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7 Methods for Differentiating Instruction
TEACHING WITH THE BRAIN IN MIND

10%
- Prepare your learners
- Create optimal environment

80%
- Engage learners emotionally
- Frame learning for relevance
- Make time to acquire knowledge, skills, values & experiences
- Provide time for trial and error
- Share feedback—expect active processing
- Connect learning other content and self

10%
- Settle learning time with reflective processing
- Rehearse & incorporate through revision of learning and using it!


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Instructional Choices for Differentiation

- Differentiate the process / activities
  - Contract Grading
  - Vary the texts, experiments, methods (manipulatives)
  - Provide varied student organizers
  - Flexible Groupings

- Differentiate the product / outcome or assessment
  - Contract Grading
  - Allow student choice or design

- Differentiate the content / topic & materials
  - Use leveled reading texts
  - Indicate important text sections: advance preparation of texts
  - In studying a single concept, provide authentic texts at varying levels as appropriate for individual students or student groups

- Differentiate the environment
  - Use intentional processes for grouping students
  - Identify areas in the room for various activities
  - Allow students to work in other parts of the building
“Being completely involved in an activity for its own sake. The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost” (Geirland 1986).
Contract Grading

- Clearly defined contract goals
  - Tied to academic standards & outcomes

- Heterogeneous groups
  - Social skills
    - Think for yourself
    - Respect others’ opinions
    - Carry your weight

- Clearly defined roles for each group member
  - Recorder
  - Quality Control
  - Artist / Layout director
  - Questioner
  - Materials Manager
  - Summarizer
  - Researcher
  - Personnel Director

- Sufficient time allotted for quality outcomes
- Review / negotiate rubric in advance
Tiered Assignments

- Select the learning outcome or objective for the lesson: the skill or concepts to be learned
- Decide on an assessment to evaluate eventual mastery
- Develop a corresponding activity to teach the skill, concept, or generalization
- Pre-assess students to determine group membership
- Review the activity to ensure it both scaffolds and challenges at three levels: above grade level, on grade level, below grade level
- Teach prerequisite skills
- Provide materials and time for practice
Example: Tiered Assignment

Section I: Maximum Points 50

5 point opportunities
- Write down & draw 5 examples of percentages
- Figure percentage of boys & girls in class
- Complete vocabulary organizers for definitions of ratio and proportion
- Complete 2 problems from section pp.???

10 point opportunities
- Bring in a round edible object & demonstrate 5 different percentages.
- Pick 3 different percentages. Draw each one three different ways

Section II: Choose one 20 points

- Find the percentage of each color in a bag of skittles; make a chart, diagram or poster
- What part of a banana is edible? Write a formula based upon the mean of your data to show the amount of the edible portion.
- Determine the amount of an ingredient listed on a nutritional label in grams for 10 different canned foods. Present your information in the form of a book using the labels as illustrations

Section III: Choose one 20 points

- Interview a coach asking how percentages are important in their sport. Write a-half to one page summary of your findings.
- Research and determine the percentage of food thrown away by people in the United States. Write a-half to one page summary of your findings.
Effects of Incidental & Intentional Instruction on Vocabulary Growth

• **Incidental Learning**
  - 5 - 15% of novel vocabulary can be learned
  - Requires 7 or so encounters
    ✓ Students must read independently to encounter new words
    ✓ Students must have inferential skills to determine meaning
  - Time spent reading directly affects vocabulary acquisition

• **Intentional Instruction**
  - Foster work consciousness beyond students’ areas of interest
    ✓ Topical: Content words
    ✓ World: Words educated people *should* know
  - Teach individual words
    ✓ Make a goal of 350 words annually
  - Teach strategies for learning new words
    ✓ Context clues: 20% reliable

Vocabulary Acquisition

- Stages of word knowledge (Dale 1965)
  - Never saw it before
  - Heard it—no knowledge of meaning
  - Recognizes in context
  - Knows it well: uses in conversation and or writing
How Well Do I Know These Words?

Thinking about words before learning them makes connections that will help me remember.

<table>
<thead>
<tr>
<th>Word</th>
<th>Never Heard</th>
<th>Heard or Seen</th>
<th>Connotation</th>
<th>I can define this word</th>
<th>I use this word!</th>
</tr>
</thead>
<tbody>
<tr>
<td>periphery</td>
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<td>decorum</td>
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<td>nefarious</td>
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<td>erudition</td>
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<tr>
<td>caveat</td>
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<tr>
<td>Term</td>
<td>Description or working definition</td>
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Use the word | Know the word | Heard the word | Never heard |
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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Initial understanding</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

In how many ways can I use this word?

1. ______________________________
   ______________________________

2. ______________________________
   ______________________________

3. ______________________________
   ______________________________

Later understanding

Use the word | Know the word | Heard the word | Never heard |
<table>
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</thead>
<tbody>
<tr>
<td>Later understanding</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

In how many ways can I use this word?

1. ______________________________
   ______________________________

2. ______________________________
   ______________________________

3. ______________________________
   ______________________________

Later understanding

Use the word | Know the word | Heard the word | Never heard |
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<tbody>
<tr>
<td>Later understanding</td>
<td>4</td>
<td>3</td>
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</tbody>
</table>
Fast Mapping (Carey 1978)

• Quick method to acquire a sense of meaning
  ✓ Based on the theory of mutual exclusivity

• Extended mapping for more definitive understanding
  ✓ Occurs over time
  ✓ Requires extended encounters
Directions for words 5 – 8: Write a meaningful statement or series of statement using three of the four words. Bonus opportunity for using all words.
### VOCABULARY MATRIX

<table>
<thead>
<tr>
<th>List vocab words across &amp; down</th>
<th>erudition</th>
<th>caveat</th>
<th>intentional</th>
<th>decorum</th>
<th>connotation</th>
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<tbody>
<tr>
<td>periphery</td>
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Two or more tasks fundamentally the same and deal with the same big idea.

But they meant for students at different levels of readiness.

Students choose which task to complete, but a common set of questions is used for both (or all) tasks.
Guided Notes

- Teacher prepared handouts guiding students through reading or lecture
- Provides standard cues and prepared space
- Omit
  - key facts, concepts, and/or relationships (Heward, 1996)
- A outline skeleton where students actively respond during whole class lecture or reading
- A columnar form where key terms or phrases, definitions, etc. are provided dedicated space for further notation during reading or lecture
Benefits of Guided Notes

- Because key concepts, facts, and relationships are cued or highlighted, students are better able to determine if they are getting it;
- therefore more likely to ask the teacher to repeat or clarify a point of information;
- students produce a standard set of accurate notes for subsequent study and review;
- Outline may be modified or differentiated for student needs;
Effective summarizing increases student learning
- Text structure helps summarize
- Effective summarization requires synthesis
  - includes analyzing information
  - identifying key concepts
  - defining the purpose of extraneous information

Note taking supports student learning
- students need explicit instruction in note taking
  - without instruction, many students write down meaningless words or phrases or copy word for word
- successful note-takers summarize which supports retention
- notes benefit students as a document of learning
- refinement & review of notes provides repetition w/ content
The Rule Strategy

- **Keep or create a topic sentence**
  - May or may not be the first sentence
  - May be at the end of the paragraph or in the middle
    - If there is no topic sentence, create one
- **Delete unnecessary words or sentences**
  - conjunctions, prepositions, personal references, interruptions by the author w/opinion or examples, superfluous descriptors
- **Combine repeated and/or similar words as one reference**
  - Substitute words
    - For unfamiliar concepts: vast stretches—large area
    - To categorize: axes, mauls, and hammers are tools
- **Examine transitions and text structure**
  - To verify topic sentence
  - To fully understand and retain the author’s purpose

The Chinese, or Celestials (from the Celestial Empire), as they were often called in the 1800s, have a long history in Western America. Chinese records indicate that Buddhist priests traveled down the west coast from present day British Columbia to Baja California in 450 A.D. Spanish records show that there were Chinese shipbuilders in lower California between 1541 and 1746. When the first Anglo-Americans arrived in Los Angeles, they found Chinese shopkeepers.

Finding the Main Idea and Summarizing Text

Paragraph #
**Circle Strategies Used:** Deleted Unimportant Words, Combined Repeated Words, Substituted Unfamiliar Words, Found or Created a Topic Sentences, Examined transitions & text structure

Main Idea  ____________________________________

_____________________________________________

_____________________________________________

_____________________________________________

Paragraph #
**Circle Strategies Used:** Deleted Unimportant Words, Combined Repeated Words, Substituted Unfamiliar Words, Found or Created a Topic Sentences, Examined transitions & text structure

Main Idea  ____________________________________

_____________________________________________

_____________________________________________

_____________________________________________

Paragraph #
**Circle Strategies Used:** Deleted Unimportant Words, Combined Repeated Words, Substituted Unfamiliar Words, Found or Created a Topic Sentences, Examined transitions & text structure

Main Idea  ____________________________________

_____________________________________________

_____________________________________________

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Paragraph #
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Main Idea  ____________________________________

_____________________________________________

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<table>
<thead>
<tr>
<th>Paragraph #</th>
<th>Paragraph #</th>
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<tbody>
<tr>
<td><strong>Circle Strategies Used:</strong> Deleted Unimportant Words, Combined Repeated Words, Substituted Unfamiliar Words, Found or Created a Topic Sentences, Examined transitions &amp; text structure</td>
<td><strong>Circle Strategies Used:</strong> Deleted Unimportant Words, Combined Repeated Words, Substituted Unfamiliar Words, Found or Created a Topic Sentences, Examined transitions &amp; text structure</td>
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<tr>
<td><strong>Main Idea</strong></td>
<td><strong>Main Idea</strong></td>
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<tr>
<td><strong>Connections &amp; Inferences</strong></td>
<td><strong>Summary</strong></td>
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Pair Reading & Note taking

- **Prelistening**
  - Debug text with partner

- **1st listening**
  - Tick off or check each word as you hear it read
  - Keep track of how many times the word is repeated

- **2nd listening**
  - Annotate the list
  - Add more details

- **Retelling**
  - After listening and annotating, use your checklist to retell the information
  - Then, let your partner use his/her list to retell it to you
Step 1: Pre-listening task

**Before** you listen to the talk, sit with a partner and decide who is partner A and who is partner B. **Then use Pair Sharing** to explore the meaning of each word or phrase as follows:
- A reads a line on the list
- B asks, “What does that mean?”
- A explains with the option to continue discussion
- B reads the next line on the list
- A asks, “What does that mean?”
- B explains with the option to continue discussion.

Step 2: During listening task

Tick off words as you hear them read
- Earthworms
- Segments
- Tube
- Organs
- Waste Products
- Bristles
- Flap
- Digestive system
- Reproductive
- Cocoon

Step 3: Rereading task

With your partner, take notes over important ideas

Step 4: Use annotations to retell or write a summary of the nonfiction text
CORNELL NOTES

Cornell Notes (Intro)

Name

Date

Topic

Class/Section

Here, in the Connections Column, you might write one or more of the following:
- Categories
- Causes of WW II
- Parts of a Cell
- Questions
- What caused WW II?
- What are the parts of a cell?
- Vocabulary words
- Holocaust
- synthesis
- Review/test alerts!
- WW II causes and names of allies will definitely be on exam!
- Parts of a Cell
- Connections
- check the Owens poem for his comments on war
- similar to process we studied in last unit

Reminders
- Be sure to check the meaning of variant.

Sample Question and Notes
What should I write down when I take notes?

Note: Leave space in the Connections Column so you can add notes and test review questions later on when studying.

How can I take notes faster?

Down here write one of the following: summary of what you read/lecture; the five most important points of the article/chapter/lecture; questions you still need to answer.

© Jim Burke 2000. For more information on this and other such Tools for Thought visit www.englishcompanion.com

Notetaking Column

1. Record: During the lecture, use the notetaking column to record the lecture using telegraphic sentences.

2. Questions: As soon as possible, formulate questions based on the notes in the right-hand column. Writing questions helps to clarify meanings, reveal relationships, establish continuity, and strengthen memory. Also, the writing of questions sets up a perfect stage for exam-studying later.

3. Recite: Cover the notetaking column with a sheet of paper. Then, looking at the questions or cue-words in the question and cue column only, say aloud, in your own words, the answers to the questions, facts, or ideas indicated by the cue-words.

4. Reflect: Reflect on the material by asking yourself questions, for example: “What’s the significance of these facts? What principle are they based on? How can I apply them? How do they fit in with what I already know? What’s beyond them?”

5. Review: Spend at least ten minutes every week reviewing all your previous notes. If you do, you’ll retain a great deal for current use, as well as, for the exam.

Cue Column

Write down only important information. Look for:
- bold, underlined, or italicized words
- information in boxes or with an icon/symbol
- headers/subheaders on the page
- information the book or teacher repeats
- words, ideas, or events that might be on a test
- quotes, examples, or details you might be able to use later in a paper or presentation
- abbreviate familiar words/use symbols (+, --, #)
- take notes in bullets and indents; not formal outlines
- cut unnecessary words
- use telegraphic sentences: “America enters war 12/44”

Summary

After class, use this space at the bottom of each page to summarize the notes on that page.
References


Tomlinson, Carol Anne. (ND). Grading and differentiation: Paradox or good practice? Theory into Practice, 44(3). 265-269.


