

FINDING RATE AND LEVEL for TAG Students

RATE

Rate of learning is the *pace* of the TAG identified student's learning. For some students, the rate may be rapid, especially in the student's identified area of strength. Rate is a measure of the pace at which a student successfully progresses through the curriculum after being placed at an appropriate instructional level. The student's rate of learning will vary depending on the subject, point in the learning process, degree of interest, level of difficulty, and learning style. Pacing or "RATE" is affected by multiple exterior factors. See the Equalizer for variables on the rate of learning for TAG students.

LEVEL

Level of learning for the TAG identified student is the "LEVELING UP of the curriculum." Some students can automatically understand more complex concepts, can work independently with less direction, and can quickly move from a simple concept to a more abstract concept with elegance and intellectual agility. The level of learning is the student's instructional level in the curriculum and the place where he or she will encounter knowledge and skills not yet learned or mastered. Level is more than an advanced grade level. It involves complexity and sophistication of concepts. See the Equalizer for variables on the level of learning for TAG students.

IDEAS FROM THE EQUALIZER

Foundational to Transformational
Concrete to Abstract
Simple to Complex
Single Facet to Multiple Facets
Small Leap to Great Leap
More Structured to More Open
Less Independence to Greater Independence
Slow to Quick

THE STUDENT: How does the student feel when instruction involves the correct "RATE" and "LEVEL?"

The student finds sufficient challenge in completing the work.

The student is challenged by learning new concepts and can begin to see interrelated ideas and concepts.

The student seeks opportunities to pursue deeper and/or more complex thinking. The student creates work products that reflect deep and complex thinking.

The student is not frustrated by work that is too difficult nor too easy.

Using the Equalizer

"The Equalizer" is a visual representation of ways in which teachers can plan to adapt instruction based on readiness, while still ensuring that all learners explore the essential concepts and principles (or generalizations) around which content is organized. "The Equalizer" is drawn to look like buttons one might use to tune a stereo or CD player. Each of the nine elements on the equalizer increases in intensity as it moves from left to right. Other things being equal, a learner who is struggling in a given area of study will likely fare better with buttons more toward the left of the continuums, and a learner who is advanced will fare better with the buttons more toward the right of the continuums.

There are exceptions to that principle, of course. For example, when material presented is brand new and complex, all learners may need learning experiences closer to the left of the continuums. Also, even a learner who struggles in a study should be moving across the continuums to some degree as a unit progresses. Further, though struggling learners often need to work more slowly and advanced learners more quickly (Continuum 9), exceptions may occur. Sometimes an advanced learner may need to spend more time on a topic to allow for greater breadth or depth of study than is appropriate for age-mates. Similarly, a student who is struggling may, on occasion, need to hit the essential points of a particular investigation, and move on to other areas of study that are more developmentally appropriate. As another example, teachers often find variation in the "independence" continuum, regardless of whether a student is "struggling" or "advanced." Many advanced learners work more confidently and independently than age-mates, but some highly able learners have not yet developed the maturity needed for great independence. Conversely, some struggling learners are quite independent and cope well with independence. No doubt you can find additional exceptions to the general "left to right/struggling to advanced" match.

The following is a summary of the instructional elements found on each continuum:

1. Information, ideas (etc.) are **foundational** if they are basic, straightforward, or close to the already known. They are **transformational** if they cause the student to stretch, bend, or modify the idea in some way.
2. Representations, ideas (etc.) are **concrete** if they are tangible, able to be physically manipulated, or deal with specific events. They are **abstract** if they focus more on meanings, implications, or principles.

3. Resources, problems (etc.) are **simple** if they deal with one or few events/meanings, and perhaps in a "skelton" or "big picture" way. They are **complex** if they deal with multiple events or meanings, and perhaps in a more fleshed out or detailed way.
4. Directions, solutions (etc.) have **fewer facets** if they require one (or few) steps, actions, or applications. They are **multifaceted** when they require relatively more steps, actions, or applications.
5. Applications, insights (etc.) may require **smaller leaps** of transfer by asking students to put ideas to work in settings relatively like those they have already mastered, or making connections among comfortable and familiar ideas. They may require **greater leaps** if they call for putting ideas to work in unfamiliar settings or making connections among far-flung fields and ideas. No student should be asked to do "no leap" assignments. Regurgitation seldom yields understanding.
6. Solutions, approaches (etc.) are **more structured** when relatively more guidance is given for completing them or relatively fewer options are presented. They are **more open** when relatively greater improvisation or decision making is required by the student in completing them.
7. Problems in research, in products (etc.) are **clearly defined** when steps in solving them and method of solution are easily evident, all variables presented are relevant to the solution, and there is a "right answer." They are **fuzzy** when the problem itself is not clearly defined, method of solution is ambiguous, irrelevant variables are intertwined with relevant ones, and there is no "right answer" or no single right answer.
8. Tasks are **less independent** when planning, designing (etc.) are largely prescribed and modeled by the teacher. They become **more independent** as planning, designing, monitoring, establishing criteria for success (etc.) rest more on the student.
9. Pace of study and thought typically need to be relatively **slower** to enable additional practice and consideration, or relatively **quicker** to enable brisk exploration and eliminate practice that is unnecessarily redundant for a given learner.

Handout 26—Continued

The Equalizer

1. Foundational



Transformational

Information, Ideas, Materials, Applications

2. Concrete



Abstract

Representations, Ideas, Applications, Materials

3. Simple



Complex

Resources, Research, Issues, Problems, Skills, Goals

4. Single Facet



Multiple Facets

Disciplinary Connections, Directions, Stages of Development

5. Small Leap



Great Leap

Application, Insight, Transfer

6. More Structured



More Open

Solutions, Decisions, Approaches

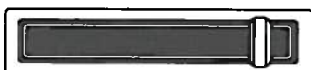
7. Clearly Defined Problems



Fuzzy Problems

In Process, In Research, In Products

8. Less Independence



Greater Independence

Planning, Designing, Monitoring

9. Slower



Quicker

Pace of Study, Pace of Thought

Source: From *The Differentiated Classroom: Responding to the Needs of All Learners* (pp. 121–122), by C. A. Tomlinson, 1999, Alexandria, VA: Association for Supervision and Curriculum Development. Copyright 1999 by Association for Supervision and Curriculum Development.

HANDOUT 36

Use this annotated version of The Equalizer to help you think about the sample tiered lessons provided for you and about the tiered lesson you plan today. Beneath each continuum on The Equalizer are descriptors of how the related element might look in an assignment. For example, look at the third continuum: simple to complex. Resources, research, issues, problems, skills, or goals which are simpler might ask students to use an idea or skill they are studying, whereas those which are more complex might ask students to combine the ideas or skills being taught with others previously taught.

Thinking About "The Equalizer"

1. Foundational Transformational

Information, Ideas, Materials, Applications

- | | |
|---|---|
| -close to text or experience | -removed from text or experience |
| -expert idea and skill to similar or familiar setting | -export idea or skill to unexpected or unfamiliar setting |
| -use key idea or skill alone | -use key idea or skill with unrelated idea or skill |
| -fundamental skills and knowledge emphasized | -use but move beyond fundamental skills and knowledge |
| -fewer permutations of skills and ideas | -more permutations of skills and ideas |

2. Concrete Abstract

Representations, Ideas, Applications, Materials

- | | |
|-----------------------------|--------------------------------|
| -hold in hands or hands-on | -hold in mind or minds on |
| -tangible | -intangible |
| -literal | -symbolic or metaphorical |
| -physical manipulation | -mental manipulation |
| -event based | -idea based |
| -event to principle | -principle without event |
| -demonstrated and explained | -not demonstrated or explained |

3. Simple Complex

Resources, Research, Issues, Problems, Skills, Goals

- | | |
|--|--|
| -use idea or skill being taught | -combine idea or skill being taught with those previously taught |
| -work with no one, or few abstractions | -work with multiple abstractions |
| -emphasizes appropriateness | -emphasizes elegance |
| -requires relatively less originality | -requires relatively more originality |
| -more common vocabulary | -more advanced vocabulary |
| -more accessible readability | -more advanced readability |

4. Single Facet Multiple Facets

Disciplinary Connections, Directions, Stages of Development

- | | |
|---------------|--------------|
| -fewer parts | -more parts |
| -fewer steps | -more steps |
| -fewer stages | -more stages |

5. Small Leap Great Leap

Application, Insight, Transfer

- | | |
|--|--|
| -few unknowns | -many unknowns |
| -relative comfort with most elements | -relative unfamiliarity with many elements |
| -less need to change familiar elements | -more need to change familiar elements |
| -requires less flexible thought | -requires more flexible thought |
| -few gaps in required knowledge | -significant gaps in required knowledge |
| -more evolutionary | -more revolutionary |

6. More Structured More Open

Solutions, Decisions, Approaches

- | | |
|---|---------------------------------|
| -more directions or more precise directions | -fewer directions |
| -more modeling | -less modeling |
| -relatively less student choice | -relatively more student choice |

7. Clearly Defined Problems Fuzzy Problems

In Process, In Research, In Products

- | | |
|---|--|
| -few unknowns | -more unknowns |
| -more algorithmic | -more heuristic |
| -narrower range of acceptable responses or approaches | -wider range of acceptable responses or approaches |
| -only relevant data provided | -extraneous data provided |
| -problem specified | -problem unspecified or ambiguous |

8. Less Independence Greater Independence

Planning, Designing, Monitoring

- | | |
|---|---|
| -more teacher or adult guidance and monitoring on | -less teacher or adult guidance and monitoring on |
| • problem identification | • problem identification |
| • goal setting | • goal setting |
| • establishing timelines | • establishing timelines |
| • following timelines | • following timelines |
| • securing resources | • securing resources |
| • use of resources | • use of resources |
| • criteria for success | • criteria for success |
| • formulation of a product | • formulation of a product |
| • evaluation | • evaluation |
| -more teacher scaffolding | -less teacher scaffolding |
| -learning the skills of independence | -demonstrating the skills of independence |

9. Slower Quicker

Pace of Study, Pace of Thought

- | | |
|-------------------------------|-------------------------------|
| -more time to work | -less time to work |
| -more practice | -less practice |
| -more teaching and reteaching | -less teaching and reteaching |
| -process more systematically | -process more rapidly |
| -probe breadth and depth | -hit the high points |

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