COMPARING DIRECT AND DIALOGIC INSTRUCTION

Dialogic Instruction	Distinction	Direct Instruction
Fundamental to both knowing and learning mathematics. Students need opportunities in both small-group and whole-class settings to talk about their thinking, questions, and arguments.	The importance and role of **talk**	Most important during the guided practice phase, when students are required to explain to the teacher how they have solved problems in order to ensure they are encoding new knowledge.
Provides a venue for more talking and listening than is available in a totally teacher-led lesson. Students should have regular opportunities to work on and talk about solving problems in collaboration with peers.	The importance of and role of **group work**	An optional component of a lesson; when employed, it should follow guided practice on problem solving, focus primarily on verifying that the procedures that have just been demonstrated work, and provide additional practice opportunities.
Dictated by both disciplinary and developmental (i.e., building new knowledge from prior knowledge) progressions.	The **sequencing of topics**	Dictated primarily by a disciplinary progression (i.e., prerequisites determined by the structure of mathematics).
Two main types of tasks are important: (1) tasks that initiate students to new ideas and deepen their understanding of concepts (and to which they do not have an immediate solution), and (2) tasks that help them become more competent with what they already know (with type 2 generally not preceding type 1 and both engaging students in reasoning).	The nature and ordering of **instructional tasks**	Students should be given opportunities to use and build on what they have just seen the teacher demonstrate by practicing similar problems, sequenced by difficulty. Tasks afford opportunities to develop the ability to adapt a procedure to fit a novel situation as well as to discriminate between classes of problems (the more varied practice students do, the more adaptability they will develop).
Students should be given time to wrestle with tasks that involve big ideas, without teachers interfering to correct their work. After this, feedback can come in small-group or whole-class settings; the purpose is not merely correcting misconceptions, but advancing students' growing intellectual authority about how to judge the correctness of one's own and others' reasoning.	The nature, timing, source, and purpose of **feedback**	Students should receive immediate feedback from the teacher regarding how their strategies need to be corrected (rather than emphasizing that mistakes have been made). In addition to one-to-one feedback, when multiple students have a particular misconception, teachers should bring the issue to the entire class's attention in order to correct the misconception for all.

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Students' learning pathways are emergent. Students should make, refine, and explore conjectures on the basis of evidence and use a variety of reasoning and proof techniques to confirm or disprove those conjectures (CCSS-M-SMP 3), asking questions that drive instruction and lead to new investigations.	The emphasis on **creativity**	Students' learning pathways are predetermined and carefully designed for. To "make conjectures and build a logical progression of statements to explore the truth of their conjectures" (CCSS-M-SMP 3) is limited to trying solution strategies for solving a problem posed to them.
Students' thinking and activity are consistent sources of ideas of which to make deliberate use: by flexibly following students' reasoning, the teacher can build on their initial thinking to move toward important ideas of the discipline.	The purpose of **diagnosing student thinking**	Through efficient instructional design and close monitoring (or interviewing), the teacher should diagnose the cause of errors (often a missing prerequisite skill) and intervene on exactly the component of the strategy that likely caused the error.
Students participate in the defining process, with the teacher ensuring that definitions are mathematically sound and formalized at the appropriate time for students' current understanding.	The introduction and role of **definitions**	At the outset of learning a new topic, students should be provided an accurate definition of relevant concepts.
Representations are used not just for illustrating mathematical ideas, but also for thinking with. Representations are created in the moment to support/afford shared attention to specific pieces of the problem space and how they interconnect.	The nature and role of **representations**	Representations are used to illustrate mathematical ideas (e.g., introducing an area model for multi-digit multiplication after teaching the algorithm), not to think with or to anchor problem-solving conversations.

Source: Munter, Stein, and Smith (2015b). Used with permission.

Figure 1.2