MINISTÈRE
DE L'ÉDUCATION
NATIONALE
ET DE LA JEUNESSE
Liberté
Égalité
Fraternité

Conseil scientifique
de l'éducation nationale

EXPLICIT INSTRUCTION: WHAT IS IT? WHY DOES IT WORK? AND UNDER WHAT CONDITIONS?

Summary of research and recommendations

Text written by Pascal Bressoux,
Professor at Grenoble Alpes University

Abstract

Explicit instruction is often misunderstood and sometimes even criticized. Yet it bears little resemblance to traditional teaching. It refers to a structured form of instruction in which the teacher's activity—essential to the process—aims, through clear explanations, demonstrations, and guided practice, to promote students' active engagement and a deeper understanding of the learning content.

A large body of scientific research has demonstrated the effectiveness of explicit instruction in the learning of new concepts, across diverse student populations and subject areas. Explicit instruction can also focus on the teaching of strategies for completing loosely structured (complex) tasks, as well as on more general strategies such as learning how to plan, monitor, and evaluate one's own work, thereby fostering students' metacognition and self-regulation. In short, explicit instruction clearly has its place within teachers' repertoire of instructional practices.

a Text written by Pascal Bressoux, Professor of Education science at Grenoble Alpes University, with contributions from Liliane Sprenger-Charolles, Marie Bocquillon and Marc Demeuse.

Table of contents

Introduction

Explicit instruction emerged from research on instructional effectiveness. It was therefore not conceived a priori as a method, nor deduced from a theory. Rather, it is the synthesis of a large body of observations and experiments that identified factors associated with improved student achievement and organized them into a coherent set of instructional practices (Rosenshine, 2009).[1] This does not mean, however, that explicit instruction lacks theoretical support. On the contrary, many elements associated with explicit instruction have been theoretically justified, particularly in relation to the architecture of human cognition (the role of working and long-term memory, the functioning of attention, the need for active engagement, the role of the consolidation of learning, etc.).

In essence, "explicit instruction is characterized by a series of supports or scaffolds through which students are guided throughout the learning process, by means of clear statements about the objective and the reasons for learning the new skill, clear explanations and demonstrations of the content to be acquired, and guided practice with feedback until independent mastery is achieved." (Archer & Hughes, 2011, p. 1)[2]

Explicit instruction does not constitute a single rigid model but rather an arrangement of pedagogical practices based on shared principles that structure the design and monitoring of lessons (Hughes et al., 2017):[3] providing clear learning objectives; breaking down complex skills; proceeding through precise steps, each of which must be mastered before moving on to the next; providing students with clear descriptions and demonstrations of the concepts to be acquired through modelling and think-aloud; promoting active student engagement through frequent questioning; multiplying opportunities for students to interact with the teacher and receive feedback; ensuring intensive and repeated practice of the targeted concepts; and so on.[b]

Several instructional approaches have been developed that follow these principles, and the terminology used to describe them therefore varies and can sometimes lead to confusion. The expression explicit instruction is often associated with the terms instructionist approach, direct instruction, or Direct Instruction (capitalized). In the latter case, the term refers to the DISTAR program initiated by Engelmann, which later underwent several developments (Engelmann & Carnine, 1991).[4] While this program shares the principles of explicit instruction, it also includes its own curriculum and dedicated instructional materials.[c] The Success for All program is also frequently associated with explicit instruction (Bocquillon, Gauthier, Bissonnette & Derobertmasure, 2020),[5] with a particular emphasis on cooperative learning.

b It is therefore not enough to improve the explicitness of instructions to achieve explicit instruction.

c In the United States (and in many other countries), there is no national curriculum, but rather curricula by state or region, which provide guidelines that are then implemented at the local level (local authorities, schools) and therefore allow for the development of specific curricula. Obviously, this does not happen in countries with a national curriculum, such as France.

1. What explicit instruction is not

In order to define explicit instruction as clearly as possible, it is first necessary to delineate its contours by determining what it is not, thereby dispelling the frequent misunderstandings and misconceptions surrounding this term.

Explicit instruction is not "traditional" or lecture-based teaching; it is not frontal, nor does it lead to passive learning on the part of students. It is not "traditional" or lecture-based in the sense that it is not centered on the transmission of knowledge in the form of a teacher's monologue (Gauthier, Bissonnette & Richard, 2013).[6] Such a mode of instruction is found mainly in higher education and may indeed be described as "traditional" in our universities' lecture halls. Although explicit instruction does involve an acknowledged component of content transmission, in the sense of direct teaching, this represents only a small fraction of the time devoted to a lesson. Moreover, teachers devote a large part of their activity to checking students' understanding, which implies engaging in numerous exchanges with them. Furthermore, explicit instruction is not purely frontal in that it is compatible with all the "modern" forms of classroom organization and management, whether group work, pair work, collaborative work, and so on. There is therefore no injunction to adopt a rigid format in which the teacher teaches alone in front of the entire class.

Finally, explicit instruction does not imply a passive conception of the student's role. As Martella, Klahr, and Li (2020) point out, "a common misinterpretation is that active learning is antagonistic to direct instruction, under the assumption that direct instruction applies only to lecture methods and is entirely teacher-based" (p. 1,583).[7] On the contrary, explicit instruction is strongly focused on the active engagement of students in their learning. Indeed, teachers constantly solicit students' participation and reflection: they question them, encourage them to generate hypotheses, and provide appropriate feedback so that students can revise their own understanding of the learning content. Above all, explicit instruction requires intensive practice of the concepts to be acquired on the part of students. As a result, most of each lesson is devoted to students' active practice of the target concept.

Explicit instruction has sometimes been described as a "teacher-centered" approach, whereas other approaches—emphasizing discovery and the construction of knowledge by students themselves—are described as "student-centered." In reality, these labels were largely coined by proponents of the latter approaches in order to promote their own perspective ("our approach is concerned with students") at the expense of others that would supposedly reflect the teacher's goodwill, rigidity, and omnipotence. However, this characterization bears little resemblance to what actually happens in classrooms. Archer and Hughes (2011) argue, on the contrary, that explicit teaching is indeed student-centered, because teachers base their decisions on students' needs and on their progress in mastering the content to be learned. These decisions are themselves informed by knowledge about how students learn and about the skills they need to acquire in order to progress in mastering a given competence. This has nothing to do with a rigid adherence to supposedly "teacher-centered" techniques.

---

d Admittedly, it is difficult to define precisely what this term covers, as it tends to function more as a label of rejection than as a definition of a specific form of teaching.

e Active engagement involves generating hypotheses or mental models, reformulating ideas in one's own words or in thoughts that make sense to oneself, and so on (Dehaene, 2018). What is at stake here is indeed cognition. Being cognitively active does not necessarily mean displaying active behaviour, even though the two may be related.

2. The fundamentals of explicit instruction

An active conception of the teacher's role

Explicit instruction is grounded in an active conception of the teacher's role. Hattie (2022) emphasizes that, from the teacher's perspective, explicit instruction means entering the classroom knowing that he or she is the driver of change[f]. This stands in contrast to a widely held view in which the teacher is seen merely as a facilitator: "What I find is that teachers who enter the classroom knowing they are the agents of change are more likely to be successful than those who go in thinking they are a guide on the side."[8–9]

The teacher therefore takes the lead: teaching, supervising, questioning, and providing feedback. Teachers constantly engage students and check their level of understanding. In their review of research on instructional effectiveness, Muijs et al. (2014) note that there is a substantial amount of teacher talk in the classrooms of effective teachers, while specifying that this talk primarily involves questioning and providing feedback rather than delivering long lectures.[10]

Reflection on the content to be taught and its structuring (task analysis)

Explicit instruction is based on the idea that learning should progress from simple to complex. This involves identifying in advance the steps necessary for mastering a concept by determining the different skills involved. The competency or knowledge to be acquired is divided into subcomponents that are taught explicitly. For example, developing scientific experimental reasoning requires, among other things, understanding the concept of control of variables (i.e., varying only one variable at a time to ensure that it is indeed that variable—and not another—that causes changes in the observed phenomenon, all other things being equal). This skill must therefore be taught explicitly (Martella & Klahr, 2020).

Regarding problem-solving, rather than treating it as a general competence that can only be developed holistically, it is possible to identify its constituent elements, stages, or heuristics and teach them explicitly. For instance, teachers may use heuristics identified by Polya (1945)[11] such as analogy (e.g., "Can you find a problem analogous to yours and solve it?") or generalization (e.g., "Can you find a more general problem than yours?"), and so forth.

More generally, teaching content explicitly rather than implicitly refers to the specificity of learning and incorporates the idea that the proposed instructional activity will be explicitly focused on acquiring a specific piece of knowledge (Connor, Morrison & Slominski, 2006).[12] This means aligning a particular activity with a particular learning objective. For example, learning nursery rhymes does not constitute explicit instruction in phonological awareness, unlike exercises involving the deletion of initial or final phonemes in words. However, it could become explicit instruction in rhyming if the teacher deliberately structures the lesson around poetic forms. Likewise, asking comprehension questions about a text does not in itself constitute explicit instruction in reading comprehension, which would instead require the specific teaching of the component skills underlying that competence (see below).

f « Explicit instruction is you go into the room knowing that you are the change agent » (Hattie, 2022)

Explicit instruction therefore does not mean "learning incidentally" or learning through mere immersion. Of course, the ultimate goal remains the mastery of higher-order competencies. Once mastered, the elements learned separately are synthesized and applied to broader practice. Thus, for an athlete, practicing a specific movement only makes sense if it can later be reinvested in the overall practice of the sport and contribute to performance. Similarly, students must transfer their specifically acquired knowledge to complex, transfer-oriented, and "authentic" tasks that require the use and coordination of the elements learned. Moreover, the completion of such complex activities is greatly facilitated when the necessary subskills have been previously automated, thereby freeing cognitive resources for the task at hand.

A way of structuring teaching sessions

"Explicit instruction refers to a set of teacher-led approaches focused on teacher demonstration followed by guided practice and independent practice" (Education Endowment Foundation, 2022).[13] Five main phases can be distinguished in the course of a session.

The first phase is the session opening. The teacher clarifies the learning objectives and draws students' attention to the essential concepts to be mastered so that they can keep a goal in mind and focus their attention on the key elements of the intended learning. Students are thus better able to select relevant information and inhibit irrelevant information. This process helps direct students' attention, which has the dual benefit of limiting the amount of information that must be held in working memory and facilitating transfer to long-term memory. Memory is in fact a set of systems that project information into the future (Dehaene, 2018).[14] In other words, the brain retains what it anticipates will be important in the future. During the opening phase, the teacher also activates relevant prior knowledge, which facilitates connections between previously learned information and new material. The aim is to create an intensive learning moment: rather than simply asking, "Do you remember X?", the teacher questions students more thoroughly: "Tell me what we studied last time," "What was important to remember?", "How was X related to Y?", "Can someone clarify what your classmate just said?", and so on.

The second phase, known as modelling ("I do"), is when the teacher demonstrates the learning content and presents the essential concepts to be learned. The teacher provides examples and counterexamples that help students identify the defining features of the concept. Clarity of explanation is essential, and teachers should avoid digressions while exploring the concept in a way that is thorough, precise, and concise. Teachers perform a task in front of students while describing what they are doing as they do it—"thinking aloud." This phase typically involves extensive use of worked examples. During this stage, teachers may also ask students to demonstrate in turn or to assist in the demonstration process: "What should I do next?" (Gauthier, Bissonnette & Richard, 2013).

The third phase is guided practice ("We do together"). The goal of this phase is for students to deepen their understanding of the learning content and practice it collectively (sometimes in teams). Formats may vary (oral responses, draft work, mini-whiteboards, board work, reciprocal teaching, etc.). During this phase, the teacher provides strong direction and support. Teachers continually question students, provide systematic feedback, and ensure that students progressively master the concept. Here again, the teacher's guidance is precise and deliberate: checking understanding does not simply mean asking, "Is everything clear?" or "Does everyone understand?" Rather, it involves genuinely verifying comprehension through prompts such as: "Can you repeat that in your own words?", "Why is your classmate's answer correct?", "Explain how you arrived at that solution," and so forth (Bocquillon, 2020; Bocquillon, Derobertmasure & Demeuse, 2021).[15–16] Teachers interact with students while also encouraging students to interact with one another.

The fourth phase is independent practice ("You do alone"). Students complete exercises individually or in groups without direct teacher assistance. This phase is introduced only once the teacher has ensured during the previous stage that the vast majority of students have achieved a satisfactory level of understanding. Independent practice enables students to assess their own level of understanding and provides substantial practice, which improves fluency and promotes automaticity. Although these exercises are intended to be completed without teacher assistance, this does not mean that teachers never intervene in practice. Teachers continue to supervise the activity, circulate around the classroom, check on students, and, if necessary, provide brief additional explanations.

The fifth and final phase is lesson closure, during which the teacher summarizes—possibly with students' assistance—the key points to remember, briefly announces the next lesson, and assigns homework. This homework further consolidates learning and promotes automaticity. Homework always involves reinvesting knowledge that has already been learned and mastered in class and is designed to avoid increasing inequalities between students.

Throughout each session, maintaining a brisk pace of instruction is recommended. This may seem surprising, since time is obviously necessary for learning and especially for the acquisition of deep knowledge. Paradoxically, this is precisely why a brisk pace is beneficial: it optimizes instructional time. A rapid pace applies to the session as a whole, which must be carefully calibrated in terms of the content taught. This allows instruction to proceed efficiently because explanations can remain concise (particularly during the modelling phase) and students are not overwhelmed by excessive information to be assimilated at once. Naturally, this must not come at the expense of deep learning; teachers must allow sufficient time for students to reflect and fully grasp the concept, but never at such a slow pace that students become disengaged (Archer & Hughes, 2011). Moreover, competencies develop over a series of lessons and are rarely mastered in a single session.

One of the features that distinguishes explicit instruction from other forms of teaching is that it incorporates, throughout all its phases (review of prior learning, modelling, guided practice, independent practice, and revision), the need for overlearning[g], which continues to strengthen understanding, automaticity, and long-term retention.

3. Structured tasks and ill-structured tasks

Explicit instruction was initially associated with the teaching of so-called structured tasks, that is, tasks that can largely be solved through the application of "algorithms": implementing procedural techniques in mathematics, mastering grapheme–phoneme correspondences or grammar rules, converting a topographic map into a relief graph, and so on.[h] [17–19]

However, explicit instruction has also proven effective for ill-structured tasks, which are complex, cannot be broken down into a clearly defined set of well-identified skills, and cannot be solved through the application of a predetermined "algorithm." These include understanding a text, writing an essay, solving an open-ended mathematics problem, etc. In such cases, explicit instruction involves teaching the constituent elements of these tasks so that they can later be used as strategies when performing them.

g The beneficial effect of which has been demonstrated many times.
h It is undoubtedly important to note here that, on this point, there is broad agreement in the scientific literature on the greater effectiveness of explicit teaching compared to less guided, discovery-based forms of teaching discovery, including among authors who otherwise advocate "constructivist" forms of teaching (Jonassen, 2009; Schmidt et al., 2007; Spiro & DeShryver, 2009)..

For example, text comprehension is a complex activity that cannot be reduced to the application of a predefined algorithm. Nevertheless, the elements that constitute particular difficulties—or key points—in comprehension are well known. Rather than merely asking comprehension questions in the hope that this will implicitly foster a general reading comprehension ability, teachers can explicitly teach specific comprehension strategies (Rosenshine & Meister, 1997; Rosenshine, Meister & Chapman, 1996).[20-21] To do so, teachers focus on these specific difficulties or key aspects.

For instance, teachers may work on anaphora (pronominal reference: "Léa is taller than Lucas; she is also older"), or on connectors that mark temporal (before, after), spatial (in front of, behind, above), or causal relationships (consequently, because, since). Instruction may also address the literal and figurative meanings of words (e.g., jam meaning marmalade or a traffic jam), metaphors ("a heart of stone," "electricity fairy"), and, more broadly, the full range of inferential processes required for comprehension, both oral and written.

Concretely, teachers may teach students to use gender and number markers to interpret pronouns, to identify relevant contextual clues in order to infer the meaning of an unfamiliar word. Teachers can also help students build a mental representation of a text (for example, by systematically asking questions such as: Who is doing what? Why? When? Where?). In doing so, teachers make visible cognitive processes that would otherwise likely remain unconscious and therefore insufficiently mastered or conceptualized, and consequently difficult to mobilize deliberately in appropriate situations. This approach equips students with comprehension strategies that they can later draw upon when studying texts independently (Bianco & Bressoux, 2009).[22]

4. An example: the acquisition of scientific reasoning

The work of Klahr and his colleagues on the acquisition of scientific reasoning is particularly enlightning, as it systematically contrasts more and less explicit forms of instruction (Klahr & Nigam, 2004; Matlen & Klahr, 2013).[23–24] In a recent study, Martella, Klahr, and Li (2020) compared four forms of active learning[i], including explicit instruction, among third- and fourth-grade students who were required to learn key principles of experimental scientific reasoning—specifically, the Control of Variables Strategy (CVS).

Lessons were organized into four phases. In the first phase, all students were informed of the session objectives and the principles of a sound experimentation (including the role of CVS). In the second phase, students were assigned either to a minimal-guidance condition or to a modelling condition. In the minimal-guidance condition, students manipulated the materials to design a sound experiment[j], while the teacher provided investigative questions as students explored and searched for solutions (e.g., "Why did you proceed this way?", "Based on your setup, can you determine which arrangement produced a difference in the outcome?"). In the modelling condition, the teacher demonstrated how to conduct a sound experiment; students therefore did not handle the experimental materials and did not receive specific feedback.

In the third phase, half of the students remained in their initial experimental condition, while the other half were placed in a direct teacher-guidance condition. In this condition, students manipulated the experimental materials in the teacher's presence and received precise comments and guidance. For example, the teacher explained why students' procedures were correct or incorrect and asked them to continue or revise their experiments accordingly.
In the fourth phase, all students completed a hands-on activity using the materials to design a sound experiment. It is therefore important to note that all students were active at some point during the lesson, in the sense that each of them handled the experimental materials available.

The results showed that students in the modelling condition (whether combined with or followed by direct guidance) achieved substantially higher learning outcomes than students in the minimal-guidance condition. Among the latter, those who were later placed in the direct-guidance condition achieved better learning outcomes than those who remained in the minimal-guidance condition throughout. These findings highlight the key role played by the teacher. It is not enough to determine whether students were "active." Active learning combined with direct and explicit instruction from the teacher is more effective than situations in which the teacher provides only limited guidance without directly teaching the target concept.

i Here, active learning refers to students' manipulation of experimental materials.

j A "sound experiment" here refers to an experiment that follows the Control of Variables Strategy—namely, one in which only a single variable is manipulated at a time in order to establish its causal role in the observed phenomenon.

5. Scientific research provides extensive evidence of the effectiveness of explicit instruction

While early studies demonstrating the positive impact of explicit instruction approaches were largely correlational, they were followed by experimental research (Rosenshine & Stevens, 1986)[25], and we now have a substantial body of experimental evidence confirming its beneficial effects. For example, Guilmois[26] recently conducted a series of experiments in elementary schools comparing explicit instruction, socio-constructivist instruction, and conventional teaching in the learning of mathematical tasks (subtraction, division, area). The results showed a significant advantage for explicit instruction over the other two conditions across all three concepts studied.

However, it is important to go beyond isolated results and examine whether findings from multiple independent research groups replicate and converge in systematic reviews of the literature (CSEN, 2021)[27]. Decades of research on the effectiveness of different instructional approaches have produced numerous syntheses and meta-analyses.

As Hughes et al. (2017, p. 145) note, "The effectiveness of explicit instruction is supported by a large number of convergent studies conducted over nearly five decades and across a variety of disciplines and theoretical frameworks."

Stockard et al. (2018)[28] conducted a meta-analysis of 328 studies spanning half a century (1966–2016) on the effects of Direct Instruction. Their findings (covering reading, mathematics, language, spelling, general skills, etc.) indicate that all effects were positive in favor of Direct Instruction, except for affective measures, where the effect was non-significant. The estimated effects were also comparable to achievement gaps observed between socioeconomically advantaged and disadvantaged groups. These results align with those of Hattie (2009)[29]. In his meta-analysis, which combined over 300 studies including 40,000 students, Hattie concluded that Direct Instruction produced large learning gains, placing it near the top of instructional methods in terms of effects on student achievement.
Bissonnette et al. (2010)[30] synthesized 11 meta-analyses covering 362 published studies between 1963 and 2006, involving over 30,000 students. Across the three domains studied—reading, writing, and mathematics—results show that learning gains from explicit instructional approaches are far superior to those from less structured, more discovery-oriented methods.

Reports prepared for the U.S. Department of Education indicate that explicit instruction has received substantial scientific support for its effectiveness for both general students and those with learning difficulties or special needs. These reports typically classify the level of scientific support for a given method as strong, moderate, or weak. For example, Kamil et al. (2008)[31] evaluated literacy instruction methods and found that providing explicit vocabulary instruction and explicit instruction in comprehension strategies were the two components with the strongest evidence to recommend classroom use. Similarly, a meta-analysis on mathematics instruction for students with learning disabilities (Gersten et al., 2009)[32] demonstrated that the two interventions with the strongest effects were explicit instruction and the use of heuristics for problem solving. A recent report (Fuchs et al., 2021)[33] on elementary mathematics teaching recommends, among other strategies, teaching students a problem-solving method for each problem type and presenting it using worked examples.

While these reports do not claim that explicit instruction is the only way to teach, they clearly indicate that "explicit instruction should be the consistent foundation of work with students, both with and without learning difficulties" (Archer & Hughes, 2011, p. 17).

6. Should we only teach disciplinary content explicitly?

Explicit instruction is not limited to disciplinary content only. Numerous studies have shown that explicitly teaching strategies that help students plan, monitor, and evaluate specific aspects of their own learning promotes metacognition and self-regulation (Education Endowment Foundation, 2022; Muijs & Bokhove, 2020)[34–35].

Through explicit instruction in these strategies, students are more likely to use them regularly and autonomously, thereby managing both their current and future learning. For example, teachers can explain how they approach interpreting a text or solving a mathematics problem. More broadly, they can teach students different ways to approach a task and which approach is most appropriate for a particular task, help students identify the steps they followed to complete it, review what worked or did not, encourage students to reconsider and improve their approach if they were to do it again, evaluate task difficulty, anticipate their likelihood of success, and adjust their effort and time devoted accordingly.

7. In what situations should explicit instruction be used?

Explicit instruction has proven highly effective for learning new concepts (i.e., when students are novices), across diverse populations and content areas. It is also an equitable method because it particularly benefits struggling students (though high-achieving students also gain), as well as those who lack resources at home to compensate for what they did not understand in class. In this way, it helps reduce or limit social disparities in learning outcomes. Conversely, approaches focused more on problem-solving can be beneficial when students already have a strong command of the concept or domain being studied[k] (situations involving reinforcement, or working with advanced learners, e.g., medical interns, engineering students)[36–39].

In short, the more learners have mastered the learning object, the less explicit teaching is necessary. Some researchers have called this phenomenon the "expertise reversal effect" (Kalyuga, 2007)[40]. This effect occurs because external models provided (e.g., through worked examples) may differ from the cognitive models already established in experts, creating a conflict that the expert learner must resolve. This increases cognitive load, which must nevertheless remain manageable for learning to occur.

k provided that this teaching remains guided. Forms of unguided discovery learning are unanimously criticised for their lack of effectiveness (Clark, 2009; Spiro & DeShryver, 2009; Blanchard et al., 2010; Alfieri, Brooks, Aldrich & Tenenbaum, 2011)

However, it should be noted that being a good student does not mean being an expert; most learners, whether weak or strong, are usually in a position of acquiring new knowledge. Students are therefore more often novices than experts relative to the learning object, even at advanced stages of their studies. Moreover, expertise is domain-specific: diabetology interns, for example, are experts in diabetes treatment and may benefit from problem-based learning. However, they may be non-experts or novices in a new treatment or in other medical specialties, and in these cases, explicit instruction is warranted.

This phenomenon may also be influenced by age: younger students have fewer cognitive resources and strategies available to manage complex learning situations. As a result, explicit instruction is particularly beneficial for them. Indeed, a recent meta-analysis shows that beginning a teaching activity with a discovery phase negatively affects learning outcomes for primary school students (Sinha & Kapur, 2021)[41].

8. Conclusion

No teaching method is infallible or can guarantee success for all students on its own. However, research on instructional effectiveness clearly shows that not all practices are equally effective in a given context. Numerous scientific studies provide evidence of the effectiveness of explicit instruction across a variety of disciplines and learner populations (Bressoux, 1994; Brophy & Good, 1986; Hattie, 2017; Kirschner, Sweller & Clark, 2006; Muijs et al., 2014; Rosenshine, 2009)[42–45].

Explicit instruction therefore has a rightful place in teachers' toolkit and supports professional practice. Professionalism is expressed in the flexibility and judgment required to know when and how to act effectively in the classroom. Achieving this is only possible if one possesses a broad repertoire of instructional approaches, teaching methods, classroom management strategies, and disciplinary and pedagogical knowledge.

Key takeaways

- In explicit instruction, the teacher plays a central role in structuring activities, guiding students, prompting and questioning them, and providing appropriate feedback, thereby fostering sudents' active learning.
- Explicit instruction is highly structured and progresses from simple to complex. The teacher aims to make the learning objective and the acquisition process explicit by identifying the different skills involved. Skills that are not yet mastered receive targeted, specific instruction.
- For complex (less-structured) tasks, which cannot be broken down into a sum of clearly defined component skills, the teacher explicitly provides strategies to support students in completing them.
- The effectiveness of explicit instruction has been demonstrated by numerous scientific studies. For learning a new concept, explicit instruction generally benefits all students, including high-achieving students, while struggling or disadvantaged students appear to benefit especially.
- The benefits of explicit instruction are less pronounced when students have already reached a high level of mastery and are considered "experts" in the learning object.
- Explicit instruction is not limited to disciplinary content. It is also important to explicitly and systematically teach students how to learn and manage their own learning, which can promote metacognition and self-regulation.
- Explicit instruction is therefore an essential component in the repertoire of instructional practices available to teachers.

Further reading

"Explicit Instruction" website, University of Mons. Available here

Clermont Gauthier, Steve Bissonnette & Mario Richard (2013). Explicit Instruction and Student Achievement. Brussels: De Boeck.

Maryse Bianco & Pascal Bressoux (2009). "Effet-classe et effet-maître dans l'enseignement primaire : vers un enseignement efficace de la compréhension ?." In Xavier Dumay & Vincent Dupriez (Eds.), Effectiveness in Education: Promises and Pitfalls (pp. 35–54). Brussels: De Boeck.

Céline Guilmois (2019). Efficacité de l'enseignement socioconstructiviste et de l'enseignement explicite en éducation prioritaire : Quelle alternative pour apprendre les mathématiques ? [Doctoral dissertation, University of the Antilles]. "Explicit Instruction" website, University of Mons. Available here

Marie Bocquillon (2020). Quel dispositif pour la formation initiale des enseignants ? Pour une observation outillée des gestes professionnels en référence au modèle de l'enseignement explicite [Doctoral dissertation, University of Mons, Mons]. Available here

Bibliography

1. Rosenshine, B. (2009). The empirical support for direct instruction. In S. Tobias & T. M. Duffy (Eds) (2009), *Constructivist instruction: Success or failure?* (pp. 201-220). New York: Routledge.

2. Archer, A. L., & Hughes, C. A. (2011). *Explicit instruction: Effective and efficient teaching*. New York : The Guilford Press.

3. Hughes, C. A., Morris, J. R., Therrien, W. J., & Benson, S. K. (2017). Explicit instruction: Historical and contemporary contexts. *Learning Disabilities Research & Practice*, 32(3), 140-148. DOI: 10.1111/ldrp.12142.

4. Engelman, S., & Carnine, D. (1991). *Theory of instruction: Principles and applications* (Revised edition). NIFDI Press.

5. Bocquillon, M., Gauthier, C., Bissonnette, S. et Derobertmasure, A. (2020). Enseignement explicite et développement de compétences : antinomie ou nécessité ? *Formation et profession*, 28(2), 3-18. http://dx.doi.org/10.18162/fp.2020.513.

6. Gauthier, C., Bissonnette, S., & Richard, M. (2013). *Enseignement explicite et réussite des élèves*. Bruxelles : De Boeck.

7. Martella, A. M., Klahr, D., & Li, W. (2020). The relative effectiveness of different active learning implementations in teaching elementary school students how to design simple experiments. *Journal of Educational Psychology*, 112(8), 1582-1596. http://dx.doi.org/10.1037/edu0000449.

8. Référence à King, A. (1993). From sage on the stage to guide on the side. *College teaching*, 41(1), 30-35.

9. Hattie, J. (2022). Explicit instruction. https://vimeo.com/88176157. Accédé le 15/02/22.

10. Muijs, D. Kyriakides, L., Van der Werf, G., Creemers, B., Timperley, H., & Earl, L. (2014). State of the art – teacher effectiveness and professional learning. *School Effectiveness and School Improvement*, 25(2), 231-256.

11. Polya, G. (1945). *How to solve it*. Princeton : Princeton University Press.

12. McDonald Connor, C., Morrison, F. J., & Slominski, L. (2006). Preschool Instruction and Children's Emergent Literacy Growth. *Journal of Educational Psychology*, 98(4), 665-68.

13. Education Endowment Foundation (2022). Five evidence-based strategies to support high-quality teaching for pupils with SEND. https://educationendowmentfoundation.org.uk/news/five-evidencebased-strategies-pupils-with-special-educationalneeds-send.
Accédé le 27/04/22.

14. Dehaene, S. (2018). *Apprendre ! Les talents du cerveau, le défi des machines*. Paris : Odile Jacob.

15. Bocquillon, M. (2020). *Quel dispositif pour la formation initiale des enseignants ? Pour une observation outillée des gestes professionnels en référence au modèle de l'enseignement explicite* (Thèse de doctorat). Université de Mons, Mons. Consulté à l'adresse https://tel.archives-ouvertes.fr/tel-02929814v1.

16. Bocquillon, M., Derobertmasure, A., & Demeuse, M. (2021). Comment les futurs enseignants vérifient-ils la compréhension de leurs élèves ? Focalisation sur l'épine dorsale de l'enseignement explicite. Dans S. Bissonnette, E. Falardeau & M. Richard (Eds.), *L'enseignement explicite dans la francophonie. Fondements théoriques, recherches actuelles et données probantes* (pp. 65-87). Québec : Presses de l'Université du Québec.

17. Jonassen, D. (2009). Reconciling a human cognitive architecture. In S. Tobias & T. M. Duffy (Eds) (2009), *Constructivist instruction: Success or failure?* (pp. 13-33). New York: Routledge.

18. Schmidt, H. G., Loyens, S. M. M., van Gog, T., & Paas, F. (2006). Problem-based learning is compatible with human cognitive architecture: Commentary on Kirschner, Sweller, and Clark. *Educational Psychologist*, 42(2), 91-97.

19. Spiro, R. J., & DeSchryver, M. (2009). Constructivism. When it's the wrong idea and when it's the only idea. In S. Tobias & T. M. Duffy (Eds) (2009), *Constructivist instruction: Success or failure?* (pp. 106-123). New York: Routledge.

20. Rosenshine, B., & Meister, C. (1997). Cognitive Strategy Instruction in Reading. In A. Stahl & A. Hayes (eds), *Instructional Models in Reading*. Lawrence Erlbaum, New Jersey.

21. Rosenshine, B., Meister, C., & Chapman, S. (1996). Teaching Students to generate questions: a review of intervention studies. *Review of Educational Research*, 66(2), 181-221.

22. Bianco, M., & Bressoux, P. (2009). Effet-classe et effet-maitre dans l'enseignement primaire : vers un enseignement efficace de la compréhension ? In X. Dumay & V. Dupriez (Eds.), *L'efficacité dans l'enseignement. Promesses et zones d'ombre* (pp. 35-54). Bruxelles : De Boeck.

23. Klahr, D., & Nigam, M. (2004). The equivalence of learning paths in early science instruction. Effects of direct instruction and discovery learning. *Psychological Science*, 15(10), 661-667.

24. Matlen, B. J., & Klahr, D. (2013). Sequential effects of high and low instructional guidance on children's acquisition of experimentation skills: is it all in the timing? *Instructional Science*, 41(3), 621-634.

25. Rosenshine, B. & Stevens, R. (1986). Teaching functions. In Wittrock, M. C. (Ed.), *Handbook of research on teaching* (3e éd.) (pp. 376-391). New York: MacMillan.

26. Guilmois, C. (2019). *Efficacité de l'enseignement socioconstructiviste et de l'enseignement explicite en éducation prioritaire : Quelle alternative pour apprendre les mathématiques ?* [These de doctorat, Antilles]. http://theses.fr/2019ANTI0398

27. CSEN (2021). La recherche translationnelle en éducation. Pourquoi et comment ? www.reseau-canope.fr/fileadmin/user_upload/Projets/conseil_scientifique_education_nationale/Ressources_pedagogiques/La_recherche_translationnelle_en_education.pdf

28. Stockard, J., Wood, T. W., Coughlin, C., & Rasplica Khoury, C. (2018). The effectiveness of direct instruction curricula: A meta-analysis of a half century of research. *Review of Educational Research*, 88(4), 479–507. https://doi.org/10.3102/0034654317751919

29. Hattie, J. (2009). *Visible learning*. Oxon: Routledge.

30. Bissonnette, S., Richard, M., Gauthier, C., & Bouchard, C. (2010). Quelles sont les stratégies d'enseignement efficaces favorisant les apprentissages fondamentaux auprès des élèves en difficulté de niveau élémentaire ? Résultats d'une méga-analyse. *Revue de recherche appliquée sur l'apprentissage*, 3, 1-35.

31. Kamil, M. L., Borman, G. D., Dole, J., Kral, C. C., Salinger, T., & Torgesen, J. (2008). Improving adolescent literacy: Effective classroom and intervention practices. *IES Ptratice Guide, NCEE* 2008-4027, U.S. Department of Education, What Works Clearinghouse. Retrieved from https://cybercemetery.unt.edu/archive/allcollections/20090807184818/ http://ies.ed.gov/ncee/wwc/pdf/practiceguides/adlit_pg_082608.pdf

32. Gersten, R., Beckmann, S., Clarke, B., Foegen, A., Marsh, L., Star, J. R., & Witzel, B. (2009). Assisting students struggling with mathematics: Response to Intervention (RtI) for elementary and middle schools (NCEE 2009-4060). *Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.* Retrieved from https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/rti_math_pg_042109.pdf

33. Fuchs, L.S., Newman-Gonchar, R., Schumacher, R., Dougherty, B., Bucka, N., Karp, K.S., Woodward, J., Clarke, B., Jordan, N. C., Gersten, R., Jayanthi, M., Keating, B., and Morgan, S. (2021). Assisting Students Struggling with Mathematics: Intervention in the Elementary Grades (WWC 2021006). *Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education.* Retrieved from https://ies.ed.gov/ncee/wwc/Docs/Practice-Guide/WWC2021006-Math-PG.pdf

34. Education Endowment Foundation (2022). Metacognition and self-regulation. https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit/metacognition-and-self-regulation. Accédé le 2/05/22.

35. Muijs, D. and Bokhove, C. (2020). Metacognition and Self-Regulation: Evidence Review. London: Education Endowment Foundation. https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/metacognition-and-self-regulation

36. Clark, R. E. (2009). How much and what type of guidance is optimal for learning from instruction. In S. Tobias & T. M. Duffy (Eds) (2009), *Constructivist instruction: Success or failure?* (pp. 158-183). New York: Routledge.

37. Spiro, R. J., & DeSchryver, M. (2009). Constructivism. When it's the wrong idea and when it's the only idea. In S. Tobias & T. M. Duffy (Eds) (2009), *Constructivist instruction: Success or failure?* (pp. 106-123). New York: Routledge.

38. Blanchard, M. R., Southerland, S. A., Osborne, J. W, Sampson, V. D., Annetta, L. A., & Granger, E. M. (2010). Is inquiry possible in light of accountability?: A quantitative comparison of the relative effectiveness of guided inquiry and verification laboratory instruction. *Science Education*, 94, 577-616.

39. Alfieri, L. Brooks, P. J., Aldrich, N. J., & Tenenbaum, H.R. (2011). Does discovery-based instruction enhance learning? *Journal of Educational Psychology*, 103(1), 1–18.

40. Kalyuga, S. (2007). Expertise reversal effect and its implications for learner-tailored instruction. *Educational Psychology Review*, 19, 509-539.

41. Sinha, T., & Kapur, M. (2021). When problem solving followed by instruction works: Evidence for productive failure. *Review of Educational Research*, 91(5), 761-798.

42. Bressoux, P. (1994). Les recherches sur les effets écoles et les effets-maîtres. *Revue Française de Pédagogie*, 108, 91-137.

43. Brophy, J. E., & Good, T. L. (1986). Teacher behavior and student achievement. In Wittrock, M. C. (Ed.), *Handbook of research on teaching* (3e éd.) (pp. 328-375). New York: MacMillan.

44. Hattie, J. (2017). L'apprentissage visible pour les enseignants - *Connaître son impact pour maximiser le rendement des élèves*. Québec : PU du Québec.

45. Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-Based, experiential, and inquirybased teaching. *Educational Psychologist*, 41(2), 75-86.

education.gouv.fr

Press
01 55 55 30 10
spresse@education.gouv.fr

Contact Conseil scientifique de l'éducation nationale
csen@education.gouv.fr
www.csen.education.gouv.fr