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CURRENT LITERATURE REVIEW IN EDUCATION

You are reading a literature review compiled by members of Veille & Analyses , a department of the French Institute of Education within the higher education institution ENS Lyon. We analyse research litterature and activities throughout scientific and institutional productions in education in order to map out key research trends on current topics and produce states of the art in the educational research field.

THE EFFECTS OF PEDAGOGICAL PRACTICES ON LEARNING

INTRODUCTION

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The purpose of this overview is to address the following question: Are some pedagogical practices more effective than others for developing students' ability to learn basic skills?

Before attempting to answer this question based on a review of the recent literature, it is important to begin with some definitions of key terms, since the meanings and uses of common terms vary in different research groups, countries, and research areas.

What does the term 'pedagogical practice' mean? Does the concept cover teaching practices, learning practices, or learning methods? What do we mean by 'effective'? To what extent should the notion of effective practice be associated with the concept of good practice? What indicators are used to assess the effectiveness of a given pedagogical practice? Is the impact on learning primarily dependent on an effective learning practice or an effective teacher? To what extent is it true to say that the impact of context justifies combining the effect of pedagogical practices with the teacher effect, the class effect or the school effect, not to mention the sociocultural or socioeconomic context (which will only be briefly alluded to in this study)?

What can we infer from pedagogical practices that are deemed to be effective? What are the underlying principles or objectives of research in this area? How is the quest for effectiveness justified? According to Dewey, "*a school that really educates is a school that offers many educational experiences [...] that promote the ability to learn from subsequent experiences*" (translated from Dewey; quoted by Meuret, 2009). Is the aim of education to develop social capital in a market system guided by international assessments?

Having presented a broad outline of different perspectives on the idea of effectiveness, the following pages present the results of studies of pedagogical practices that are deemed to foster learning in reading and writing.

THE IMPORTANCE OF PEDAGOGICAL PRACTICES

In 2003-2004, a survey was conducted in France to assess views on education as part of a national debate on education (*Débat national sur l'éducation*). The debate focused on one key question: how can we ensure the success of all students? Among other findings, the Thélot report based on this survey emphasized that student success (i.e. the end) required an improvement of pedagogical practices, student support and student assessment (i.e. the means) (Thélot, 2004).

"It goes without saying that not all pedagogical practices are equal [...]. It is important to identify and promote the most effective practices, i.e. practices that help students to achieve the desired learning outcomes as effectively as possible" (translated from Gauthier et al., 2004a).

At first glance, this statement might seem appealing to anyone with a sincere concern for students. However, other studies have cast doubt on the validity of this argument. The author, Clermont Gauthier, is a fervent advocate of 'effective pedagogical practices', a key concept derived from North American educational research. Other scholars in Britain, Belgium and elsewhere have significantly qualified or opposed this approach. The purpose of the following section is to present different approaches to this issue while keeping students and student learning as the main focal point.

THE DEBATE ON EDUCATIONAL EFFECTIVENESS

Normand (2005) examined the emergence of the concept of quality in education, noting that *"the question of quality in education emerged as a major issue in the political agenda in the early 1980s, first in the United States, then within the OECD"*. The OECD *"developed international educational indicators to compare the performance and quality of different educational systems in industrialized countries. Performance indicators, school, region or state rankings, and standardized tests eventually became the inevitable toolkit for assessing quality in education"* (translated from Normand, 2005). According to Keeley, this is precisely the issue raised by the constitution or reconstitution of human capital (Keeley, 2007). In its many reports on the well-being of nations, the quality of education and the role of human capital, the OECD has consistently argued that "the social effects of education are just as important as its economic effects". The OECD measures the impact and effectiveness of education based on PISA assessments (CERI, 2007) and emphasizes the possibility of over-qualification, i.e. the discrepancy between the level of training or qualification and the demands of the labor market, with higher education identified as the main culprit (CERI, 2001). The measurement of effectiveness is thus somewhat undermined.

According to the definition given by the OECD, human capital includes knowledge, qualifications, skills and other qualities that are conducive to personal, social and economic well-being (**Keeley**, 2007).

Educational effectiveness research (EER) is deeply rooted in the quest for standardization based on assessments, which are themselves standardized.

Another line of research focuses on the identification of factors of educational effectiveness (Dumay et Dupriez, 2009). The aim is to identify effective practices that affect the quality and quantity of student learning or to understand how practices are formed. *"In an educational context, effectiveness often refers to the evaluation of the quality of student learning or of the educational process itself"* (translated from Van Damme et al., 2009). Teacher effectiveness is defined as *"the power to achieve objectives that have a social value validated in the context of the work of the teacher and in particular (although not exclusively) the work that enables students to learn"* (translated from Campbell et al., 2003).

WHAT EFFECTS AND WHAT MEASUREMENTS?

The notion of educational effectiveness is faced with the classic problem of modelling the 'human'. To what extent is it possible to measure data that are often intangible or interdependent? What variable will be more relevant? Some models focus on the 'micro' level, i.e. the class level, while others, such as those used in *School Effectiveness Research*, focus instead on schools.

Once the main variable has been selected, the aim will be to determine the 'gross' or 'net' effect of practices. In the first case, student performance levels are compared in different learning environments irrespective of the initial characteristics of students. In the second case, a range of individual characteristics (previous level of knowledge) and collective characteristics (average class performance) are also assessed ●. Finally, models can be used to process hierarchized data, including *"multilevel random-effects models"* also known as *"hierarchical linear models"* (translated from Cusset, 2011). Hierarchization is defined as follows: the student is defined as level 1; students are grouped in classes (level 2); one or several teachers (level 3) work with these classes; and they all belong to a school (level 4). Multilevel models use variance ● to measure changes over time in a cohort of students, between schools, between students in the same class, etc. (van Damme et al., 2009).

In a review of the literature on the 'teacher effect', Cusset explained the difficulty of identifying specific factors that promote or foster learning. The measurement of the results of a given student in a test "*never* represent a perfect assessment", since a range of exogenous factors also need to be taken into account. If the aim is to measure progress, an initial test and an identical final test will need to be conducted – a method rarely observed in practice. Analytical models will therefore seek to compare the progress of students, classes, or schools. The analysis will calculate the dispersion around the mean values (standard deviation). However, since students are not distributed randomly in classes, the results will automatically be distorted (Cusset, 2011).

Many studies conducted in France between 1990 and 1999 examined the class effect, the school effect and the teacher effect. According to Cusset, the class effect and the school effect are relatively weak and significantly related to the teacher effect. Some studies have argued that the school effect is merely the sum of teacher effects, with effective schools employing highly effective teachers (Cusset, 2011). A synthesis of seventeen analyses conducted in the United States between 1971 and 2002 at different levels of primary education showed that between 7 and 21% of the variance in learning achievement among students can be attributed to the teacher effect, particularly at the beginning of primary education (Nye et al., 2004).

THE NORTH AMERICAN APPROACH ●

In 2004, Gauthier and colleagues at Université Laval (Québec) published a review of the literature on the relations between pedagogical interventions and the educational success of students from disadvantaged backgrounds (Gauthier et al., 2004b). In 2010, Bissonnette and colleagues conducted a review of recent research on the same issue and provided a mega-analysis ● (Bissonnette et al., 2010).

Based on the 'Follow Through' project, one of the first longitudinal studies in the field (involving 70,000 students from nursery schools and the first three years of primary education) initiated in 1968 by Lyndon Johnson, the North American approach adopted by Gauthier also refers to the work carried out by Slavin. According to Slavin, pedagogical practices need to be changed and reformed using evidence-based experiments. Slavin called on researchers in education to provide such evidence (Slavin, 2002). Studies of the effectiveness of educational practices

There are two types of net effects. Type A only includes the individual characteristics of students (for example gender). Type B takes into account individual characteristics, *"but also variations in terms of the composition of the groups of students within which the student learns' (for example the percentage of female students in each school)"* (translated from Van Damme et al., 2009).

In statistics, variance characterizes the dispersion of values around the mean.

"Funded by the Bill and Melinda Gates Foundation, and led by recognized experts from major American universities, the Measures of Effective Teaching project was launched in the United States in the autumn of 2009. Its aim is to improve the available information used to assess teacher effectiveness and to develop an effective measurement tool for identifying effective teachers and effective educational practices" (translated from Cusset, 2011).

"A mega-analysis is a synthesis of the results of different meta-analyses. The combined results can be used to compare and determine the most effective interventions in a given area or subject. A meta-analysis is a literature review based on a statistical technique used to quantify the results of several studies of the effect of a variable. The process of quantification of the effect of each study can be used to calculate the average effect of the examined variable in terms of standard deviation".(translated from Bissonnette et al., 2010).

in this area are part of Evidence-based research in education, which recommends the "*accumulation and systematic comparison of empirical research data on a given topic in order to identify 'good practices'*" (translated from Rey, 2006).

THE CONTROVERSIES SURROUNDING META-ANALYSES OF THE SCHOOL EFFECTIVENESS MODEL

Effectiveness research often refers to the notion of school effectiveness. In their mega-analysis, Bissonnette, Richard, Gauthier, and Bouchard provide an overview of the results of studies conducted on school effectiveness and effective teaching over the last twenty years. "*The results of different meta-analyses show that structured and directive teaching methods, such as explicit teaching ●, prioritize core subjects for students in difficulty*" (translated from Bissonnette et al., 2010). Based on the same premises, the CRIFPE team has argued that constructivist or socio-constructivist pedagogical methods are not conducive to learning in reading, mathematics and geography.

The analytical model used in this line of research was criticized by Gorard, who focused on the errors resulting from the chosen indicators and the adoption of these models by a number of governments. In particular, Gorard criticized the use of contextual value added (CVA) by the British government. CVA compares the results of two students with comparable circumstances and characteristics but attending different schools and measures the difference between their performance levels and the average performance levels in each school. According to Gorard, besides the iniquity of the model (because of the chosen method of statistical representation, half of the schools are below the determined threshold, even if the schools improve their performances), the results are marred by errors since the criteria (evaluations, tests at the start and end of the period of observation, etc.) are only partially met (Gorard, 2010).

Similarly, Felouzis showed the existence of 'sociological variance': schools with sociologically similar students will not necessarily have educationally equivalent students – a finding illustrated by working-class middle schools (*collèges*) in a *banlieue* (difficult suburb) of Bordeaux with higher results than predicted and vice versa (Felouzis, 2005 ; Maroy, 2009). According to Gorard, the British government used the contextual added value model to determine whether a given school is effective. Schools are discriminated against by inspections and parents, who tend to rely on the rankings and league tables published by the DCSF. Teachers and management teams in schools focus on the measurement of performance and not on differentiated instruction (Gorard, 2010). The methodological criticisms outlined by Gorard have resulted in a number of discussions and exchanges in preparation for the 2011 annual conference of the *British Educational Research Association (BERA)*.

Carette also criticized 'process-product' research (i.e. assessment of the quality of a process based on the 'generated' products). Standardized tests and the effects of teacher practices on educational results are based on a battery of assessments used to produce a general statistical model. They show the superiority of explicit teaching ● and exclude other effective practices because they are not validated by 'effective school' models, even when there is evidence to support their value (Carette, 2008).

Bissonnette, Richard, Gauthier and Bouchard defended the validity of their results based on the classification system defined by Ellis and Fouts in 1993 to evaluate research quality (Bissonette et al., 2010) :

– Level 1: basic research in education aimed at describing a phenomenon and analyzing the correlation between two variables. Level 1 studies cannot "*be used to establish causal links or to verify hypotheses*" (translated from

● Explicit teaching models *"belong to the 'instructionist' family. They all focus on teaching as opposed to less structured student-based models founded on learning through discovery"* (translated from Bressoux, 2007).

● Pedagogical practices are said to be effective when the teacher *"begins by reviewing the prerequisites, relates the subject of the day to previous learning and then addresses the new subject in stages. The teacher alternates between short presentations and questions. After the presentation, the teacher organizes structured exercises until all the students have been assessed and given feedback. This is followed by individual exercises carried out until students have reached the new learning objective independently'"* (translated from Rosenshine, 1986, quoted by Gauthier et al., 2005).

Ellis and Fouts, 2005);

- Level 2: experimental or quasi experimental research, implying that *"a model, a theory or a hypothesis, developed based on descriptive research (level 1), is the object of a test in class using experimental groups and witnesses"* (translated from Ellis and Fouts, 2005);

- Level 3: research *"aimed at evaluating the effects of recommended pedagogical interventions based on the results obtained by level 2 studies"*. This type of research has *"a lower degree of internal validity than level 2 research because of the inherent difficulties of variable control. However, their degree of external or ecological validity is higher given the size of the sample and the contexts within which such studies are conducted"* (translated from Ellis & Fouts, 2005).

According to the proponents of the effective school and explicit teaching models, the effectiveness of a pedagogical practice that is not the object of level 2 or level 3 research cannot be proven.

The Canadian Language and Literacy Research Network explains that *"the most advanced research incorporates the results of several studies (meta-analyses) conducted among thousands of students often over long periods (longitudinal studies). These studies, which can be described as high-quality, comply with strict standards for controlling subjectivity and bias. They are based on experimental designs that can be used as a basis for comparison. Reliable conclusions can only be drawn when the data from a significant number of experimental studies have been collected and compared"* (translated from Hawken, 2009).

THE INSTITUTIONAL USE OF META-ANALYSES

As an example, consider the case of the 'Pédagogie 2010' project developed by the Conseil Scolaire Francophone de la Colombie Britannique (Francophone Education Authority of British Columbia). The overall objective of the project is to promote the success of young French speakers in British Columbia in a context of minority education. The project has more specific aims linked to the cultural, community, pedagogical and technological context. Rejecting sociological research for its vagueness and imprecision (quoting Coleman, Jenck, and Bourdieu and Passeron), the Educational Council of British Columbia bases its policy-making on research "*that has successfully compared and measured the impact of different factors on the educational performance of students*" (level 2 and level 3 research; see above; quote translated). The authors of the report justify their reservations concerning differentiated, constructivist, cognitivist and cooperative instruction by underlining the failure of Canadian educational reforms based on such strategies. Based on the principle that "*untested innovations have been widely implemented, and at a great expense, then disappear as quickly as they appeared after the effects of their supposed virtues failed to materialize*" (translated), the educational council recommends using empirical research to validate the pedagogical innovations suggested by reformers before any attempt at widespread dissemination (Conseil Scolaire Francophone de la Colombie Britannique, 2006).

This preference contradicts the decision implied in the 2000 reform in Quebec, which privileged differentiated instruction, contested by Bissonnette et al. (Bissonnette, 2009). The analysis of effective pedagogical practices aimed at developing literacy in allophone students conducted by Richard (2008) will be examined in due course.

FRANCO-BELGIAN ANALYSES: CIRCUMSTANTIAL EFFECT AND PREDICTED PERFORMANCE

Besides the impact of individual or collective characteristics, a number of studies have examined the notion of differentiated teacher effectiveness (behaviors in class, representations, pedagogical methods, ethics, etc.). In other words: is a teacher effective in all circumstances?

Vause, Dupriez and Dumay used recent studies in educational effectiveness research to promote the notion of the differentiated impact of teacher practices. Muijs, Campbell, Kyriakides and Robinson showed that "*the climate of work and discipline in class, the real learning time, learning opportunities, the quality of teaching, the structured nature of learning, the feedback given to students and teachers' high expectations are all*

parameters that are conducive to learning" (translated from Campbell et al., 2003; 2004). Campbell added a differentiated dimension of teacher effectiveness that takes into account the characteristics of students or classes: "*Differences relating to intellectual or psychometric abilities, the level of prior knowledge, the sources of interest and motivation, the cognitive style and the socio-economic level of students must be taken into account in order to understand the impact (or lack of impact) of pedagogical practices*"(translated from Campbell et al., 2003 ; Vause et al., 2008).

Clanet, a member of the OPEN network (*Observatoire des Pratiques Enseignantes*, or Observatory of Teacher Practices) showed the importance of taking account of learning expectations to assess a given characteristic of teaching and education. Referring to Paquay, another member of the OPEN network, Clanet noted that "*teacher effectiveness cannot be examined in isolation from the nature of expected learning and that in this respect explicit teaching is not necessarily the best strategy*" (translated from Clanet, 2008). Carette also showed that, for complex learning or learning that calls on multiple skills, '"*effective teachers" deploy specific types of practices'* (translated from Carette, 2008).

In a review of a study by Bressoux on explicit teaching, Bourgeois explained that from his point of view as an educational psychologist, the structuring nature of explicit teaching has an undeniable cognitive effectiveness, but that other strategies, including learning through discovery, produce equally good results. In his view, there are no good or bad practices: 'there are [...] principles [...] that need to be complied with to ensure high-quality learning. However, there are also different ways of translating these principles into a practice, an intervention or a strategy' (translated from Bourgeois in Bressoux, 2007).

To assess the effectiveness of an educational practice, an assessment of learning (or, more precisely, an assessment of successful learning) is standard practice. In the 'process-product' approach, an effective teacher 'conducts assessments that reflect what has been learnt' in a similar way to international assessments – i.e. summative assessments. Formative assessment tends to be emphasized in more 'pedagogical' approaches (Carette, 2008).

> *"Formative assessment refers to frequent interactive assessments of student progress and learning aimed at identifying needs and adjusting teaching and learning accordingly. Teachers who use formative assessment methods and techniques are better prepared to respond to the diversity of student needs by differentiating and adapting their teaching to improve attainment levels and the equity of results."* (translated from CERI, 2008).

EFFECTIVENESS IN PRACTICE

Many studies have sought to identify the key factors that define effective education, effective practices and effective teachers. Examples include the UNESCO report by Scheerens (Scheerens, 2004), the expectations outlined in the report by Thélot following the *Débat sur l'Ecole* (Thelot, 2004), and many book-length studies or papers based on older typologies, such as the study by McBer (2000), referred to by Hattie (2009) or Anderson (2004). Hattie (2004) conducted the most important mega-analysis, providing a synthetic

overview of 50,000 studies and 800 meta-analyses.

MODELLING PROPOSALS ('WHAT WORKS')

The sheer quantity of data is perhaps not enough to overcome the reservations outlined above about a model that excludes or fails to define certain vague variables. However, research points to a number of common characteristics. ●

used: Scheerens, 2004 ; Rapport Thélot, 2004 ; Association canadienne d'éducation, Friesen, 2009 ; Teaching and Learning Research Programme, Pollard, 2010; John Hattie, 2009; McBer, 2000.

Factors linked to teacher personality and lesson structure

An effective teacher is a teacher with high expectations in terms of educational performance. He (she) is also someone who believes that the work required of students is worth the time and the effort. This commitment is apparent in teachers' attitudes toward students. Effective teachers show enthusiasm, give a positive sense of the educational dimension of learning, and have strong educational leadership, supervising the class continuously. In terms of class management, an effective teacher facilitates interdependent relationships in class to promote learning and to foster a strong learning culture, to create a positive learning environment in class, to facilitate peer learning, and to use emulation as a behavior management strategy. One of the main concerns of an effective teacher is to be reflective and purposeful in developing a form of learning that engages students intellectually and educationally. An effective teacher presents the subject clearly (structure and organization of teaching and learning) and gives precise instructions and explanations. Effective teachers emphasize the key aspects of the lesson, monitor understanding, and ask frequent questions. A typical lesson sequence will involve (for example) attractive, stimulating and relevant displays. An effective teacher adopts assessment practices that are clearly designed to improve student learning and to guide pedagogical decisions and actions: asking questions linked to the subject and open questions, providing useful and regular feedback, using students' answers to delve deeper into the subject, and providing support to students when they give the wrong answer.

Factors linked to the learning team, school organization and the community

Outside the classroom, a number of contextual factors can promote learning. Teachers, supervisors and support staff need to take an active part in the development of an ordered and structured climate in school. The aim is to promote consensus and cohesion among teachers and to develop cohesive pedagogical practices within motivated and stable teaching teams. However, teachers and support staff need to be aware that a school is also part of a wider community. It is important to ensure that parents are involved in the school and to collaborate with other educational partners.

Factors linked to global educational principles and content

To complete this overview of factors linked to teacher personality, groups of 'performance indicators' linked to educational values (long-term commitment to complying with the values of knowledge) or tending to improve or promote learning conditions more generally can be identified. For educational practices to be effective, they need to be supported by a political framework aimed primarily at learning and by a high-quality curriculum. The art of providing good education requires adapting pedagogical practices and learning times to the specific needs of students, to devise and implement adapted educational and monitoring practices, and to adapt learning times and pedagogical practices to the rate of student progress. In other words, pedagogical effectiveness is based on differentiation and personalization (practical classes, personalized support, etc.). Teaching and learning are not fixed or strictly formal, and the relevance of informal learning also needs to be acknowledged. Some models emphasize the need to promote learning opportunities and to favor individual and collective results. Education needs to be student-centred by encouraging independent learning, by recognizing the importance of previous experience and

learning, by promoting the active involvement of students and by considering that effective education means equipping students for life in the broadest sense of the term.
In 2007, Scheerens provided a new review of the literature on school and educational effectiveness. Based on the various models outlined above, the study by Scheerens produced mixed results on performance factors. The study showed that it is pointless to oppose any two educational strategies since meta-analyses have shown (for example) that directive teaching will be more effective and more beneficial in earlier years than at *collège* (middle school) but that a student-focused approach is generally more positive than a more formal teacher-led strategy. The study by Scheerens suggests several important points (by order of relevance): the importance of learning to learn; the importance of teacher personality (strong focus on students); the importance of a motivating approach to education; and the importance of a structured learning environment while privileging active learning methods and group learning (Scheerens, 2007).

WHAT LEARNING IS ASSESSED ?

In 2005, Carra and Reuter presented the results of a 5-year study conducted in a school using Freinet pedagogy. The key objectives of the school were to combat violence and poor results. The effects of the alternative pedagogical approach on behavior, responsibility and involvement in mathematical research were found to be positive (including over time) and were consistent with the initial expectations and objectives. In terms of subject performance, the authors found some degree of heterogeneity but recognized that there had been progress in a number of activities in literacy (reading and writing), mathematics and science. The authors emphasized the following points: students were easily able to engage in questioning (‘*relevant to students’*) and to show an ability for research and self-assessment (‘*allowing for the analysis of performance levels, identifying possible improvements and developing concern for ways of monitoring and assessing success in tasks*’). Students were also found to be comparatively less ‘*unsettled when faced with unusual tasks, situations or tests* [...] *(showing evidence of a high level of flexibility and a capacity to adapt*)’ and to be ‘*more serene in their relationships with adults with whom they are less familiar*’ (translated from Reuter and Carra, 2005).

Effective teaching in reading and writing

Research on literacy has yet to provide a clear and univocal view of pedagogical strategies ‘that work’. According to the International Reading Association, there is as yet no universal method for teaching reading effectively to all students. In 2000, the association defined a number of principles relating to Excellent Reading Teachers. The contribution of explicit teaching was noted by emphasizing the need for significant levels of interaction between teachers and students (think-alouds/talk-alouds) and a personalized response to student needs. ‘Excellent teachers’ understand the development of reading and writing and believe in the ability of every student to learn to read and write. They conduct regular assessments of student progress and link the process of literacy teaching to the prior knowledge of students. Excellent teachers are also familiar with a range of different reading methods and know how to put them to good use by combining them within an effective learning program. They use a range of texts and ressources while emphasizing both individual and group work. Finally, excellent teachers are good ‘coaches’ (support strategy). The study by Blair et al. aimed to explain how and why an effective reading strategy works, insisting on the assessment of the strengths and weaknesses of students, on the need to structure activities around explicit teaching, and on the need to maximize learning opportunities within the framework of ‘real’ reading tasks. Motivation, self-esteem, and high expectations were also identified as key factors (Blair et al., 2007).

A report conducted as part of the ‘National Strategy for Early Literacy’ in Canada (Jamieson, 2009) noted that "*teachers are able to make the process of learning how to read and write fun and interesting while improving the effectiveness of learning by*

incorporating teaching practices based on conclusive data drawn from research" [translated]. According to Slavin, 'using ability groups by mixing students from different years for reading results in a 0.44 change in standard deviation on the reading performance scale' (translated from *(*Van Damme et al., 2009).

In an assessment of the emphasis on differentiation in the Quebec system based on 'School effectiveness research', Gauthier et al. emphasized the key components of preventive practices in reading from nursery school to the third year of primary education as defined by the National Reading Panel: "*They involve explicit practices that promote learning or the development of phonological awareness, decoding skills, fluidity in the identification of words and in processing texts, comprehension strategies, vocabulary, spelling and writing skills*" (translated from Brodeur, 2008 ; quoted by Bissonnette et al., 2009).

Recent meta-analyses have examined learning strategies in textual comprehension, word recognition, phonemic awareness, and phonics (Bissonnette, 2010). These key reading skills (Gaussel et Feyfant, 2007) are the focus of an intervention toolkit produced by the Canadian Language and Literacy Research Network. The toolkit encourages teachers to make better use of research, and in particular of studies based on conclusive data. The need for regularly updated information must be combined with an assessment of the specific needs of students and the expertise of teachers. In its recommendations for reading, the guide emphasizes a number of preconditions of teacher knowledge and competence: "*an in-depth knowledge of language to provide explanations and models to students, and to assess them. This knowledge will also help teachers to recognize and understand the difficulties faced by students, enabling teachers to devise appropriate intervention strategies*" (translated from Hawken, 2009). Using the framework defined by the *Southwest Educational Development Laboratory* (SEDL), Hawken emphasized that oral comprehension and word recognition are equally important and interconnected. Teaching in reading and writing is more effective when they are combined rather than taught in isolation or sequentially (Hawken, 2009). The document also presents a number of practical learning situations based on explicit teaching, detailing (for example) the findings of research on written language awareness and the actions that teachers need to take in order to promote the (basic or specialized) skills that students need to develop.

Recent research on effective literacy learning practices reemphasizes the major principles that promote learning while specifying the major points relating to basic learning (Hawken, 2009 ; Pressley et al., 2001). ●

The Institute of Education Sciences (US Department of Education) has developed a database of knowledge and research on *'what works'* (based on a systematic assessment of the available evidence in support of recent research, programs or learning resources in literacy, mathematics, and science), on the development of language, and on behavior issues (What Works Clearinghouse).

General pedagogical principles

- To rethink teacher training, the support provided to teachers, and the professional development of teachers based on a sound knowledge of research in education;
- To begin learning at nursery school level;
- To ensure excellent class management based on positive consolidation and cooperation;
- To promote self-regulation (through planning, task supervision and self-assessment, students become actively involved in learning);
- To promote student and teacher engagement and motivation;
- To know how to assess and detect specific needs; to know what to do if a student needs further support;
- To make links between the different aspects of the curriculum (for example by incorporating literacy learning in all subjects);
- To use activities that reflect progress in learning and the links between different areas of learning.

Teaching practice

- To adopt a synthetic approach (grapheme/

phoneme) or analytic approach (word and word decomposition)

- To incorporate explicit teaching of grapheme-phoneme correspondences, integrated language activities, literature and writing activities;
- To practice multi-sensory learning aimed at making connections between what we see, what we hear, and what we feel;
- To use meta-cognitive strategies (summarizing what has been read, returning to the text to retrieve information, rereading parts of the text, etc.) and reciprocal teaching (knowing how to apply these strategies);
- Organizing learning support sequences (before, during and after reading);
- Providing pedagogical support;
- Performing tasks adapted to the skills of students (for example, students must be able to identify the words contained in a text based on the strategies and knowledge they have developed).

QUESTIONS

It is impossible to give a clear and definitive answer to the question raised at the beginning of this overview, namely: '*Are some pedagogical practices more effective than others for developing students' ability to learn basic skills?*'. Above all, it is difficult to provide an 'instruction manual' for developing good practices that might be universally applicable regardless of place or circumstance. Several sites (particularly in the US) provide toolkits. Many young teachers are keen to be given a miracle recipe to help them in their teaching. However, the conclusive data provided by meta-analyses are often undermined by the harsh reality of teaching practices and by important contextual factors. Similarly, in seeking to answer the question 'What works?', we should not forget that most practices, strategies and methods are not universally applicable. In presenting their findings, educational researchers working on the effects of teaching practices almost always raise the following question (or, if they do not, their readers certainly do): is an effective practice transferable ? Is it sustainable ? For example, Kostantopoulos established the existence of a cumulative teacher effect over several years. Using the data generated by the STAR project●, Kostantopoulos showed that teachers have a long-term impact on students at the beginning of education and that their impact gradually decreases after three or four years. In the long term, the teacher effect is more perceptible in literacy (reading) than in mathematics, despite the fact that in any given year, the teacher effect is greater in mathematics than in reading (Kostantopoulos, 2007). Based on the findings of the study by Kostantopoulos and a number of other studies on the long-term effectiveness of a given practice, Kane and Staiger identified the factors accounting for this decrease in the two years following good results in tests. Is it because students forget what they have learnt or that teachers concentrate on achieving the best possible results in assessments? The implication is that 'value added estimates measure something that is transitory rather than real learning' (translated from Kane and Staiger, 2008). Kane and Staiger remain optimistic, adding that other indicators can show the sustainability of an effective practice, when successful learning spreads to other students through peer effects.

Since the major concern was learning success (i.e. successful learning outcomes), a literature review of effective practices could have examined the many studies that have focused on struggling students (integration difficulties, learning difficulties, students from underprivileged backgrounds, and students with disabilities). This overview is merely a first stage of a broader project aimed at offering a comprehensive overview of pedagogical models that promote learning.

This brief overview of effective pedagogical practices concludes with a quotation from Verhoeven: "*is effectiveness a legitimate objective in education? More specifically, 'the question* [...] *is to know whether the renewed interest in effectiveness results in greater justice and equity in social groups*" (translated from Verhoeven, 2009).

● The Star project (Student Teacher Achievement Ratio) was an experimental study conducted in Tennessee between 1985 and 1989. The study examined 7,000 students and 329 classes over a 4-year period. The idea was to use a random distribution of students and teachers. One of the most significant results was that a reduction in class size to fifteen students per teacher in the early years of education was found to promote learning and to increase educational success rates. This reduction is particularly beneficial for ethnic minority students and students from disadvantaged backgrounds.

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