Subject Area: Mathematics
Grade Level(s): K-12
Title of Instructional Method, Strategy, or Approach: Direct Instruction (DI) is a teacher-centered theory based upon the use of well-developed lessons. In order for DI to be effective, the teacher must use clearly defined teaching tasks in order to eliminate misinterpretation. The belief behind this approach is that eliminating misinterpretations can greatly improve and accelerate the learning process. This approach is most effective when teaching smaller, isolated skills. DI uses a step-by-step approach that requires student mastery at each level.

Direct Instruction begins with the teacher modeling the desired task, followed by more limited teacher modeling, and ending with the fading of teacher involvement once the students have demonstrated mastery of the lesson. The sequence of events for DI include generally stating the objective, reviewing skills necessary for new information, presenting new information, questioning students, providing group instruction and independent practice, assessing performance, and giving more practice.

Overall, there are twelve criteria that could be present when using DI. When any four of these criteria are being met at any time during instruction, DI is occurring. The criteria are: breaking down a task into smaller steps, administering probes, administering feedback repeatedly, providing a pictorial or diagram presentation, allowing independent practice and individually paced instruction, breaking down the instruction into smaller phases, instructing in a small group, teacher modeling a skill, providing set materials at a rapid pace, providing individual child instruction, teacher asking questions, and the teacher presenting the new materials.

Description of each Instructional Method, Strategy, or Approach:
References in APA format:

1. The Access Center. Direct or explicit instruction and mathematics. Retrieved August 23, 2007, from http://www.k8accesscenter.org/training_resources/DirectExplicitInstruction_mathematics.asp

2. National Institute for Direct Instruction. What is direct instruction?. Retrieved August 23, 2007, from http://www.nifdi.org

3. Flores, Margaret, M., Kaylor, Maria, (2007). The effects of a direct instruction program on the fraction performance of middle school students at-risk for failure in mathematics. *Journal of Instructional Psychology*, 34. Retrieved August 27, 2007

"How-To" Information—What will make this work in the classroom? What would a teacher need to know to implement this Instructional Method, Strategy, or Approach? In order for a teacher to implement this strategy, he/she would need to break down the lessons into a step-by-step format. The first step for Direct Instruction would be for the teacher to review previously learned material. This could be in the form of a pre-test or a quick review session. It is important that the students understand the previously learned material before they are able to learn the new material. For example, if the teacher is trying to teach the class how to add double-digit numbers they should review putting the numbers in the correct place value columns. The teacher could also review the basics of addition.

Next, the teacher must introduce the new material to the students by modeling the new concept. When introducing double-digit addition, the teacher should model how to correctly line up the digits in order to add them. The teacher should also review how to correctly re-group numbers. It is important for the teacher to remember that each

problem must be modeled for the students. Talking through the problems as they are being taught would be an effective way to review the material

The next step for Direct Instruction would be going through individual math problems to allow the students to practice the new skill. The teacher should apply the new skill to practical situations. At this point the teacher modeling should begin to fade as students are developing mastery of the new skill. The teacher should allow plenty of time for the students to fully master the new concept before moving on to the next lesson. Direct Instruction can be repeated for as many new concepts as needed.

Implications for Practice/Other Considerations: When using Direct Instruction teachers must give way to a willingness to follow certain carefully prescribed instruction practices. Teachers must always keep in mind the importance of hard work, dedication and commitment to students. The belief that is crucial to the success of this approach is that "All students, if properly taught, can learn."

Additional Links (for further information):
An interactive tutorial
http://psych.athabascau.ca/html/387/OpenModules/Engelmann/
The Association for Direct Instruction
http://www.adihome.org/

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