Multiple Intelligence Approaches to Assessment

Solving the Assessment Conundrum

David Lazear

Foreword by Grant Wiggins

Multiple Intelligence Approaches to Assessment

Multiple Intelligence Approaches to Assessment
Solving the Assessment Conundrum

Grades K-12

© 1999, 2004 by David Lazear

Editors: Stacey Lynn and Stacey Shropshire
Design and production: Nancy Taylor and Daniel Miedaner
Cover art and design: Daniel Miedaner
Illustrations: John W. Reedy

First published in 1999 by Zephyr Press.
Original ISBN: 0-913705-95-0

UK paperback edition published by:
Crown House Publishing Ltd
Crown Buildings, Bancyfelin, Carmarthen, Wales SA33 5ND, UK
www.crownhouse.co.uk

Current edition published 2004. Reprinted 2004.

All rights reserved. The purchase of this book entitles the individual teacher to reproduce the forms for use in the classroom. The reproduction of any part for an entire school or school system or for commercial use is strictly prohibited. No form of this work may be reproduced, transmitted, or recorded without written permission from the publisher.

British Library Cataloguing-in-Publication Data
A catalogue entry for this book is available from the British Library.

ISBN 1904424481

Printed and bound in the UK by
Antony Rowe Ltd
Chippenham

Contents

List of Assessment Forms viii

Foreword ix

Preface x

Prologue: The Face of the Conundrum xii

1. An Emerging New Paradigm of Assessment 1
   - The Old Paradigm vs the New Paradigm 5
   - Individual Student and Teacher Differences 8
   - Developmentally Appropriate Education 10
   - A Holistic Picture of Human Beings 11
   - The Importance of Process vs Content 12

2. Eight Ways of Knowing: A Developmental Perspective 14
   - The Old Paradigm: A Deficit-Based Approach to Intelligence Testing 15
   - Teaching Intelligence: The Developmental Levels Defined 18
   - The Intelligence Development Pathways: A Foreword (and Disclaimer) 19
   - What About Report Cards? 40

3. Intelligence and Ability Testing Revisited: Creating Student Intelligence Profiles 42
   - Student Behavior Log 45
   - Intelligence Skill Games 49
   - Intelligence Foci 53
   - Complex Problem Solving 58
   - Inventing 63

4. Prescriptions for Expanding and Enhancing Intelligence: Using Intelligence Profiles to Help Students 69
   - Verbal-Linguistic Profile Dominance 70
   - Logical-Mathematical Profile Dominance 71
   - Visual-Spatial Profile Dominance 72
   - Bodily-Kinesthetic Profile Dominance 73
   - Musical-Rhythmic Profile Dominance 74

Interpersonal Profile Dominance 75
Intrapersonal Profile Dominance 76
Naturalist Profile Dominance 77
Strength or Weakness: Where Should We Focus? 78

5. Assessing Student Academic Progress: Toward Creating Authentic Assessments 81
New Standards: What Should We Be Looking For? 87
Authentic Assessment: Toward a Definition 88

6. Multiperceptual Formal Testing: Assessing Student Academic Progress 102
Intelligence-Based Assessment Guidelines 104
Using the Multiple Intelligence Assessment Menu to Design Tests 130
Scoring Multiperceptual Tests 134

7. Classroom-Based Informal Assessment: Practices for Ongoing Evaluation of Students 141
Student Portfolios 142
Metacognitive "Process-folios" 145
Personal Reflective Journals and Logs 148
Transfer of Learning 154
Anecdotal Reporting Model 156
Domain Projects, Exhibits, Performances, and Displays 158

Epilogue: Redefining the Boundaries of Education 161

Appendix: Intelligent Report Card Models 175

Bibliography 186

Index 190

Assessment Forms

Verbal-Linguistic Capacities Developmental Journey 24
Logical-Mathematical Capacities Developmental Journey 26
Visual-Spatial Capacities Developmental Journey 28
Bodily-Kinesthetic Capacities Developmental Journey 30
Musical-Rhythmic Capacities Developmental Journey 32
Interpersonal Capacities Developmental Journey 34
Intrapersonal Capacities Developmental Journey 36
Naturalist Capacities Developmental Journey 38
Student Behavior Log 45
Intelligence Skill Games 49
Intelligence Foci 53
Complex Problem Solving 58
Inventing 63
Multiple Intelligences Profile Indicator 68
Verbal-Linguistic Intelligence Instruments 106
Logical-Mathematical Intelligence Instruments 109
Visual-Spatial Intelligence Instruments 112
Bodily-Kinesthetic Intelligence Instruments 115
Musical-Rhythmic Intelligence Instruments 118
Interpersonal Intelligence Instruments 121
Intrapersonal Intelligence Instruments 124
Naturalist Intelligence Instruments 127
A Model for Creating Student Portfolios 144
A Model for Metacognitive Process-folios 147
Thinking Logs 149
Before-and-After Scenarios 149
Snapshots of the Past and Present 150
Chart Your Moods 151
Stepping Stones of the Future 152
Multimodal Reflection Log 153
Andecdotal Reporting Model 157
Domain Projects, Exhibits, Performances, and Displays 158
Sample Report Cards 176

Situation 2

Mr. and Mrs. Kringle were shocked by the report card their third-grade daughter, Andrea, brought home from school.She had been so excited about school and what she had been learning during the term. They felt she was not only gaining very valuable information from the various subjects she was studying, but that she was acquiring many important life skills. They had also noted significant growth and development of her knowledge and skills throughout the term. Why, then, did she bring home a report card that did not reflect any of this?

Situation 3

Chris, a high school sophomore, was depressed by the score he received on the final test in his American history class. He felt that the test wasn't fair because it did not test in the same ways he had learned and studied the material. In the learning situation, he had been given opportunities to master the material in a wide variety of ways: in cooperative learning groups; through art, music, dance, and drama; and through more traditional learning modes. With the exception of the traditional modes, however, none of these was included on the test! Chris knew that he knew and understood the material. The written test was just too limiting and did not allow him to demonstrate the fullness of his learning.

These three scenarios perfectly illustrate what I call "the assessment conundrum"; namely, our students almost always know, understand, and have learned much, much more than they can demonstrate on any tests we must administer. And yet, we educators are required by school boards, legislatures, and taxpayers, who pay for public education, to preoccupy ourselves with getting better and better test scores each year, even when we know that these test scores do not tell the whole story of what our students have learned, what they understand, and what they know about various subject areas. In *A True Test: Toward More Authentic and Equitable Assessment,* Grant Wiggins (1989) eloquently describes the conundrum we are facing: "When an educational problem persists despite the well-intentioned efforts of many people to solve it, it's a safe bet that the problem hasn't been properly framed. Assessment in education has clearly become such a problem since *every state reports above-average scores on norm-referenced achievement tests*

> get higher and higher test scores. To a great extent, my evaluation as an educator, by my administrators, peers, and community, to say nothing of my salary level, rests mainly on this.
>
> I got into the teaching profession because I wanted to serve the needs of the next generation of Americans by providing them with the skills and knowledge they would need to function effectively and successfully in the world. Who am I in fact serving? College admissions officers, school board policy-makers (whose major concerns are often more political than in the best interests of students), district schedule-makers, school board/district budget committees, and secretaries who want a simple formula for entering grades into computers. Why do all of these concerns take precedence over the needs of students?
>
> Where do our state legislators come up with their "mandates" for school reform? Do they even have a clue what goes on in schools today and who the student population is? Do they know that the world has changed from when they went to school, and that therefore schooling, which is supposed to prepare students to live effectively in this new world, must be different, as well? How many of them are even marginally aware of the most up-to-date educational research on effective teaching, learning, and human development? I feel like we (students and teachers alike) are often nothing more than pawns in their political chess games.

In an article that appeared in *Educational Leadership,* Carl Glickman (1991) summarizes this teacher's frustrations and the moral dilemma as follows:

> For too long, professionals have gone about the business of teaching and operating schools in ways they privately admit are not in the best interests of students. The reasons for doing so are plentiful—we all live with district policies, state regulations, traditional school structures, mandated curriculum alignment, community pressures, and limited resources . . .
>
> We must confront our knowledge and use it to guide our efforts; then we must operate our schools in different ways, using our knowledge . . . We [must] ask that the school be the center for professional decisions where teachers and administrators control the priorities and means of helping students to learn.

This book is about confronting our knowledge and applying it to restructuring the assessment process in our schools. In so doing, I believe that assessment can become a profound means for enhancing and deepening the learning of our students and for giving back to teachers the *raison d'être* that led most of them to enter the vocation of being a professional educator.

Bodily-Kinesthetic Capacities Development Evaluation

(1 = low interest; 2 = consistent growth; 3 = high interest)

Basic Level

	1	2	3
automatic physical reflexes			
simple motor skills			
physical independence			
environment-control actions			
goal-oriented actions			

Complex Level

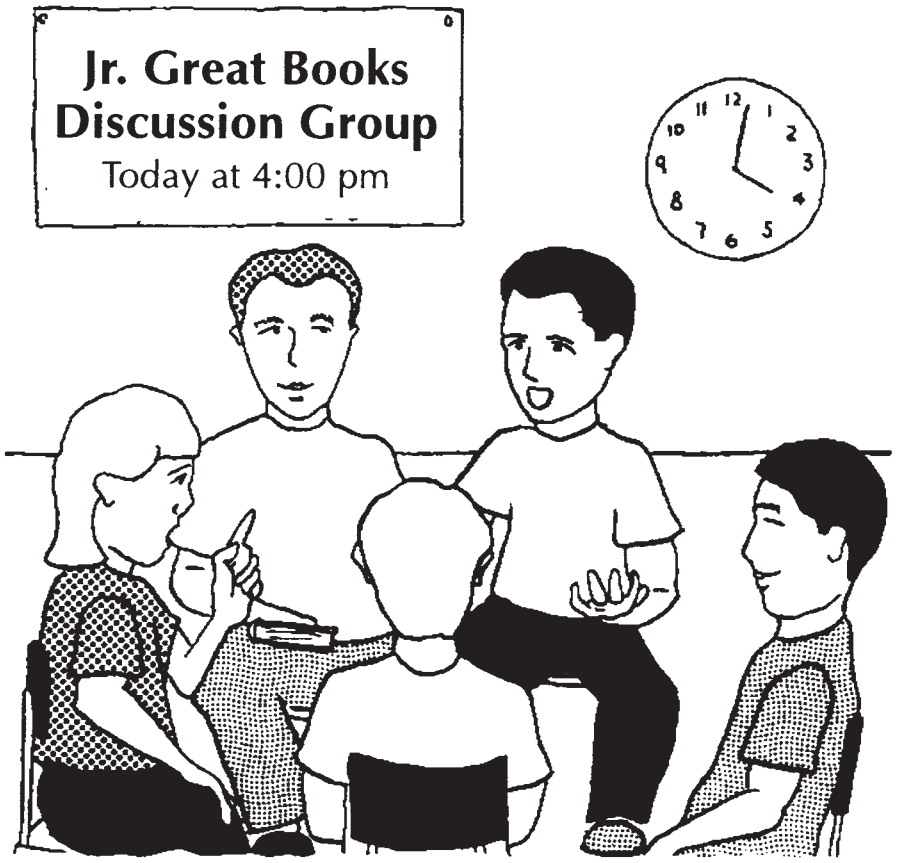
	1	2	3
gestures, body language			
coordinated motor skills			
role-play, charades			
body exercise routines			
hands-on creation tasks			

Coherence Level

	1	2	3
invention activities			
expressive body movements			
enactment of complex scenes			
complex physical movements			
goal-oriented movements			

NOTES

Intelligence Foci



Procedure

Show students a film, play, or TV show that includes fine representations of the intelligences—beautiful scenery, great soundtrack, lots of action, good script, and so on. Afterward, lead students in a discussion, carefully listening to what they focused their attention on, what captured their imagination, and what they liked or disliked.

Intelligence Foci

Student Name: _____ **Age:** ____ **Date of Observation:** _____

Verbal-Linguistic Discussion Questions **0 1 2 3 4**
What lines of dialogue do you remember?
What were some of the key words, phrases, or figures of speech used?
What written words do you remember from any of the scenes?

Logical-Mathematical Discussion Questions **0 1 2 3 4**
Where were you aware of the use or presence of patterns?
What do you think would happen in a sequel to what you have seen?
How would you compare and contrast the major characters?

Visual-Spatial Discussion Questions **0 1 2 3 4**
What scenes do you remember?
What physical objects do you remember? What colors?
What visual patterns? What symbols were used?

Bodily-Kinesthetic Discussion Questions **0 1 2 3 4**
What action scenes can you recall?
What gestures and physical movements did the main characters use?
Where were you aware of movement of any kind?

Musical-Rhythmic Discussion Questions **0 1 2 3 4**
What sounds and noises do you remember?
Where were you aware of music being used?
Can you hum any of the themes?
What sounds or music would you add to the production if you could?

Interpersonal Discussion Questions **0 1 2 3 4**
What are your observations about how the various characters related?
If you could have one of the characters as a friend,
who would you choose? Why?
What role would you assign each main character on a team
or in a cooperative group?

Intrapersonal Discussion Questions **0 1 2 3 4**
Where were you aware of your own emotions and feelings?
With whom did you identify? Whom did you dislike and why?
In a sentence, state what you think the message or moral is.
What title would you give the film?

Naturalist Discussion Questions **0 1 2 3 4**
What natural settings do you remember? What objects? What animals?
If you could go to any natural place, where would you go? Why?
Which of your senses "got turned on" by the scenes from nature?

Multiple Intelligence Approaches to Assessment © 1999 Zephyr Press, Tucson, Arizona

Intelligence Foci Scoring

Instructions

1. During the discussion, try to detect the different intelligences students used when watching the movie, play, or TV show. Listen for clues such as those listed below, which reveal different ways in which students are processing the production. Rank the students based on the frequency and intensity of their comments using the following criteria:

> **0** = unable to recall information related to the questions; is bored by these kinds of questions
>
> **1** = recalls mostly items already mentioned by others; shows little interest in these questions
>
> **2** = remembers new things that piggyback on or are related to others' responses; shows some interest in answering these questions but loses interest quickly
>
> **3** = recalls new items from contexts and situations not mentioned previously; demonstrates an appreciation for subtleties of things in the area; interprets the meaning of specific items; items from the discussion of one intelligence trigger responses from another intelligence
>
> **4** = keeps coming back to items from this area; shows genuine appreciation for and excitement about questions related to this area; based on information from this area, is able to hypothesize, empathize, analyze, and perform higher-order cognitive tasks related to the larger story; sees connections between items and questions in this area and everyday living

Clues for Listening between the Lines of the Discussion

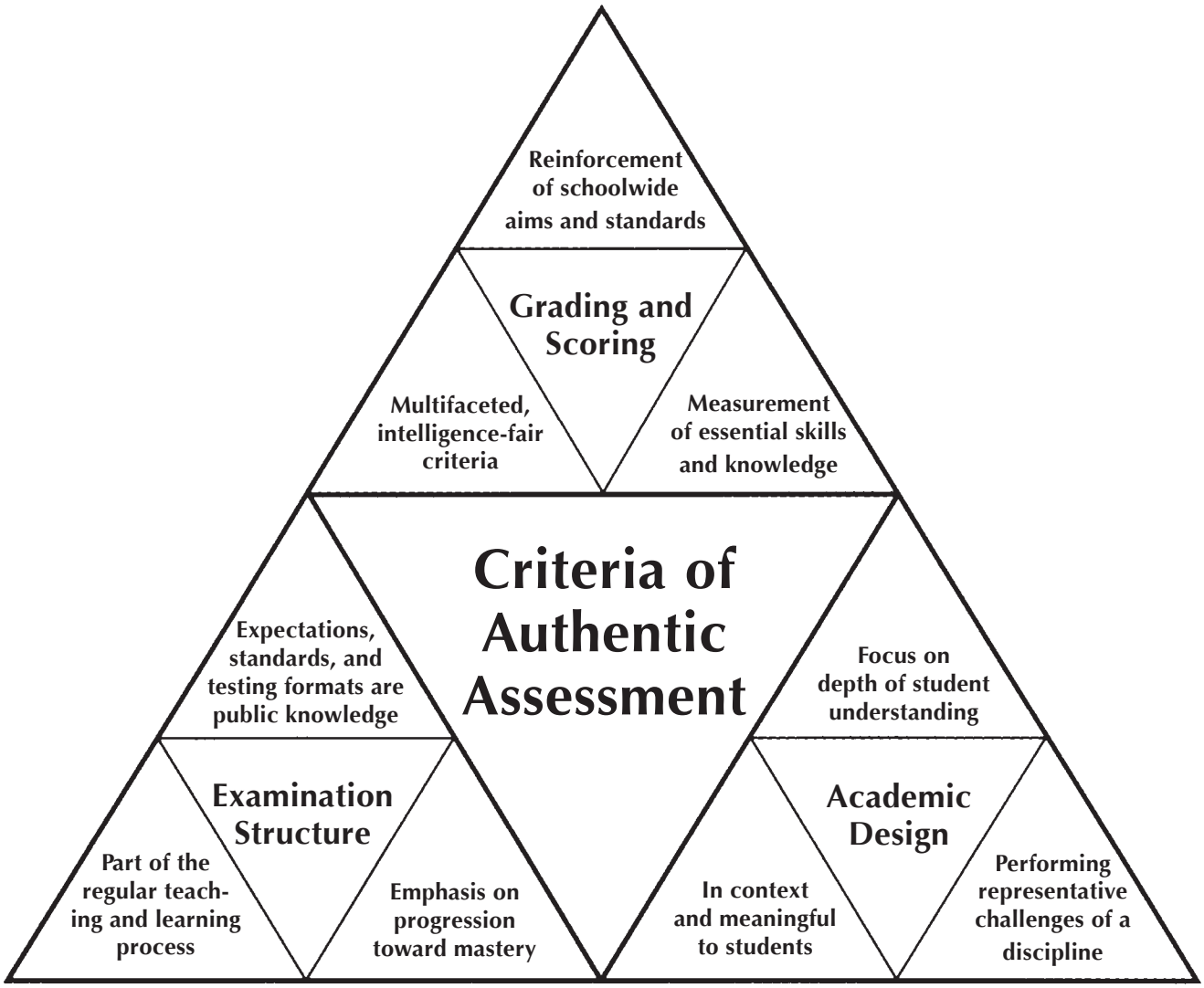
(What to be looking for)

VERBAL-LINGUISTIC

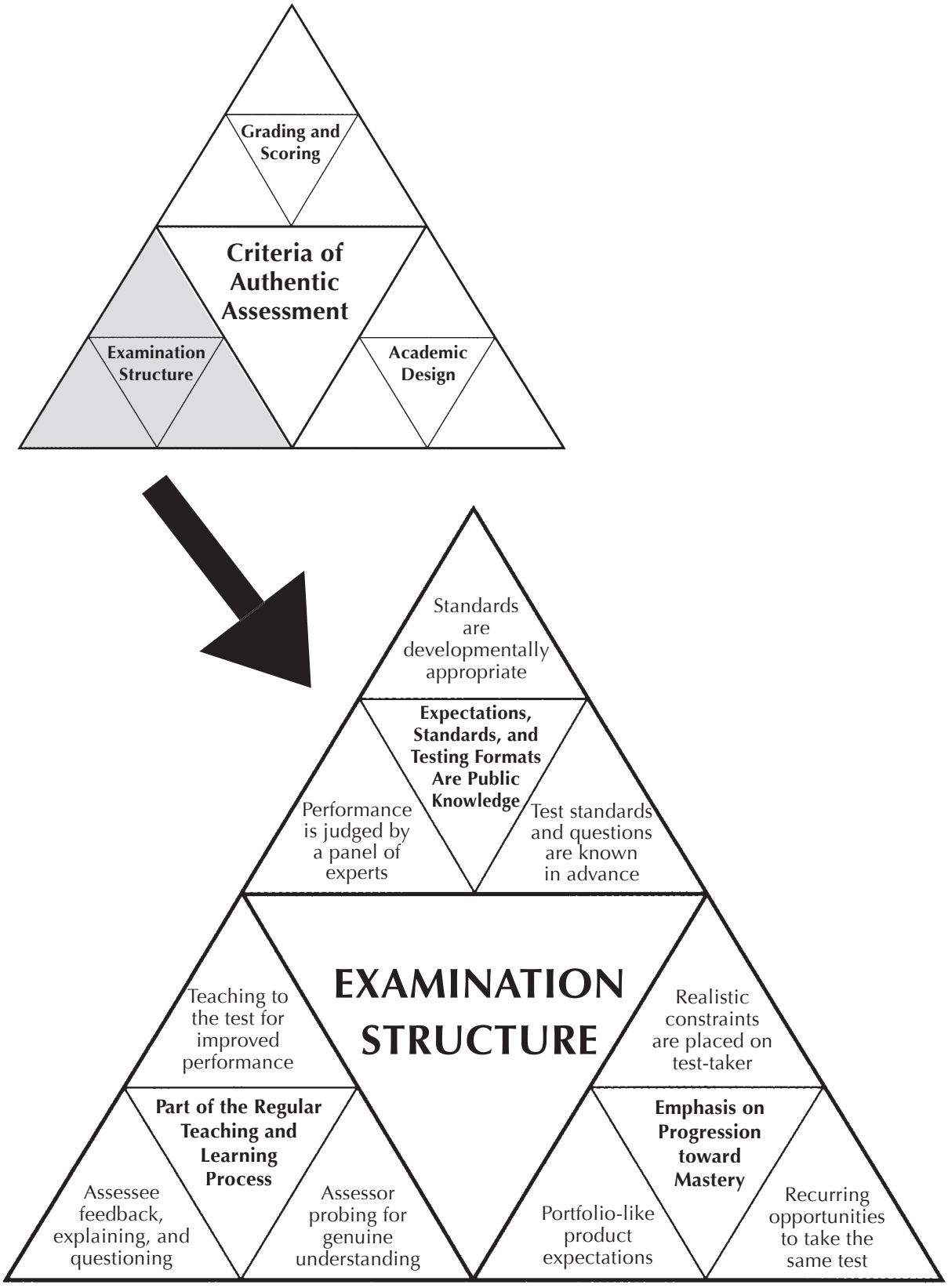
- remembers specific phrases and patterns of speech
- interprets characters primarily through their speech
- easily recalls written and verbal information from the production
- appreciates linguistically based humor

LOGICAL-MATHEMATICAL

- grasps thought and behavior patterns of various characters
- tries to figure out what is going to happen next based on clues
- analyzes cause-and-effect relationships
- notices and points out various motifs in the story



Multiple Intelligence Approaches to Assessment © 1999 Zephyr Press, Tucson, Arizona


Grading and Scoring
Criteria of Authentic Assessment
Examination Structure
Academic Design
Standards are developmentally appropriate
Expectations, Standards, and Testing Formats Are Public Knowledge
Performance is judged by a panel of experts
Test standards and questions are known in advance
EXAMINATION STRUCTURE
Teaching to the test for improved performance
Part of the Regular Teaching and Learning Process
Assessee feedback, explaining, and questioning
Assessor probing for genuine understanding
Realistic constraints are placed on test-taker
Emphasis on Progression toward Mastery
Portfolio-like product expectations
Recurring opportunities to take the same test

Personal Reflective Journals and Logs

As far as we know, human beings are the only creatures who have the ability to be self-reflective. That is, we possess self-consciousness: the unique capacity to step back from ourselves and watch ourselves involved in any activity. And, what is more, we can alter our behavior even in the midst of it.

This self-reflective or self-awareness dynamic is at the heart of the learning process. It is key to helping students grasp the personal implications of what they are studying. Most of what we learn at deep levels has meaning for us personally. We can learn an immense amount about students' understanding of various concepts if we read between the lines or listen between the words of their personal reflections on the meanings and interpretations they give to what they have learned.

One of the best ways to provide yourself with the opportunity to read between the lines is to encourage students to keep reflective journals or logs to help them be aware of their thoughts, feelings, learnings, questions, and ideas. In *Patterns for Thinking, Patterns for Transfer,* Jim Bellanca and Robin Fogarty (1989) describe the possibilities inherent in thinking logs:

> Writing in the thinking log may take many forms. It may be a narrative, a quote, an essay, jotting, a drawing, a cartoon, a diagram, webs or clusters, a soliloquy, a riddle, a joke, doodles, an opinion, a rebuttal, a dialogue, a letter, a flowchart, or just an assortment of phrases and ideas.
>
> The entries may be reflective, evaluative, questioning, personal, abstract, introspective, cynical, incomplete, revealing, humorous, communicative, thoughtful, poetic, rambling, formative, philosophical, or none of the above. There are no right or wrong answers to do the log. It's just a log of one's thinking—whatever that thinking may be. It's a personal record of the connections being made within the framework of the student's cognitive capacities and their experiences. (226–27)

Following are five models for creating student journals and logs that I suggested in *Seven Ways of Teaching* (Lazear 1991). I have also included an experimental personal reflection log adapted from one in *Seven Ways of Knowing* (Lazear 1991) that suggests a multimodal journaling and logging process. Each model asks students to reflect on the import of a lesson in a particular way. Journals can involve a variety of modes of reflecting, including writing, drawing, painting, sculpting, role-playing, and dancing. As an assessment tool, journals and logs can help us discern the personal impact of lessons on students, and through students' reflections we can often grasp the relative depth and accuracy of their understanding of what we have been teaching.

Multiple Intelligence Approaches to Assessment © 1999 Zephyr Press, Tucson, Arizona

Models for Student Journals

1. "THINKING LOGS"* *(to process lesson content)*

The main thing I'll remember is . . .
A new insight or discovery is . . .
I really understood . . .
I'm really confused about . . .
Something I can use beyond school is . . .
Connections I'm making with other things I know are . . .

2. BEFORE-AND-AFTER SCENARIOS* *(to process the impact of a lesson)*

Analyze the impact of a unit or lesson on yourself using this chart.

	BEFORE THE UNIT OR LESSON	AFTER THE UNIT OR LESSON
Feelings about it		
Thoughts about it		
Associations with it		
Images or pictures in mind		

Now write "How I'm different as a result of this unit or lesson."

* These models are adapted from Lazear, David. *Seven Ways of Teaching: The Artistry of Teaching with Multiple Intelligences*. Palatine, Ill.: Skylight, 1991.

"David Lazear has taken Howard Gardner's ideas and made them accessible to every teacher."

Grant Wiggins, Director of Research and Programs
Center on Learning Assessment and School Structure (CLASS)

We are now entering the modern age of education in which we tailor learning to suit the learner instead of making students adapt to necessarily narrow teaching styles and methods.

The multiple intelligence approach to education can make a big difference to the lives of your students. But the question is:

HOW DO WE ASSESS THIS KIND OF LEARNING?

Based on Howard Gardner's model of Multiple Intelligences, this excellent book on multiperceptual testing details more than 1,000 specific ideas designed to help teachers accurately assess children's academic progress. Covering the subject areas of Maths, English, History, Geography, Science, PSHE and practical and fine arts, it allows the teacher to observe and score children involved in various activities and learning tasks with 5 "Student Watch" assessment instruments and shows how to create intelligence profiles based on their observations.

Using the Multiple Intelligences model enhances and deepens the learning of students and increases student achievement. This comprehensive text also gives practical prescriptive ideas on how to teach to varying intelligence strengths.

David Lazear is the founder of New Dimensions of Learning, an organisation that trains educators and business people to apply cutting-edge research on multiple intelligences and other brain-friendly approaches to instruction and business. He has many years' international experience in applying MI theory in practical ways to classrooms, schools and business.

Crown House Publishing Limited
www.crownhouse.co.uk
www.chpus.com

ISBN 978-190442448-2
9 781904 424482 90000