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Origine et nature de l'enseignement explicite

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L'enseignement explicite :

une approche pédagogique efficace pour favoriser la réussite du plus grand nombre

Explicit Instruction

A model elaborated from research on classroom instruction and validated by research on human cognitive processing

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His research focused on teaching effectiveness and cognitive strategies. He developed the model of explicit teaching on the basis of effective teaching strategies highlighted by research.

by ***Barak Rosenshine***

This article presents the scientific basis of explicit teaching. This is the original version of the preface to the book "*Enseignement explicite et réussite des élèves. La gestion des apprentissages* (Gauthier, Bissonnette & Richard, 2013) generously written in 2012 by Professor Barak Rosenshine from the University of Illinois at Urbana-Champaign. At the time, he was already very old and we learned his passing a few years later in 2017. This article, presumably his last contribution, is a tribute to the one who inspired us so much.

Marie Bocquillon, Clermont Gauthier et Steve Bissonnette

The modern era of research on teaching began in the 1950's with the pioneering work of Donald Medley and Harold Mitzel (1963), Ned Flannders (1960), Arno Bellack (1966) and N.L. Gage (1963). These pioneers, and the researchers who followed them attempted to identify the instructional procedures used by the most successful teachers. Their research found that when successful teachers taught new material to their students, they used some of the following instructional procedures :

- Begin a lesson with a short review of previous learning.
- Present new material in small steps with student practice after each step.
- Guide students as they begin to practice.
- Think aloud and model steps.
- Require active and successful participation from all students.
- Give clear and detailed instructions and explanations.
- Ask a large number of questions and check students for understanding.
- Provide models of worked-out problems.
- Ask students to explain what they had learned.
- Check responses of all students.
- Provide many examples.
- Re-teach material when necessary
- Prepare students for seatwork
- Monitor students when they begin independent work.

The major components include teaching in small steps with student practice after each step, guiding students during initial practice, and providing all students with a high level of successful practice.
These procedures are relevant for teaching mathematical procedures and computations, reading decoding, science facts and concepts, social studies facts and concepts, map skills, grammatical concepts and rules, and foreign language vocabulary and grammar. These procedures have also been used, with modifications, to teach students complex cognitive skills such as writing essays, reading comprehension, and problem solving in mathematics. In these cases, students are provided with "scaffolds" and other techniques that support the student and reduce the difficulty of the task (Rosenshine and Meister, 1992).

Explicit teaching, systematic instruction, direct instruction, and similar terms.

Gage (1978) referred to these studies as research on "teacher effectiveness." Medley and Mitzel (1963) referred to the same research as "process-product research" because of the emphasis on conducting correlations in these studies. Brophy and Good (1985) used the title "teacher effects." McDonald and Elias (1976) looked at pattern of the results in one of their studies and wrote that the successful teachers used a pattern that they called "direct instruction," a term which Rosenshine (1976) began to use extensively. Unfortunately, the term direct instruction is confusing today because today the term is used to refer to both to the specific findings of the teacher effects research and also to any teacher-led instruction. There is no way to avoid this problem because many educators who use the term direct instruction are not aware of the many meanings this term has. Others have used the term "explicit teaching" to refer to the same pattern. Katz (1994) introduced the term "systematic instruction" to describe the findings of the teacher effects research, and uses that term to refer to the explicit sequence of instruction and the emphasis upon providing guided practice.
So we're left with confusion and a reader needs to pay particular attention to how these terms are being used. One author's use of a term such as explicit instruction may be quite different from another author's use of the same term.

The fit between research on classroom instruction and research on human cognitive processing.

New material needs to be processed in order to transfer it from our working memory to our long term memory where it is stored and used. Unless we elaborate on, review, and rehearse the new material there is a good chance that the new material will not be retained. Thus, the importance of active participation in classrooms emerged from the need to help students process and elaborate new material. As Brown and Campione (1986) put it : "*Understanding is more likely to occur when a student is required to explain, elaborate, or defend his or her position to others ; the burden of explanation is often the push needed to make him or her evaluate, integrate, and elaborate knowledge in new ways*" (p. 1066).
A major difference between an expert and a novice is that the expert's knowledge structure has a larger number of knowledge items, the expert has more connections between the items, the links between the connections are stronger, and the structure is better organized. A novice, on the other hand, is unable to see these patterns, and often ignores them.
The need for practice is also rooted in research on human processing. Chase and Chi (1980), who have studied how expertise is acquired, wrote :

> *The most obvious answer is practice, thousands of hours of practice... For the most part, practice is by far the best predictor of performance. Practice can produce two kinds of knowledge ... a storage of patterns and a set of strategies or procedures that can act on the patterns.* (p. 12).

En bref

Cet article présente les recherches ayant permis d'élaborer l'enseignement explicite. Il s'agit de la version originale de la préface de l'ouvrage intitulé *Enseignement explicite et réussite des élèves. La gestion des apprentissages* (Gauthier, Bissonnette & Richard, 2013) généreusement rédigée en 2012 par le professeur Barak Rosenshine de l'Université de l'Illinois à Urbana-Champaign. À l'époque, il était déjà d'un âge très avancé et c'est quelques années plus tard, en 2017, que nous avons appris son décès. Cet article, vraisemblablement sa dernière contribution, se veut un hommage à celui qui nous a tant inspiré.

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The art of teaching

Gage (1978) has noted that these general principles represent "*the scientific basis for the art of teaching*". Gage notes that a good deal of art is needed to translate this material into specific lessons. Teachers have to make decisions on the amount of material that will be presented at one time, the way in which it will be presented, how guided practice will be conducted, how specific errors made by specific students will be corrected, the pace and length of the lesson, and how they will work with different students. A great deal of thought, creativity, and flexibility is also needed to apply the results from the research on teacher effects to specific instances of teaching lessons on long division, on grammar, and on reading comprehension.

All teachers use some of these functions some of the time. These findings, after all, came from the study of observed classroom instruction. But the differences between the more effective and the less effective teachers were in how they used these functions. It was found that effective teachers apply these instructional procedures consistently and systematically, while the less effective teachers use each function less effectively.

Conclusion

The research on human cognitive architecture suggests that it is important for the teacher to provide "instructional support" when teaching students new material (see Tobias, 1982). Such support occurs when the teacher : (1) breaks material into small steps in order to reduce possible confusion ; (2) structures the learning by giving an overview or an outline ; (3) gives the learner active practice in each step in order to move the new learning into long-term memory ; and (4) provides for additional practice and overlearning so that the learners can use the new material or skills effortlessly. After the presentation, the teacher guides the students as they practice the new skill and continues this guidance until all students have been checked and received feedback. Guided practice is followed by independent practice, which is continued until students can perform the new skill independently and fluently.

Instruction in new material begins with full teacher control and the teacher diminishes control through the lesson so that at the end students are working independently. But the progression is done in a systematic and supportive manner. This progression moves from teacher modeling, through guided practice using prompts and cues, to independent and fluent performance by the students. But at each step there is a need to monitor student learning, guide student practice, and provide additional support when they need it.

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