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Research Brief

Meaningful Direct Instruction

Question: What are some ways to make direct instruction meaningful?

Summary of Findings:

Most of us have had the experience of sitting through a course where the teacher droned on and on and our thoughts were on just about anything other than the topic being presented. The majority of us have also experienced a teacher lecturing the entire period, yet our brains were actively involved with the information. Why, with the seemingly same presentation style, were we sometimes engrossed and sometimes turned off?

Adolescent brains overdevelop gray matter and this continues into their early 20s. What this means to educators is that students have opportunities to do extremely well in many areas so that the knowledge and skills they develop will become hard wired into their brain's structure.

> *The neural connections a teenager makes endure a lifetime and unused connections are lost forever. If they aren't reading, doing science or solving problems, the synapses for those activities will be pruned. It is hypothesized that pruning at this age permits the adolescent brain to organize its circuitry and refine its thinking processes. It is a golden opportunity to build a better brain. It is also a golden opportunity to waste the brain's potential and water it down instead (Feinstein*, 9*).*

The concept of "lecture" has almost become synonymous with poor teaching, however, this does not have to be the case. There is a place for lecture in the presentation of curriculum along with ways that can actively involve students in the content. Lectures can and should provide essential information about the topic. In order to do this successfully, teachers must be knowledgeable about and comfortable in the content area. They must be familiar enough with the information that they know and understand it from different perspectives and can present it in a variety of ways to meet the needs of every student. Students must then be given several opportunities to manipulate and work with the concept both in small groups and individually, in order for it to become hardwired and part of their long-term memory. According to recent findings in brain research, the rule of thumb is that the typical student can only sit and concentrate for their age plus two minutes. As an example, for a 15 year old, 17 minutes is maximum seat time, then they must be given a legal opportunity to move and/or talk to a partner/group about the concept, before being expected to sit still and listen to a lecture (Sprenger, 2002).

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Ways to actively engage students in direct instruction:

- "Tell them what you're going to say, say it, and then tell them what you said" (*Direct teaching information*).
- Provide meaningful visuals that directly relate to the concept(s).
- Use PowerPoint, where only the key ideas are listed and elaborate on each idea, this will help the visual learners. Do NOT put all of the notes on it then read the notes to the students.
- Supply an outline or graphic organizer and have students complete it during the lecture.
- Remember and apply the"age plus two rule" and provide opportunities for students to discuss and/or actively demonstrate their understanding of the topic.
- Use different inflections and voice tones throughout the lecture.
- Solicit input from the students about how this concept/idea relates to them, their beliefs, thoughts, etc. so that they can relate to and see the relevance of it to their lives.
- Ask higher levels of questions throughout the lecture to stimulate and push them deeper into the concept. Allow for enough "think time," then call on a variety of students, not just those whose hands are raised.
- Wrap up the class with every student providing a piece of knowledge they gained as a result of the lesson. This will help concepts get cemented into their long-term memory and will provide an idea to the teacher about how much information was retained so they know where to take the next lesson. Some ideas include: have each student stand and orally share out an idea/concept; have students pair up and share an idea, then orally share with the class their partner's idea; have students write down something they learned and use it as their ticket out of class; have students quickly write down in list form everything they remember from the class, then have them pair up with someone else who has a similar number of items on their list, and have them share their list with their partner, adding to their own list those things their partner had that they did not; and/or have students get in small groups and share their idea/concept, then the group selects one idea to orally share with the class.

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Online Resources:

- An outline of the direct instruction model
  This is a solid description of Hunter's lesson plan format.
  http://www.humboldt.edu/~tha1/hunter-eei.html

- Direct instruction: A transactional model
  In chart form, this lists what teacher and student behaviors would look like when using direct instruction.
  http://chiron.valdosta.edu/whuitt/col/instruct/instevnt.html

- Direct teaching information
  A succinct yet clear definition of direct teaching is provided in this article. Although links are given to other sites, they are not active.
  http://www.adprima.com/direct.htm

- Elements of effective instruction
  This is a description of the Hunter model.
  http://www.humboldt.edu/~tha1/hunter-eei.html#eei

- Instructional methods information
  This is a chart of advantages and disadvantages of a variety of instructional strategies from lecture to discussion to cooperative learning.
  http://www.adprima.com/teachmeth.htm

- Mastery learning in the public schools
  An extensive review of research results about mastery learning is provided in this article.
  http://chiron.valdosta.edu/whuitt/files/mastlear.html

- Student-program alignment and teaching to mastery
  This is a copy of a paper presented on mastery learning.
  http://www.zigsite.com/PDFs/StuPro_Align.pdf

- Summary of principles of direct instruction
  A brief list of the components of direct instruction.
  http://chiron.valdosta.edu/whuitt/col/instruct/dirprn.html

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Books

- Feinstein, S. (2004). *Secrets of the teenage brain.* The Brain Store: San Diego, CA.
  An easy to understand book for the lay person about how the adolescent brain works and processes information.
  http://www.thebrainstore.com/store/brainlinks.asp

- Sprenger, M. *(2002) Becoming a wiz at brain learning. Corwin Press: Thousand Oaks, CA.*
  This book uses the analogy of the Wizard of Oz to describe how the brain works. It was written with primarily educators as its audience.
  http://www.corwinpress.com/authorDetails.nav?contribId=527961

Submitted Date: 6/19/06 By: Dr. Karen Walker Lebanon Valley College

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