Population*: 769 students between five and six years old.

- 19 experimental classes,
- 29 control classes

NB The two groups were constituted by the local pedagogical authorities and validated afterwards from responses by 48 teachers on a 29-item questionnaire on their ways of teaching reading and writing.



Factor analysis of the pedagogical behaviors of the 48 teachers

#### TRANDUCTIONS:

##### *Evaluation design:*

In order to evaluate the effects of the “Ecriture-Lecture” action-research project (ECLEC), students were tested in the beginning of the school year with a pre-reading test, a test of invented spelling, and a test of cognitive clarity.

At the end of the year they were tested by a reading test, a writing test (dictation), and a test of knowledge of the contents of a book.

Other variables were also taken into account (cf. Figure 2), including social, educational and demographic data on students, as well as their attitudes toward reading, writing, and school itself, as ascertained through a questionnaire for students, but also for their teachers and parents.

#### TRANDUCTIONS:

Student characteristics: social, demographic, educational

Initial evaluation: pre-reading test, cognitive clarity, invented spelling

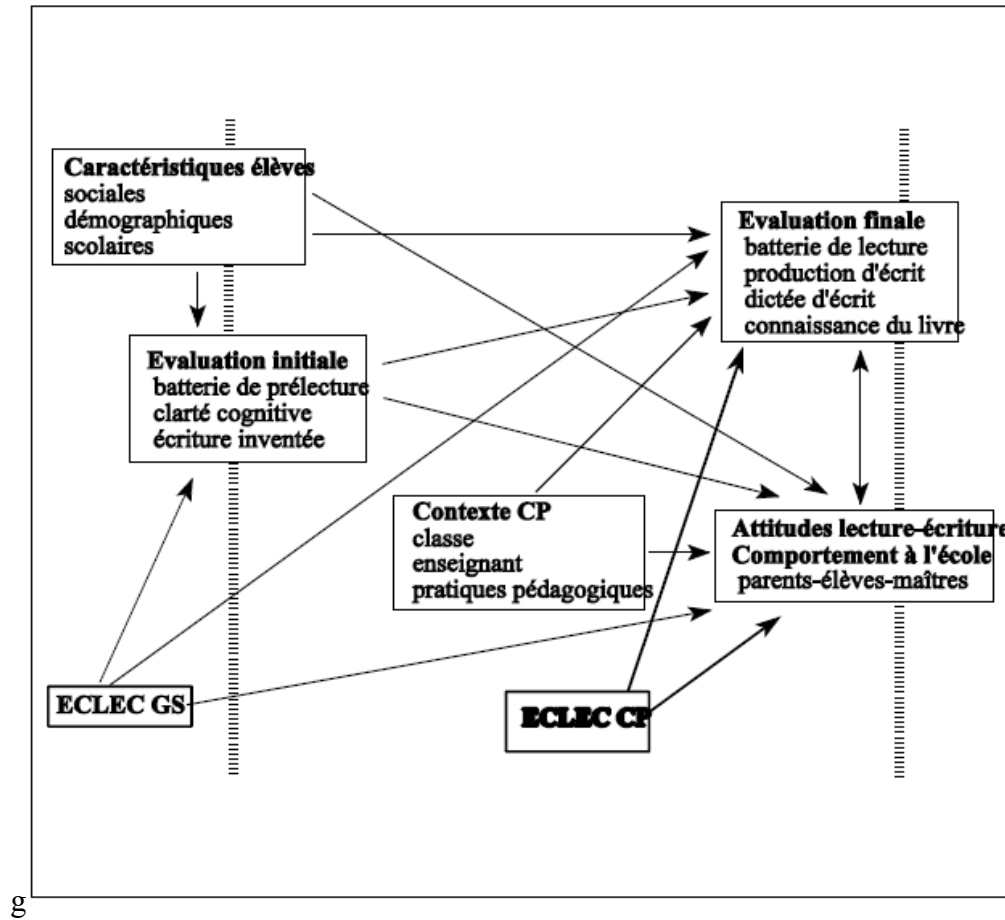
Final evaluation: reading test, writing test, (dictation), knowledge of a book

1<sup>st</sup> grade context: class, teacher, pedagogical practices

“GS” = kindergarten

Attitudes to reading-writing

School behavior (parents, students, teachers)



### *Analysis of results*

The statistical method used (multivariate model) reveals the effect of ECLEC for students of comparable individual characteristics (social, educational...) in comparable school contexts. Samples thus being assumed to be parallel, comparison of initial tests (evaluation in September) and final tests (evaluation in June) made it possible to measure students' progress during the first year of elementary school.

### *Main results*

The first issue was the influence of ECLEC in preschool children on achievement levels at the beginning of 1<sup>st</sup> grade. Analysis shows that students enrolled in preschool ECLEC reach 1<sup>st</sup> grade with stronger reading and writing skills than comparable students from "ordinary" schools. This is true in all areas of the initial assessment.

Secondly, the comprehensive analysis conducted in first grade shows that students of the experimental classes have, on average, greater increases in reading and writing than students in non-ECLEC classes. The magnitude of the effect of ECLEC on the progress of students is comparable to the gap which appears during 1<sup>st</sup> grade between children of unemployed fathers and those whose father has a middle-level job. The advantage of ECLEC is visible in specific areas of assessment in June, namely on the production of written text and knowledge of the contents of a book.

Beyond the average effect, which applies to all students, further analysis has shown that some students benefit more than others from ECLEC. These students are those who score the lowest in the evaluation in the beginning of 1<sup>st</sup> grade (these are students for whom the prediction of learning to read was the most uncertain).

Finally, the influence of teaching practices on the attitudes of pupils at the end of 1<sup>st</sup> grade (assessed by parents, teachers and students themselves) was tested. It should be noted that the attitudes of students appear to be quite independent of their results in reading and writing, as measured in study. The analysis suggests that students who were in ECLEC have, on average, more autonomous and more positive attitudes about learning to read and write and about school in general. Nevertheless, in the eyes of teachers and parents, no significant difference was observed in attitude between students in ECLEC classes and control classes.

## Conclusion

Even if the results revealed by this assessment of ECLEC are generally very positive, some questions need to be raised. One might regret that the first effects of ECLEC do not manifest themselves in all aspects of reading and writing. It should be remembered that in this study we have adopted a broad definition of reading and writing, and that the tests selected measured many aspects of learning, and in particular production and comprehension. Thus, there is no overall positive impact of ECLEC on progress in the sole test battery of reading, but nevertheless there is no negative impact. One might also regret that the influence of the positive ECLEC practices on the attitudes of students is perceived only by students and not by parents and teachers.

## *Second evaluation*

*Authors: Pasa et Ragano, 2002 (two researchers from my research group)*

*Field : Brive (a medium-sized town)*

*Population: 291 students:*

- ECLEC classes : 39 students (24 students from ZEP<sup>1</sup>, 15 non ZEP)
- Control group : 252 children (62 students from and 190 non PEA – Priority Educational Area –, different from PEA)

NB six teachers participated during three successive years in this action-research. One of the two schools was in a ZEP and the second school elsewhere. In each school there was one teacher for each grade (preschool, 1<sup>st</sup> grade, 2<sup>nd</sup> grade)

### *Evaluation design*

While the first study used tools developed by different researchers, the present evaluation used an official tool – a national evaluation of school performances designed by the Ministry of Education that all French students are submitted to every year to at the beginning of 3<sup>rd</sup> and 6<sup>th</sup> grades.

Different fields of competence are defined in that formal test:

- Reading: knowledge of the conventions of language (e.g. recognizing words, identifying different uses of typographical cues, identifying verbal tenses, connectors ...),
- Writing: knowledge of the conventions of language (e.g. copying, writing down a dictated text...)
- Mathematics

NB We will consider mathematics too, even if we are not involved in this field but as a measure of parallel assessment.

Beyond the kind of school (ZEP / non ZEP), other variables were taken into account: gender and length of schooling in the particular educational cycle (1, 2, or 3 years), since many children move from school to school, meaning that some of them spent only one year in ECLEC (the 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup>) while others spent two or three years.

### *Analysis of results*

If we compare the overall performance of ECLEC students to control students, it appears that, in both ZEP and non ZEP contexts, children in ECLEC perform better.

The differences in ZEP schools are stronger than those in non ZEP environments.

The detailed results, skill by skill, generally confirm these observations :

Competency	Non PEA	PEA
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<sup>1</sup> ZEP : Zone d'Education Prioritaire. : Educational Priority Zone (children from deprived areas)

	Control	ECLEC	Control	ECLEC
Reading ability: mastery of language conventions	72,5	80	65 ***	81
Writing ability: mastery of language conventions	76,2 **	86,2	75 ***	85
Reading ability: comprehending a text	72,5	76,2	65 ***	77,5
Writing ability: writing a text	72,5 **	87,5	63 ***	81
French (general mean)	72,5 *	80	68 ***	81
Mathematics (general mean)	72,5	77,5	64 ***	82,5

\*  $p < .10$       \*\*  $p < .05$       \*\*\*  $p < .01$

The comparisons between girls and boys are more complex to analyze, depending on pedagogical and sociological contexts. I will only underline that girls generally succeed better than boys in ECLEC and especially in PEA schools.

The number of years children spent in ECLEC appears to have a strong effect: the ECLEC effect, or the benefits a child can reap from being in ECLEC, is proportional to the time spent in this kind of class.

Means in function of the length of time spent in ECLEC classes

	1 year	2 years	3 years	
Reading ability: mastery of language conventions	62,5	78,8	88,8	***
Writing ability: mastery of language conventions	61,3	88,8	92,5	***
Reading ability: comprehending a text	66,3	71,3	85,0	**
Writing ability: writing a text	61,3	83,8	87,5	***
French (general mean)	62,5	78,8	87,5	***
Mathematics (general mean)	72,5	81,3	87,5	***

\*\*  $p < .05$       \*\*\*  $p < .01$

This second evaluation confirms the positive impact of ECLEC on students exposed to this approach. As in the preceding analysis, it has been found that this effect is greatest among “at risk” students (in PEA schools).

Moreover, two new aspects should be underlined,

- The benefits of the length of time of exposure
- Surprisingly, the parallel effect on mathematics

### *Third evaluation*

*Authors: Schroeder, 2005 (institutional evaluation by a district academic advisor)*

*Field : Castres (a medium-sized town)*

*Population:*

- ECLEC classes: 64 students (21 students in PEA; 43 non PEA).
- Control group: = the whole district : 458 students (21 in PEA; 394 non PEA)

NB Most of the children spent little time in ECLEC, so it was not possible to study the variable of length of exposure.

*Evaluation design*

As in the previous case, the present evaluation used the official tool – the national evaluation of school performances designed by the Ministry of Education that all French students are submitted to every year to at the beginning of 3<sup>rd</sup> and 6<sup>th</sup> grades.

Results also include evaluations of 3<sup>rd</sup> grade (CE2) in reading, writing and math.

*Main results*

- The general results show only a slight difference between the performance of students who followed the ECLEC approach and those in the control group: a difference of 1% in French and math. By competency, the only significant differences do not exceed 3% and relate to text production and reading tools, the ECLEC students scoring only slightly more higher.
- It should be noticed that the most significant and constant differences between ECLEC and control groups, as before, occur within the PEA context.

Means in French and Mathematics according to groups

	Général		non PEA		PEA	
	Control	ECLEC	Control	ECLEC	Control	ECLEC
Reading ability: language conventions	76,7	** 79,6	77,6	** 80,1	60	** 78,6

Writing ability: language conventions	69,7	69,7	71,0	**	66,8	46,8	**	75,5	
Reading ability: comprehending a text	74,6	74,4	75,6		74,6	55,9	**	74,1	
Writing ability: writing a text	62,5	**	64,2		64,1	63,2	33	**	66,3
French (general mean)	71,9	72,9	73,1		72,3	51	**	74,1	
Mathematics (general mean)	67,7	68,6	68,6		68,2	51,9	**	69,4	

\*\* p < .05

### *Conclusion*

In our opinion, the main results of these evaluations consistently show, despite certain differences, that

- 1) Students in ECLEC environments perform better than those in control classes
- 2) Students from low income and socially deprived families are those who benefit more from this approach.

From these recurrent results, two questions could be asked:

1) On the scientific side: How to explain these results ? I am not able to respond to this question because there are at least two explanations which are not mutually exclusive:

- either there is something intrinsically positive for students in this approach to learning; for example, learning is more interesting
- and/or the action-research context itself has a positive effect on teachers; for example, believing that “Yes, the students can”, or a stronger self investment in their work.

2) On the political side : Why are the French pedagogical authorities so unconcerned by these results, when at the same time they continuously repeat that learning to read is the main problem and that they are trying to find efficient solutions ?

But these are the subject of another conference...



