

**International Center for
Leadership in Education**

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To the Developer

Using the Rigor/Relevance Framework for Planning and Instruction is for developers — not developers of curriculum, although it could be used by them, but for developers of teachers. This kit offers teachers, curriculum coordinators, administrators, and staff developers information and activities to improve teaching and learning. The objective is to support the development of a more rigorous and relevant curriculum for all students.

The original kit introducing the Rigor/Relevance Framework, *Planning Rigorous and Relevant Instruction*, was written in 1997 and explained in detail how to apply the Framework to teaching and learning. Since that time, the International Center for Leadership in Education has engaged in hundred of conversations with teachers, who have broaden our ideas on how to use the Framework.

The International Center has also developed other resource kits related to curriculum and instruction that promote use of the Rigor/Relevance Framework. These resources are referenced in this publication.

The most valuable companion product to this kit is the *Rigor and Relevance Handbook*. This publication for teachers serves as a handy reference to key concepts and ideas presented in the kit. It is recommended that when working with teachers using the activities in this kit, you provide all teachers a copy of the handbook. Appropriate pages in the Rigor/Relevance Handbook are referenced throughout this kit.

We hope that *Using the Rigor/Relevance Framework for Planning and Instruction* stimulates the imagination about the possibilities

for every student to achieve at a high level and for all teachers to be passionate about their work.

Chapter 1 – Why Application Instruction provides an overview of the research and underlying reasons why rigor and relevance should be the goals of all schools.

Chapter 2 – Rigor/Relevance Framework provides an in-depth explanation of how the Rigor/Relevance Framework is designed by combining the Knowledge Taxonomy and the Application Model. Examples from several subjects and grade levels help teachers apply the Framework to their teaching,

Chapter 3 – Planning Instruction is the heart of the resource kit. It makes a detailed examination of instructional planning. Included are recommendations and tools to create a more rigorous and relevant interdisciplinary curriculum to challenge students.

Chapter 4 – Designing Assessments – reviews best practices in creating assessments and scoring guides. Moving to high levels of rigor and relevance requires performance assessments.

Chapter 5 – Interdisciplinary Instruction provides suggestion on how to create high-quality interdisciplinary student work as one of the ways to add greater relevancy to learning. Also, discussed are tools and resources available for designing interdisciplinary instruction.

Chapter 6 – Raising the Level of Rigor and Relevance reviews some of the multiple ways that teachers can raise the level of both rigor and relevance in their teaching once they understand how to quantify rigor and relevance using the Rigor/Relevance Framework.

Chapter 7 – Suggestions for Administrators discusses the important role of instructional leaders in raising the rigor and relevance of instruction.

Chapter 8 – Professional Development Activities has an extensive list of tools and activities that can be used to help teachers understand and apply the Rigor/Relevance Framework. Professional development is not a rigid set of workshops but the flexible tools in this resources kit can be used in

individual mentoring sessions, small group curriculum work or staff meetings to help teachers understand and use the Rigor/Relevance Framework.

For your convenience, electronic versions of all tools and handouts are included on the CD-ROM. The DVD provides a video presentation, *Rigor and Relevance*, from the 12th annual Model Schools Conference.

Richard D. Jones, Ph.D.



Chapter 2 Rigor/Relevance Framework

Introducing the Rigor/Relevance Framework

The Rigor/Relevance Framework is a tool developed by staff of the International Center for Leadership in Education to examine curriculum, instruction, and assessment. The Rigor/Relevance Framework is based on two dimensions of higher standards and student achievement.

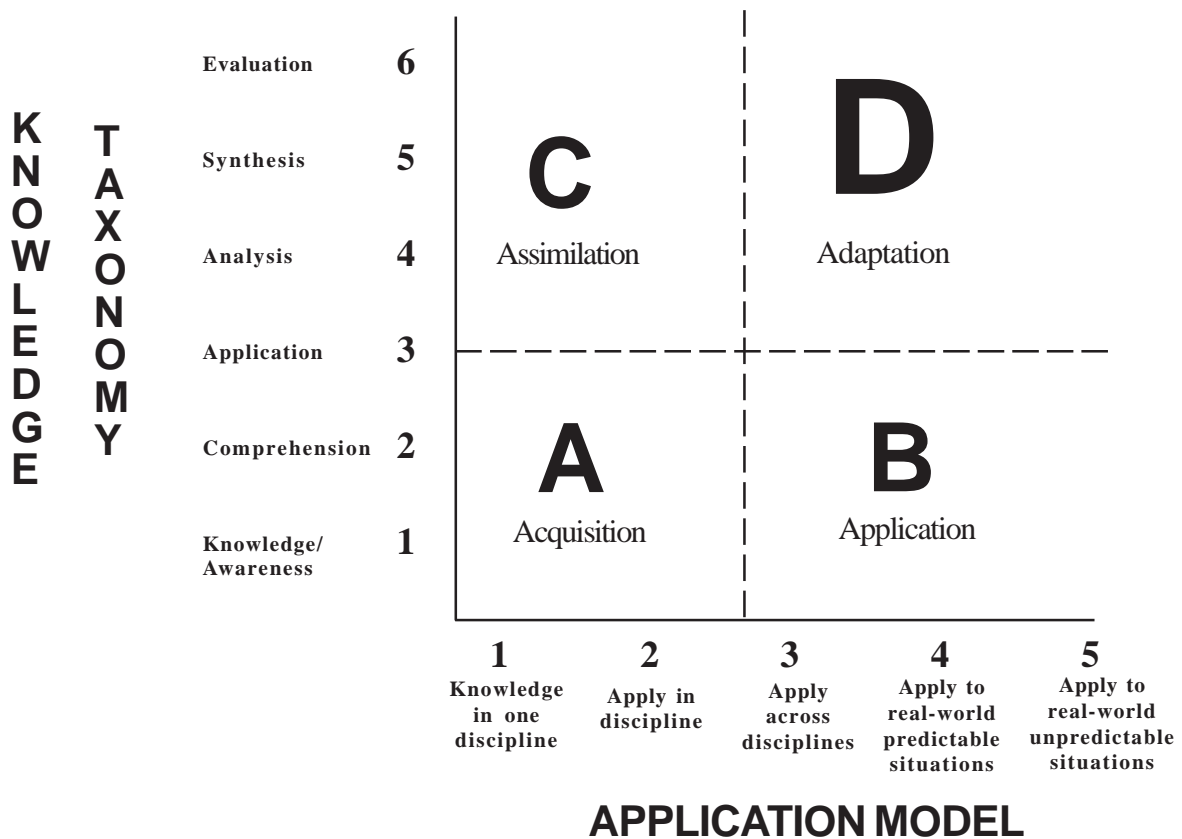
First, there is a continuum of knowledge that describes the increasingly complex ways in which we think. The Knowledge Taxonomy is based on the six levels of Bloom's Taxonomy: (1) awareness/knowledge, (2) comprehension, (3) application, (4) analysis, (5) synthesis, and (6) evaluation.

The low end of this continuum involves acquiring knowledge and being able to recall or locate that knowledge in a simple manner. Just as a computer completes a word search in a word processing program, a competent person at this level can scan through thousands of bits of information in the brain to locate that desired knowledge.

The high end of the Knowledge Taxonomy labels more complex ways in which individuals use knowledge. At this level, knowledge is fully integrated into one's mind, and individuals can do much more than locate information. They can take several pieces of knowledge and combine them in both logical and creative ways. Assimilation of knowledge is a good way to describe this high level of the thinking continuum. Assimilation is often referred to as a higher-order thinking skill; at this level, the student can solve multistep problems and create unique work and solutions.

The second continuum, known as the Application Model, is one of action. The five levels of this continuum – (1) knowledge in one discipline, (2) apply in discipline, (3) apply across disciplines, (4) apply to real-world predictable situations, and (5) apply to real-world unpredictable situations – describe putting knowledge to use. While the low end is knowledge acquired for its own sake, the high end signifies action – use of that knowledge to solve complex real-world problems and to create projects, designs, and other works for use in real-world situations.

Rigor/Relevance Framework



The Rigor/Relevance Framework has four quadrants. Quadrant A represents simple recall and basic understanding of knowledge for its own sake. Quadrant C represents more complex thinking but still knowledge for its own sake. Examples of Quadrant A knowledge are knowing that the world is round and that Shakespeare wrote *Hamlet*.

Quadrant C embraces higher levels of knowledge, such as knowing how the U.S. political system works and analyzing the benefits and challenges of the cultural diversity of this nation versus other nations.

Quadrants B and D represent action or high degrees of application. Quadrant B would include knowing how to use math skills to make purchases and count change. The ability to access information in wide-area network systems and the ability to gather knowledge from a variety of sources to solve a complex problem in the workplace are types of Quadrant D knowledge.

Each of these four quadrants can also be labeled with a term that characterizes the learning or student performance.

Quadrant A — Acquisition

Students gather and store bits of knowledge and information. Students are primarily expected to remember or understand this acquired knowledge.

Quadrant B — Application

Students use acquired knowledge to solve problems, design solutions, and complete work. The highest level of application is to apply appropriate knowledge to new and unpredictable situations.

Quadrant C — Assimilation

Students extend and refine their acquired knowledge to be able to use that knowledge automatically and routinely to analyze and solve problems and create unique solutions.

Here is an example involving technical reading and writing.

Quadrant A

Recall definitions of various technical terms.

Quadrant B

Follow written directions to install new software on a computer.

Quadrant C

Compare and contrast several technical documents to evaluate purpose, audience, and clarity.

Quadrant D

Write procedures for installing and troubleshooting new software.

Quadrant D — Adaptation

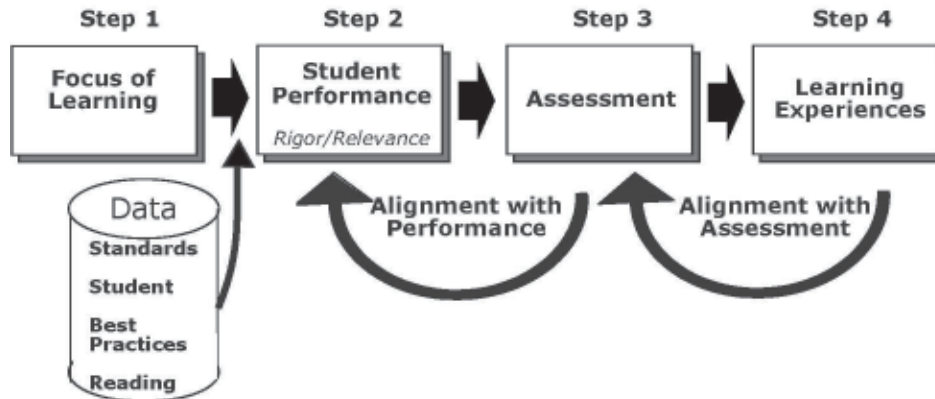
Students have the competence to think in complex ways and also apply the knowledge and skills they have acquired. Even when confronted with perplexing unknowns, students are able to use extensive knowledge and skills to create solutions and take action that further develops their skills and knowledge.

A Fresh Approach

The Rigor/Relevance Framework is a fresh approach to looking at curriculum standards and assessment. It is based on traditional elements of education yet encourages movement to application of knowledge instead of maintaining an exclusive focus on acquisition of knowledge.

The Rigor/Relevance Framework is easy to understand. With its simple, straightforward structure, it can serve as a bridge between school and the community. It offers a common language with which to express the notion of a more rigorous and relevant curriculum and encompasses much of what parents, business leaders, and community members want students to learn. The Rigor/Relevance Framework is versatile; it can be used in the development of instruction and assessment. Likewise, teachers can use it to measure their progress in adding rigor and relevance to instruction and to select appropriate instructional strategies to meet learner needs and higher achievement goals.

Planning Rigorous and Relevant Instruction



Step 1 - Focus of Instruction

What defines or drives the learning?

- What is the subject, grade level, topic, area, theme, setting, or concepts?
- What are the important connections (standards, other disciplines)?

Step 2 - Student Performance

What are students expected to know, do, or be like and at what level of rigor and relevance?

- What student work will be used to facilitate learning?
- What standards are addressed in this learning?

Step 3 - Assessment

How will you assess desired student performance?

Step 4 - Learning Experience

What activities will enable students to achieve student performance?

- What content will students need know?
- What are the essential questions?
- What will be the launching activity?
- What strategies will be used?
- What are the learning steps? Teacher? Student?
- How will learning be extended?
- What resources are needed?

Checklist for Rigorous and Relevant Teaching and Learning

The teaching design

- Is planned using data on students and curriculum.
- Is clearly linked to priority state standards.
- Has an expectation for levels of rigor and relevance.
- Uses appropriate assessments aligned with the rigor and relevance of expectations.
- Is clearly guided by big ideas and essential questions.
- Uses strategies that are aligned with the rigor and relevance of expectations.
- Includes the knowledge and skills necessary for expected student performance.
- Uses authentic performance tasks calling for students to demonstrate their understanding and apply knowledge and skills.
- Uses clear evaluation criteria and performance standards evaluations of student products and performances.
- Uses a variety of resources. The textbook is only one resource among many.

The classroom

- Has student work and essential questions as central to classroom activities.
- Has high expectations and incentives for all students to achieve the expected performance.
- Has a culture that treats students and their ideas with dignity and respect.
- Displays evaluation criteria or scoring guides.
- Has samples of high-quality student work on display.

The teacher

- Informs students of the expected performance, essential questions, performance requirements, and assessment criteria at the beginning of the lesson or unit.
- Engages students' interest when introducing a lesson.
- Uses a variety of strategies that match the expected level of rigor and relevance and learning styles of students.
- Facilitates students' active construction of meaning (rather than simply telling).
- Effectively uses questioning, coaching, and feedback to stimulate student reflection.
- Facilitates student acquisition of basic knowledge and skills necessary for student performance.
- Differentiates instruction to meet individual student needs.
- Adjusts instruction as necessary on reflection and feedback from students.
- Uses information from ongoing assessments to check for student learning and misconceptions along the way.
- Uses a variety of resources to promote understanding.

The students

- Can describe the goals (student performance) of the lesson or unit.
- Can explain what they are doing and why (i.e., how today's work relates to the larger unit or course goals).
- Are engaged throughout the lesson or unit.
- Can describe the criteria by which their work will be evaluated.
- Are engaged in activities that help them to apply what they have learned.
- Demonstrate that they are learning the background knowledge and skills that support the student performance and essential questions.
- Have opportunities to generate relevant questions.
- Are able to explain and justify their work and their answers.
- Use the criteria or scoring guides to revise their work.

Chapter 8

Professional Development Activities

Selecting Activities for Various Audiences

The professional development activities in this chapter are designed as short separate activities. They can be combined to create engaging professional development designed for each appropriate audience and setting. The following table suggests activities for various audiences.

Audience and Setting	Suggested Activities
90-minute introduction to teachers who have no previous introduction to the Rigor/Relevance Framework	3 Discovering Levels of Learning 5 Setting the Level of Application 6 Determining Levels of Rigor and Relevance 7 Identifying Rigor and Relevance 8 Rigor/Relevance Challenge
90-minute introduction to teachers who have some familiarity with the Rigor/Relevance Framework	7 Identifying Rigor and Relevance 8 Rigor/Relevance Challenge 15 Determining Levels of Test Questions 16 Assessment Challenge 20 Rigorous Relevant Lesson Reflection
Full-day workshop to introduce the Rigor/Relevance Framework	1 How Does It Feel To Be Learning? 4 Setting the Level of Knowledge 5 Setting the Level of Application 6 Determining Levels of Rigor and Relevance 7 Identifying Rigor and Relevance 8 Rigor/Relevance Challenge 13 Linking Standards and Student Work 15 Determining Levels of Test Questions 16 Assessment Challenge 20 Rigorous Relevant Lesson Reflection

Audience and Setting

Suggested Activities

<p>Full-day workshop with a focus on the Rigor/Relevance Framework and assessment</p>	<p>1 How Does It Feel To Be Learning? 5 Setting the Level of Application 6 Determining Levels of Rigor and Relevance 13 Linking Standards and Student Work 14 Setting Clear Expectations: What Do You Want? 15 Determining Levels of Test Questions 16 Assessment Challenge 17 Developing Analytic Scoring Guides 20 Rigorous Relevant Lesson Reflection</p>
<p>Full-day workshop with a focus on the Rigor/Relevance Framework and interdisciplinary instruction</p>	<p>1 How Does It Feel To Be Learning? 2 How Do You Learn? 5 Setting the Level of Application 6 Determining Levels of Rigor and Relevance 7 Identifying Rigor and Relevance 8 Rigor/Relevance Challenge 10 Identifying Community Resources 12 Mapping Across Disciplines 13 Linking Standards and Student Work 18 Developing Instructional Plans 23 Brainstorming Student Work in Multiple Disciplines 25 Standards Alignment</p>
<p>Full-day workshop with a focus on the Rigor/Relevance Framework and instruction</p>	<p>1 How Does It Feel To Be Learning? 2 How Do You Learn? 5 Setting the Level of Application 6 Determining Levels of Rigor and Relevance 7 Identifying Rigor and Relevance 8 Rigor/Relevance Challenge 13 Linking Standards and Student Work 18 Developing Instructional Plans 19 Data-driven Curriculum 20 Rigorous Relevant Lesson Reflection 21 Lesson Review 26 Put It In Writing!</p>

Activity 8



Rigor/Relevance Challenge

Time 10–15 minutes

Purpose

This activity reinforces the Rigor/Relevance Framework and encourages teachers to think about creative instructional activities that will raise the level of instruction.

Materials

- Index cards (one per group)

Procedure

1. Working in groups of 5–6, have participants brainstorm instructional topics for any subject which are generally taught at low levels of the Rigor/Relevance Framework — Quadrant A. Encourage participants to think of a low-level memorization assignment through which they or their children suffered. Some examples are: defining vocabulary words, identifying mechanical devices in physics, math operations (addition, etc.).
2. Have the groups select one of their topics that is a good candidate for improvement and write it on an index card.
3. Collect the cards and redistribute them, making sure no group gets its card back.
4. Have the groups write a skill and knowledge statement for the topic which is in Quadrant D of the Rigor/Relevance Framework. They should then suggest at least one instructional activity that would raise student performance to the stated level.
5. Have groups report on: (1) their assigned skill, (2) the higher level that is their target on the Rigor/Relevance Framework, and (3) their instructional activities.

Suggestions

A motivational twist can be added by appointing a couple of judges and giving a prize to the group that is most creative. The activity can also be expanded to have participants use a Rigor/Relevance Worksheet to create skill and knowledge activities for Quadrants B, C, or D.