“Ascend” to Un-“Parallel”ed Heights!

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NAGC 2006
Charlotte, NC

The Parallel Curriculum Model

CORE CURRICULUM OF CONNECTIONS CURRICULUM OF PRACTICE CURRICULUM OF IDENTITY

KEY CURRICULUM COMPONENTS

What are the components of a comprehensive curriculum unit, lesson, or task?

- Content
- Assessment
- Introduction
- Teaching Strategies
- Learning Activities
- Grouping Strategies
- Products
- Resources
- Extension Activities
- Modification Strategies (Ascending Levels of Intellectual Demand)

The Teaching Strategies Continuum

Direct
- Lecture
- Drill and recitation
- Direct instruction
- Strategy-based instruction
- Coaching
- Concept attainment
- Synectics
- Demonstration
- Socratic Questioning
- Visualization

Indirect
- Role playing
- Cooperative learning
- Jurisprudence
- Simulation
- Inquiry-based instruction
- Problem-based learning
- Shadowing experiences
- Mentorships
- Independent study
- Independent investigations

Ascending Levels of Demand

Ascending levels of intellectual demand is the process that escalates one or more facets of the curriculum in order to match a learner’s profile and provide appropriate challenge and pacing. Prior knowledge and opportunities, existing scheme, and cognitive abilities are major attributes of a learner’s profile. Teachers reconfigure one or more curriculum components in order to ensure that students are working in their zone of optimal development.

Why Provide Ascending Levels of Intellectual Demand?

- To honor differences among students.
- To address varying levels of prior knowledge, varying opportunities, and cognitive abilities
- To ensure optimal levels of academic achievement
- To support continuous learning
- To ensure intrinsic motivation
- To provide appropriate levels of challenge
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Guiding Questions that Support the Ascending Levels of Intellectual Demand

- What are the powerful differences among my students’ levels of prior knowledge, cognitive ability, and rates of learning?
- Which students require greater or lesser degrees of depth, abstraction, and sophistication with regard to this unit, lesson, or task?
- How might I design lessons and activities that provide varied levels of scaffolding, support, and challenge?
- Which content, teaching or learning activities, resources or products support varying levels of prior knowledge and cognitive ability within this unit, lesson, or task?
- How might I assess students’ growth when many of them possess varying levels of abstraction and prior knowledge?

Ascending Levels of Intellectual Demand Take Into Consideration Students’ ……. 

- Cognitive abilities
- Prior knowledge
- Schema
- Opportunities to learn
- Learning rate
- Developmental differences
- Levels of abstraction

What’s Your Criteria?

1. Nature of the Objective
2. Number of Students Needing Differentiation
3. Time for Teaching/Planning
4. Availability of Resources
5. Instructional Repertoire
6. Parental Support
7. Student Behavior
8. The Power of the Strategy to Enhance Learning

Examples: Ascending Levels of Intellectual Demand

Typical
Students were given different spelling lists, each containing a different number of words to memorize and spell for the Friday post-test. The decision to give some students a smaller list and some students a longer list of the same pattern words was based on the Monday morning pretest containing 20 pattern words.

Ways in Which Individuals Can Differ

- Prior Knowledge or Skill Expertise
- Learning Rate
- Cognitive Ability
- Learning Style Preference
- Motivation, Attitudes, and Effort
- Interest, Strength, or Talent

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Examples: Ascending Levels of Intellectual Demand

Exemplary

Students were assigned to small, flexible groups based upon preassessment data that revealed critical differences in students’ prior knowledge. One group of students was provided with a demonstration about the two processes, asked to work as a small group to come to consensus about their observations, and make a list of everyday examples of these two processes at work. Another group, with greater prior knowledge than the first, was asked to watch the same demonstration, come to consensus in a small group discussion about their observations and conclusions and to compare their findings to the weather outside. The third group demonstrated a thorough understanding of the two processes. They were given topographical maps and related weather information, and were asked to draw conclusions about why it rains in some parts of the United States more than in other parts. The teacher moved to each of the small groups and used Socratic questioning and feedback to advance students’ thinking.

Core: ALID

Framework

• Provide modifications to address readiness to learn, learning rates and/or level of expertise
• Offer adaptations to learning goals, teaching methods, learning activities, grouping strategies, learning resources, and extension activities

Core Curriculum

• Content: Ask students to apply learning to an unfamiliar context
• Teaching and learning: Adjust the pace of teaching and learning; provide more or less scaffolding/support
• Products: Ask students for products that are more open-ended, require greater depth or level of abstraction, as well as increasingly levels of professional quality
• Resources: Require more advanced resources (human and non-human) or resources that require a greater degree of inference
• Assessment/Self-Monitoring: Ask students to respond to concept-based questions at the highest levels of complexity. Ask students for increasing levels of independent reflection about the quality of their own work

Data Representation and Graphs

4. You have been asked by the President of the United States to lead an investigation into school violence. Your job is to survey the students, teachers, and parents of your school to assess their feelings and concerns on the issue. Design and field test a survey and present your findings using graphs and descriptive statistics. Describe the central tendency and variability in your survey results.

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6. The Walt Disney corporation has asked you to be the lead investigator on a study to research the results (find out the names of all the Disney movies from Tarzan to Snow White) to the weather outside. The third group demonstrated a thorough understanding of the two processes. They were given topographical maps and related weather information, and were asked to draw conclusions about why it rains in some parts of the United States more than in other parts. The teacher moved to each of the small groups and used Socratic questioning and feedback to advance students’ thinking.

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Designing Ascending Levels of Intellectual Demand in the Curriculum of Connections

- Apply understandings, concepts, or principles in contexts that are markedly dissimilar.
- Analyze diverse perspectives on an issue or problem.
- Search for legitimate and useful connections among seemingly disparate elements.
- Look for patterns of interaction among multiple areas of connection.
- Look at broad swaths through an unfamiliar perspective.

Egyptology

- Discuss the ethical argument in favor and opposed to dealing in antiquities.
- Who owns relics? Conduct a formal debate with regard to this statement: The explorers who found Titanic own its relics.
- Create an original product that illustrates the similarities and differences between the ancient Egyptian and modern-day American cultures.

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Identity: ALID

- Encourage independent explorations, study, and investigations.
- Encourage students to explore research questions in more depth and at increasing levels of sophistication.
- Provide opportunities for students to explore their own questions with less scaffolding and support.
- Ask students for increasing levels of analysis in their work.
- Encourage students to compare their own work with exemplars in the field. Invite self-evaluation in order to support students’ increasing levels of expertise with respect to product quality.
- Escalate the use of primary course material. Arrange for students to learn about and use state-of-the-art tools and equipment.

Connections: ALID

<table>
<thead>
<tr>
<th>Content</th>
<th>Curriculum of Practice</th>
</tr>
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<tbody>
<tr>
<td>Ask students to apply learning in an unfamiliar context.</td>
<td></td>
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<td>Teaching and Learning: Adjust the pace of teaching and learning; provide more or less scaffolding/scaffolding support.</td>
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<td>Products: Ask students for products that are more open-ended, require greater depth or level of abstraction, or as well as greater levels of professional quality.</td>
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<tr>
<td>Resources: Require more advanced resources (human and non-human) or resources that require a greater degree of inference.</td>
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<tr>
<td>Support: Self-Monitoring: Ask students for increasing levels of independent reflection about the quality of their own work.</td>
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</thead>
<tbody>
<tr>
<td>Content: Asks students to apply learning to an unfamiliar context</td>
<td>Content: Increase the depth of students’ knowledge about various career fields and options; learn in-depth about their interests and strengths; vary the levels of support for interpersonal skill development; provide more or less scaffolding/support</td>
</tr>
<tr>
<td>Teaching and Learning: Provides more or less scaffolding/support</td>
<td>Teaching and Learning: Provide content-rich, sophisticated explorations, mentoring, service, co-curricular, and internship opportunities in the community; encourage independent explorations, study, and investigations</td>
</tr>
<tr>
<td>Products: Asks students for products that are more open-ended, require greater depth or level of abstraction, or resources that require a greater degree of inference</td>
<td>Products: Allow students to develop in-class and enrichment products that reflect their communication and intellectual talents and interests; provide more advanced resources (human and non-human) or resources that require a greater degree of inference</td>
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Talent Development: History

<table>
<thead>
<tr>
<th>Has no response; dislikes</th>
<th>Asks questions</th>
<th>Likes to look at historical things</th>
<th>Chooses projects with an historical slant</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Chooses classes about history</td>
<td>Seeks out friends who love history</td>
<td>Thinks about being an historian</td>
<td>Makes plans for professional growth</td>
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<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Enjoys finding unanswered historical questions</td>
<td>Affinity</td>
<td>Collaborative research</td>
<td>Self-actualization</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
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Forwarding Talent Development in History

1. Find an entrance through the student’s current interests
2. Read books, etc. about historical people and events
3. Investigate local and historical sites
4. Enlist the support of the library media specialist to get additional resources
5. Provide extension activities on projects that the student enjoys
6. Discuss the discipline with the student; explore course offerings, select appropriate courses
7. Engage the support of local resources
8. Locate shadowing and internship experiences
9. Locate a mentor; help the students become involved as a member in related organizations
10. Support student’s intense work; locate resources; solicit professionals to give the student feedback
11. Locate grants and fellowships
12. Nurture the student’s research; encourage publishing

Selecting a Preassessment Technique

- What is the most powerful difference you expect to see among students?
- How might you identify these potential differences in your students?

Things Take Time: Start Small

- One unit in one content area
- One lesson in one unit
- One student in one lesson in one unit