Differentiating Instruction with Technology

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DIFFERENTIATED INSTRUCTION WITH TECHNOLOGY

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“When a teacher tries to teach something to the entire class at the same time, chances are,

one-third of the kids already know it; one-third will get it; and the remaining third won’t.

So two-thirds of the children are wasting their time.”

~Lilian Katz (teacher educator)
WHAT IS DIFFERENTIATION???

- Differentiation
  - Modifies content, process, product and learning environment based on assessed needs

- Scaffolding
  - Breaking up a learning experience, concept or skill into discrete parts, then giving students the assistance needed to learn the part

- Differentiation and Scaffolding BOTH
  - Move student learning and understanding from where it is to where it should be
  - Blended in a classroom to the point that the two are indistinguishable
  - Essential to learning and engagement
Differentiation is NOT...

- individualized instruction
- just small group work
- making things comfortable/easier for students
- changing up your style

~Bentz
a teacher who collects and uses assessment data

a teacher who recognizes students need more than one way to experience learning

Differentiation IS...

a teacher who is proactive rather than reactive

balancing effort with SUCCESS!

~Bentz
**Traditional vs. Differentiated**

- Student differences ignored or acted upon when problematic
- Assessment only at the end of learning to see “who got it”
- One definition of excellence exists (100 percent achievement, on objectives tested once)
- Student interest infrequently tapped
- Whole-class instruction dominates

- Student differences studied as a basis for planning
- Assessment on-going and diagnostic to be responsive to learning needs
- Excellence defined in large measure by individual growth for a starting point
- Students frequently make interest-based learning choices
- Many instructional arrangements (groupings, partner work, centers)

~teachingasleadership.org
<table>
<thead>
<tr>
<th><strong>Traditional vs.</strong></th>
<th><strong>Differentiated</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage of texts and curriculum drives instruction</td>
<td>Curriculum/standards still drives instruction</td>
</tr>
<tr>
<td>Single option assignments</td>
<td>Multi-option assignments</td>
</tr>
<tr>
<td>A single text prevails</td>
<td>Multiple materials provided (visuals, manipulatives)</td>
</tr>
<tr>
<td>Time is relatively inflexible</td>
<td>Time is flexible, based on student need</td>
</tr>
<tr>
<td>Students assessed in one way</td>
<td>Students assessed in multiple ways</td>
</tr>
</tbody>
</table>

~teachingasleadership.org
**Differentiate Content**

- What the teacher plans to teach

- What the students need to learn

- Presenting material to students in more than one way everyday!
  - Auditory, Visual, Kinesthetic, Tactile, etc.

- Determined through pre-assessment and formative assessment

- Take the time to be thorough!
**Content Methods**

- Textbooks
- Speakers
- Fieldtrips (real or virtual)
- Videos
- Demonstrations
- Lectures
- Internet sources
- Paper resources (newspaper, magazines, books)
- Power point
- Podcasts
- Webquests

**Differentiated**

- Varying reading level of materials
- Putting text on CD/Tape/Ipod
- Grouping/peer buddies
- Multi-level questioning
- Real world materials/examples
- Multi-level computer programs
- Meeting with small group to re-teach skill or extend skill
- Modeling
- Vocabulary instruction based on readiness level
- Use more than one method of presentation
- Graphic organizers
- Fill in blank notes
TECHNOLOGY RESOURCES FOR CONTENT

- Multi-level Computer programs
  - www.IXL.com (math and LA k-12)
  - www.raz-kids.com (leveled e-books k-5)
  - www.mobymax.com (math, LA, Science k-8)
  - Getkahoot.com and Kahoot.it (learning games)
  - www.brightstorm.com (9-12 math, science, LA, test prep)
  - www.digitalhistory.uh.edu (6-12 Social Studies)
  - www.kahnacademy.org (k-12 multi subject)
  - Sketchpad Explorer App (1-10 math)
DIFFERENTIATE PROCESS

- Don’t skip this step!

- How students will access information

- Activities the students engage in order to make sense of the content

- Tiered activities in which all learners work with the same information, understanding, and skills but proceed with different levels of support, challenge or complexity

- Can be teacher led, collaborating as a class, collaborating in pairs, homogenous or heterogeneous ability groups, or independent work
### Process Methods
- Worksheets
- Graphic organizers
- Teacher led Discussion
- Teacher led practice
- Work at the board
- Vocabulary activities
- KWL
- Dipstick or Summarizing strategies
- Blooms Taxonomy

### Differentiated
- Centers/stations
- Manipulatives
- Jigsaw
- Think, Pair, Share
- Labs
- Role play/simulations
- Web quests
- Journaling
- Cubing (can be process or product)
- Tiered practice problems
- Solve a mystery/problem scenario
- Heterogeneous or homogenous grouping
- Collaborate as a class, group, or pairs
TECHNOLOGY RESOURCES FOR PROCESS

- [www.edutechalogy.org](http://www.edutechalogy.org) go to blog
- [exploredifferentiation.wikispaces.com](http://exploredifferentiation.wikispaces.com)
- [Daretodifferentiate.wikispaces.com](http://Daretodifferentiate.wikispaces.com)
- [www.schrockguide.net](http://www.schrockguide.net)
- [www.learnnc.org](http://www.learnnc.org)
- [www.doe.in.gov/highability/resources-and-publications](http://www.doe.in.gov/highability/resources-and-publications) go to Tiered Curriculum Project
- Padlet.com, Google drive, Bubbl.us, [www.twiddla.com](http://www.twiddla.com)
Scaffolding is part of the Process

- Provides a safety net for students
- Happens before and during teaching
- Breaks learning into chunks, then provides structure or a tool with each chunk
  - Activating and previewing strategies
    - Investigate prior knowledge, making predictions, piquing interest, allow time to share personal experiences
  - Show and tell (show sample product, discuss rubric or criteria, what steps do they follow)
  - Think aloud – as you teach model thought processes
  - Quality Questioning - Pause, Ask, Pause, Review
  - Using chants, mnemonics, visual or verbal cues/reminders
SCAFFOLDING THROUGH TRANSITIONS

- PBIS can help
  - Posted behavioral expectations
  - Explicitly teaching and practicing transitions
  - Reinforce and reward!!

- Activating strategies
  - Hook interest and get brains engaged in what is coming next
  - Max Thompson strategies: KWL, word splash, word maps
  - Personal story, visual aide, brainstorming
  - Should be fun and require interaction
  - Can also include reviewing previously taught material in a fun way
SCAFFOLDING THROUGH TRANSITIONS

- Good closing steps:
  - Have a predetermined plan for those who finish early, then better differentiate for them the next time
  - Find a stopping point and come together
  - Review academic and behavior positives
  - Allow time to share
  - Release and start getting set up for the next lesson
DIFFERENTIATE PRODUCT

- How the student will demonstrate what he/she has learned

- Special Education students can do all the things other student do, given time, a sample, and support!
<table>
<thead>
<tr>
<th>Common products</th>
<th>Differentiate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a poster</td>
<td>Product Menu/Choice board (Tic Tac Toe)</td>
</tr>
<tr>
<td>Create a Powerpoint</td>
<td>Cubing, Think Dots</td>
</tr>
<tr>
<td>Design an article</td>
<td>Write song/video/act it out</td>
</tr>
<tr>
<td>Worksheets, tests, quizzes (yawn)</td>
<td>Blog or Wiki</td>
</tr>
<tr>
<td>Speech</td>
<td>Podcast</td>
</tr>
<tr>
<td>Essay/Book report</td>
<td>Rubrics with varied levels</td>
</tr>
<tr>
<td>Build a model</td>
<td>Exit card</td>
</tr>
<tr>
<td>Teach another student</td>
<td>Contracts and timelines</td>
</tr>
<tr>
<td>Debate</td>
<td>Interest based investigations</td>
</tr>
<tr>
<td>Demonstration</td>
<td>Movie or book trailer</td>
</tr>
<tr>
<td></td>
<td>Incorporating learning styles into choices</td>
</tr>
</tbody>
</table>
TECHNOLOGY RESOURCES FOR PRODUCT

- www.readwritethink.org k-12 student interactives
- Differentiationdaily.com
- Pinterest
- Youtube playlists
- Screencastify
- Zoom
- Thinglink
- Piktochart

bit.ly/di4allonlinetools
DIFFERENTIATION PRO’S AND CON’S

- **Pros**
  - It is just more fun!!
  - Research shows it works for gifted as well as students with more severe disabilities
  - Allows students to take responsibility for their own learning
  - Students are more engaged resulting in fewer discipline issues

- **Cons**
  - Requires more time put into planning and preparation
  - Limited professional development
“There is no one right way to create an effectively differentiated classroom; teachers craft responsive learning places in ways that are a good match for their teaching styles, as well as for their learners needs.”

~Carol Tomlinson
PROACTIVE = ANTECEDENT MODIFICATION

- Differentiation can be part of the IEP.
  - Instructional accommodations
    - Content, Process, Product, and Environment
  - Antecedent modification
    - Environmental
    - Social Supports
    - Task Oriented
    - Teacher Behavior
ENVIRONMENTAL MODIFICATIONS

- Lighting - dim/bright, overhead/lamps, natural, filters
- Sounds - door open/shut, background music, white noise, headphones
- Alignment - chair height, slant boards
- Zoning - seating, specific areas with specific purpose (desks/board, floor space, table, computer area, project area), location of staff
- Provide tools - visual cues for rules/steps/boundaries, timers visual/auditory, fidgets, soothing space
SOCIAL MODIFICATIONS

What proactive strategies can you use to help students be socially appropriate in class, with peers, and adults?

- Circle time/morning meeting or check in
- Explicit social skills instruction, Role play
- Visual cues/reminders
- Behavior specific praise
- Behavioral momentum
- Pair with a role model
- Self-monitoring check list and self-evaluation
- Set up volunteer/positive relationship opportunities
- Practice specific skills and then test run
Task Modifications

- High interest or preferred materials
- Incorporate choices
- Writing modifications
- Manipulatives, calculator
- Break task down into portions
- Shorten length or reduce complexity of task
- Schedule work/break times
- Extended time, multiple attempts
- Provide a completion schedule or map for difficult tasks
- Alternate task or lowered/advanced level
- Always be willing to negotiate!! What is most important?
TEACHER BEHAVIOR MODIFICATIONS

- Proximity
- Verbal cues for upcoming activities, reminders, and praise
- Incentive plans/individual behavior contracts
- Allow students time as soon as frustration is detected
- Be knowledgeable in coping strategies, offer and guide students in using them
- All adults in room engaged
- Reduce down time
- Incorporate sensory activities for all
“Teachers discover that they need to develop and maintain personal relationships with the students they teach -- because for most students, meaningful interaction with a teacher is a precursor to academic learning.”

~Huberman
Questions???

- Differentiation and Scaffolding
- Differentiation in the IEP
  - Proactive/Antecedent mods
  - Smooth Transitions
- Web Resources
  - Web and App Resource List
  - Product Menu
  - Pinterest