

Instructional Approaches: Explicit and Inquiry-Based Instruction



As educators, we are constantly faced with the question of how we can best present material that is optimally “learnable” for the different students we are trying to reach. The instructional approach selected is based on the intention of the learning. In general, two main approaches are using in today’s instruction: explicit instruction (Effect Size 0.57) or inquiry-based instruction (Effect Size 0.31).

What is Explicit Instruction?

Explicit instruction provides a **series of engaging instructional supports or scaffolds** - first through the logical selection and sequencing of content, and then by breaking down that content into manageable instructional units based on students’ cognitive capabilities. (Archer & Hughes, 2011).

Why should I use Explicit Instruction?

Well-organized and connected information makes it easier for students to retrieve information and facilitates the integration of new material. Furthermore, some students may have difficulty seeing how some skills and concepts fit together. Therefore, it is important to use teaching techniques that make these connections more apparent.

How do I use Explicit Instruction?

Delivery of explicit instruction is characterized by clear descriptions and demonstrations of a skill, followed by supported practice and timely feedback. Initial practice is carried out with high levels of teacher involvement. However, once student success is evidence, the teacher’s support is systematically withdrawn, and the students move toward independent performance. The average learner requires 4-14 quality learning opportunities to learn a new skill or concept, whereas, a struggling learner may need 14-200 experiences to learn the same concept.

Six Key Functions:

1. Reviews relevant previous learning and/or prerequisite skills and knowledge.
2. Presents instruction by stating the learning intentions and success criteria, presenting new material in small steps, modeling, providing examples and non-examples, using clear language, and avoiding digressions.
3. Provides guided practice that requires a high frequency of responses, ensures high rates of success, provides timely feedback, and prompts while students continue to practice until they are accurate.
4. Provides positive and corrective feedback.
5. Provides independent practice that is monitored during initial practice attempts and continuous practice as students build automaticity and fluency.
6. Provides spiral reviews of previously learned concepts over time.

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How is Explicit Instruction different than Direct Instruction?

Explicit instruction uses **six** key teaching functions (see page 1), whereas, **Direct Instruction (DI)** is most commonly a scripted program where teachers are given cues to follow throughout a lesson and students respond chorally following a teacher's signal. DI is helpful to use when the teacher is carefully designing lessons around small learning increments and clearly defined, prescribed teaching tasks. DI generally occurs in Tier 2 and Tier 3 instruction within a Multi-Tiered System of Supports.

Explicit Instruction
Uses 6 key teaching functions

Direct Instruction
Uses cues and a scripted program

What is inquiry-based instruction?

Inquiry-based instruction is characterized by students engaging in student-centered investigation to gain knowledge and skills that support personal sense-making. Inquiry-based instruction includes students identifying and evaluating evidence, formulating explanations from evidence, connecting explanations to prior knowledge, and communicating and justifying explanations while the teacher carefully scaffolds students in the new learning experience.

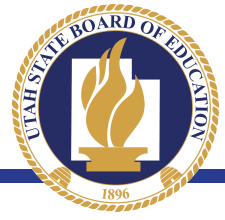
Why should I use inquiry-based instruction?

Inquiry-based instruction promotes student choice, independent decision making, higher level thinking, and sense-making through the development of knowledge and skills based in a specific discipline. Inquiry-based instruction has shown positive results for diverse student groups, including students with learning disabilities, students learning English, and females, as it eliminates inequity in accessing the content (Quinn, Lee, & Valdes, 2012; Laursen, Hassi, Kogan, & Weston, 2014; Cole & Washburn-Moses, 2010; Phillips & Myers, 2012). Additionally, inquiry-based instruction promotes motivation and active engagement through reading, writing, listening and speaking during learning tasks.

How do I use inquiry-based instruction?

Instructional delivery is characterized by clear expectations, activation of prior knowledge, and providing context while providing relevance and eliciting curiosity. A teacher introduces the initial investigation, explains the intent of the lesson, and describes needed student behaviors before student discourse begins. Students first work independently, then collaborate in groups while the teacher monitors, uses questions to probe student thinking and understanding, and promotes student-to-student discourse. Students increase their understanding and develop meaning through explaining and justifying their thinking. By the end of the lesson, the learning community of students demonstrate increased knowledge and skill toward the learning intention(s) in their mastery of the learning.

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How do I use inquiry-based instruction? cont.'d

Five Key Features:

1. Learner engages actively in the learning experience provided by teacher, materials, and or other sources.
2. Learner identifies (is directed to) and collects evidence as the teacher facilitates meaningful student to student discourse and experiences while activating prior knowledge.
3. Learner formulates (is guided in the process to formulating) explanation after summarizing the evidence, while the teacher elicits and uses evidence of student thinking to help build a shared understanding.
4. Learner evaluates (is directed towards) resources to link explanations as the teacher poses purposeful questions to assess and advance student reasoning and sense making.
5. Learner forms (is coached in the development of) a reasonable and logical argument to communicate explanations in a variety of forms as the teacher informally assesses student learning and determines the next steps for instruction.

*Note: Details in parentheses represent the scaffolding that may be necessary given the diversity of learners in each classroom.

How is inquiry-based instruction different than discovery-based or exploratory instruction?

Inquiry-based instruction is an instructional technique governed by scaffolded student experiences and is tied to teacher-created learning objectives. Discovery-based and exploratory instruction is characterized by an open-ended experience for students, empowering them to pursue what interests them and minimizes the participation of the teacher in the learning process. Discovery-based and exploratory instruction is most appropriate when the teacher desires students to engage in self-guided exploration

When do I use explicit instruction or inquiry-based instruction?

The what and when are of equal importance when planning for instruction that will have impact on learning. Matching the right instructional approach with the current stage of learning is critical in maximizing student learning. Explicit instruction and inquiry-based instruction are both valuable tools. Considering when to use explicit or inquiry-based instruction is an essential component in the planning process.

The teacher may use explicit instruction when students are learning discrete skills, strategies, concepts, and rules that will allow students to practice and apply their newly acquired knowledge in the future. The teacher determines the logical selection and sequencing of the content, and then breaks down the content into manageable instructional units based on students' instructional needs.

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When do I use explicit instruction or inquiry-based instruction? cont.'d

A teacher may use inquiry-based instruction when students are identifying and evaluating evidence, formulating explanations from evidence, connecting explanations to prior knowledge, and communicating and justifying explanations. The teacher carefully scaffolds the content and instruction to support students in the new learning experience through deepening student learning and facilitating the transfer of previously learned concepts in new or novel situations.

Surface Learning

“Surface learning does not mean superficial learning. Rather, surface learning is a time when students initially are exposed to concepts, skills, and strategies. Surface learning is critical because it provides a foundation on which to build as students are asked to think more deeply.”

- Hattie, Fisher and Frey (visible Learning for Mathematics, 2017)

Deep Learning

“We define deep learning as a period when students consolidate their understanding and apply and extend some surface learning knowledge to support deeper conceptual understanding... We think of this as a ‘sweet spot’ that will often take up more instructional time, but can be accomplished only when students have the requisite knowledge to go deeper.”

- Hattie, Fisher and Frey (visible Learning for Mathematics, 2017)

Transfer Learning

“Transfer learning [is] the point at which students take their consolidated knowledge and skills and apply what they know to new scenarios and different contexts. It is also a time when students are able to think metacognitively, reflecting on their own learning and understanding.”

- Hattie Fisher and Frey (visible Learning for Mathematics, 2017)

