Supporting Multiple Disabilities Through Differentiation

A presentation by:
E. C. Dixon
Denise Zannu
What Differentiation is NOT?

Differentiating does not mean providing separate, unrelated activities for each student (Good, 2006).
What is Differentiation?

- **Instruction** that helps students with diverse academic needs and learning styles master the same challenging academic content.
  - (Center for the Comprehensive School Reform and Improvement – 2007)

- Providing **interrelated activities** that are based on student needs for the purpose of ensuring that all students come to a similar grasp of a skill or idea.

  (Good, 2006)
Why Differentiate?

Heterogeneity

Special Education Inclusion

Reduction in out-of-class services for Gifted Learners

Escalations in Cultural Diversity in Classrooms

(Tomlinson, C., et.al., 2013)
Why Differentiate?

- Supports students with learning differences
- Helps students retain content and skill
- Reduces time students require to absorb information

(Mitchell, 2010)
Why Differentiate?

• **Decreases** the need for skill remediation

• Allows learners the ability to **demonstrate learning** in a variety of ways*

*(Mitchell, 2010)*
In all classrooms, teachers deal with at least 3 curricular elements:

1. **Content** - input, what students learn
2. **Process** – how students go about making sense of ideas and information
3. **Product** - output, how students demonstrate what they have learned
Where do I Differentiate?

Successful Instruction can be differentiated based on three general areas. These areas include:

- the **content** of instruction
- the **processes** and techniques used to help make sense of a given topic
- the **products** produced by students that demonstrate their learning

*Jennipher Willoughby, 2010*
A differentiated classroom is marked by a repeated rhythm of whole-class preparation, review, and sharing, followed by opportunity for individual or small-group exploration, sense-making, extension, and production.
4 Steps to Planning Differentiation

- Determine the Academic Content or Skill
- Gauge student background knowledge
- Select suitable instructional methods and materials
- Design ways to assess skill mastery

(Mitchell, 2010)
Where are my Students?

- Understand **Prior Knowledge**
- Understanding Students **Strengths** and **Weaknesses**
- Understand level of **skill**
- **Assess** Learning Styles

[Online Learning Inventory](#)
Selecting Instructional Methods

All differentiated instruction:

• Is rooted in good **curriculum**.
• Includes rigorous content and application of higher-order **thinking skills**
• Aligns with common-core state **standards** and/or state and district **curriculum**
• Emphasizes deep themes, ideas and **inter-connections**

(Dr. Susan Allan, differentiatedinstruction.net)
### Where do I begin?

<table>
<thead>
<tr>
<th>Low-Prep Differentiation</th>
<th>High-Prep Differentiation</th>
</tr>
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<tbody>
<tr>
<td>Choice of books</td>
<td>Tiered activities and labs</td>
</tr>
<tr>
<td>Homework Options</td>
<td>Tiered products</td>
</tr>
<tr>
<td>Varied Journal Prompts</td>
<td>Alternative assessments</td>
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<tr>
<td>Whole-to-part/ Part-to-whole Explanations</td>
<td>Lectures coupled with graphic organizers</td>
</tr>
<tr>
<td>Varied Computer Programs</td>
<td>Multiple-intelligence Options</td>
</tr>
<tr>
<td>Varied Supplementary Programs</td>
<td>Tiered centers</td>
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<td>Use of Collaboration, independence, and cooperation</td>
<td>Literature Circles</td>
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<td>Open-ended activities</td>
<td>Stations</td>
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<tr>
<td>Negotiated Criteria</td>
<td>Choice Boards</td>
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<tr>
<td>Games to practice mastery of information and skill</td>
<td>Problem-based learning</td>
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<tr>
<td>Multiple levels of questions</td>
<td>Graduated Rubrics</td>
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</table>
Strategies for Math

1. Visual and graphic descriptions of problems

2. Systematic and explicit instruction
3. Student think-aloud

Thinking Aloud in Math

**Background knowledge** (e.g., When I see a triangle, I remember that the angles have to add to 180°.)

**Relevant versus irrelevant information** (e.g., I’ve read this problem twice and I know that there is information included that I don’t need.)

**Selecting a function** (e.g., The problem says ‘increased by’ so I know that I’ll have to add.)

**Setting up the problem** (e.g., The first thing that I will do is ... because ...)

**Estimating answers** (e.g., I predict that the product will be about 150 because I see that there are 10 times the number.)

**Determining reasonableness of an answer** (e.g., I’m not done yet as I have to check to see if my answer is makes sense.)

**Types of Think-Alouds**

- **Predicting**
  - I predict that...
  - In the next part, I think...
  - I think this is...

- **Picturing**
  - I can picture...
  - I can see...

- **Questioning**
  - A question I have is...
  - I wonder about...
  - Could this mean...

- **Making connections**
  - This is like...
  - This reminds me of...

- **Identifying a problem**
  - I’m confused about...
  - I’m not sure of...
  - I didn’t expect...

- **Summarizing**
  - So what it’s saying is...
  - The big idea here is...
  - I think the point is...

- **Using fix-ups**
  - I’ll reread this...
  - I’ll read on and check back...

- **Other**

**Think Aloud**

- I predict that...
- I can picture...
- A question I have is...
- This is like...
- This reminds me of...
- I’m confused about...
- I’ll reread this... (fix up)
- The big idea here is...
- I think/believe/wonder... (commenting)

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### Innovation Configuration Map
**Teacher Think Aloud – Math**

**Component:** Prior to Solving the Problem  
**Role:** Teacher

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
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<tbody>
<tr>
<td>The teacher verbalizes all her thinking prior to solving the problem, stating in specific detail what she plans to do, why she plans to do it that way, and how she plans to solve the problem. When appropriate, the teacher verbalizes confusion about or second guesses her chosen method of solving the problem.</td>
<td>The teacher verbalizes most of her thinking prior to solving the problem, stating in some detail about what she plans to do and how she plans to solve the problem.</td>
<td>The teacher verbalizes some of her thinking prior to solving the problem, stating what she plans to do to solve the problem.</td>
<td>The teacher does not verbalize her thinking prior to solving the problem.</td>
</tr>
</tbody>
</table>
Strategies for Math

4. Use of structured peer-assisted learning activities involving heterogeneous ability groupings

5. Assessment data provided to teachers and students.
Strategies for Reading

1. Provide **multiple** texts at **varying** reading levels for students.

2. Use assessment to inform **planning** and **instruction**.

3. Explicitly **teach** reading and learn to **scaffold** instruction.

4. **Integrate** writing to think and learn
Assessing the Learning

101 Ways to Show What You Know
Utilize pre-tests to assess students needs and strengths

Encourage thinking at various levels of Bloom's Taxonomy.

Use a variety of instructional delivery methods to address different learning styles.

Break assignments into smaller, more manageable parts
  – include structured directions for each part.

Choose broad instructional concepts and skills that lend themselves to understanding at various levels of complexity.
Based on Process

• Provide access to a variety of materials
  – target different learning preferences
  – target reading abilities

• Develop sensory-based activities
  – target auditory, visual, and kinesthetic learners.

• Establish stations for inquiry-based, independent learning activities.

• Create activities that vary in level of complexity and degree of abstract thinking required.

• Use flexible grouping to group and regroup students based on factors including content, ability, and assessment results
• Use a **variety** of assessment strategies

• **Balance** teacher-assigned and student-selected projects.

• Offer a **choice** of projects that reflect a variety of learning styles and interests.

• Make assessment **ongoing** and **interactive**
Differentiation for Readiness

• **Varied** Texts by Reading Level
• **Varied** Supplementary Materials by Reading Level
• **Varied** Scaffolding
• **Tiered** Tasks
• **Tiered** Products
• **Utilize** Small-Group Instruction
• **Provide** Homework Options
• **Assessment**
• **Negotiate** Criteria for Quality Varied Graphic Organizers
Focus on Interests

- Interests Areas
  - Fine Arts
    - Photography
    - Painting
    - Sculpture
  - Literature
    - Poetry
    - Prose
    - Fiction
    - Non-Fiction
  - Technology
  - Athletics
  - Sciences
    - Life
    - Physical
  - Mathematics
  - Social Sciences
  - Journalism
  - Politics/Government
  - Business
  - Music
    - Song
    - Dance
    - Composition
    - Performance
  - Theater/Film/Televison
  - Travel/Culture
  - People
    - Heroes
    - Villains
    - Young People
  - Sports/Recreation
  - Crafts
Mode of Expression

• **Oral**
  – Speech
  – Seminar
  – Drama
  – Symposium

• **Written**
  – Creative
  – Expository

• **Designed/Built**
  – Display
  – Model

• **Artistic**
  – Graphics
  – Painting
  – Photography
  – Illustration

• **Abstract**
  – Ideas
  – Plans
  – Theories

• **Service in Community**
Strategies That Support Interest-Based Differentiation

- Exploratory Studies
- Studying Concepts and principles through the lens of interest
- Student Choice of Tasks
- Independent Studies
- Orbitals
- Design-A-Day
- I-Searches

- Mentorships/Apprenticeships
- Group Investigation
- Interest Groups
- Jigsaw
- Literature Circles
- WebQuests
- Negotiated Criteria for Tasks and products
- Student-selected audiences
Strategies That Support Learning-Profile Differentiation

- Varying Teacher Presentation
- Varying Student Mode of Expression
- Working Choice Arrangements
- 4-Mat
- Flexible Environment
- Complex Instruction
- Multiple Modes of Assessment
- Organizer
- Varied Approaches to Organizing Ideas and Information
Product Possibilities

- Design a web page
- Develop a solution to a community problem
- Write a book
- Design a game
- Lead a symposium
- Build a planetarium
- Conduct a series of interviews
- Submit writings to a journal, magazine, newspaper
- Interpret through multi-media
- Design a structure
- Design and conduct experiment
- Collect and analyze samples
- Plan a journey, trip
- Write letter to the editor

- Design [political] cartoon
- Conduct a training session
- Do a demonstration
- Present a news report
- Write a new law and plan path
- Make Learning Centers
- Create authentic recipes
- Choreograph dances
- Design a new product
- Create a subject dictionary
- Design a simulation
- Develop a museum exhibit
- Compile a newsletter
- Develop Advertising Campaign
- Complete an Archaeological Dig
Let’s do the work!

- ernest_dixon@gwinnett.k12.ga.us
- Denise_zannu@gwinnett.k12.ga.us
References


