t was the last day of the summer workshop, and the language arts teachers didn’t want to
stop talking about what they’d discovered—a way to elicit more challenging work from
their students. “In my school, we’re interested in increasing the intellectual quality of
the work our students do, but this is the first opportunity I’ve had to really talk about
what that might look like in their writing,” volunteered Lucinda. “My colleagues and I teach
using the writing process,” said Judy, “and our students are writing more than ever. This year
we plan to devote departmental meetings to discussing not only how they’re writing, but also
what they’re writing. These criteria will help us guide those conversations.”

As facilitators for the project that had brought them together, we listened intently to our
teacher-colleagues describe how they planned to incorporate the summer’s experiences in their schools
and classrooms. The goal of the project was to assess the intellectual quality of writing produced in
Chicago’s public schools. The teachers had analyzed writing assignments and students’ work, using cri-
teria that the authors of this article and Fred Newmann had developed to describe what we call
Authentic Intellectual Achievement (AIA) in writing. The enthusiasm and feedback of our teacher-
colleagues confirmed our belief that the research effort we’d been involved in for several years could
help teachers in their daily classroom practice.

**Considering Constructivism and Authenticity**

The theory of AIA draws on theories of, and invites new conversations on, constructivism and authen-
ticity. Constructivism, perhaps best understood as a theory about learning that suggests new ways to
think about our teaching (Cohen, McLaughlin, and
Talbert; Einbender and Wood; Newmann and As-
Associates), argues that students learn best when they acquire strategies to construct new knowledge from
interactions between what they already know and information they encounter in new social contexts.
Constructivism challenges views of the learning process as a “transmission of information to passive re-
ceivers” (Newmann, Marks, and Gamoran 284). Research indicates that constructivist practices can
boost achievement on both conventional measures, such as standardized tests, and performance-based
ones, such as portfolios. What’s more, all students can benefit. (For a discussion of these practices
for disadvantaged children, see Knapp, Shields, and Turnbull.)

Constructivism does not prescribe specific teaching practices; rather, it asks us to think differently about how students learn. A teacher following constructivist philosophy may, for instance, incorporate students’ prior experiences into lessons, emphasize higher-order thinking and problem-solving, ask students to demonstrate understanding through a variety of forms of expression, and encourage collaboration and experimentation. Many consider the writing process essentially constructivist, as it advocates such practices as discovering one’s own voice,
writing on topics of personal interest, and encouraging feedback from real audiences (Grabe and Kaplan 87).

These activities might also be called authentic, and the theory of AIA asks us to think carefully about what we mean by that term. Authentic has been used synonymously with performance to suggest instructional activities that physically resemble real-world activities. This carries the risk of allowing student participation in an activity to stand as the goal of the activity, without regard to the intellectual quality of the work students perform or produce. This may be particularly dangerous in the writing classroom, where the very act of writing may be seen as authenticating the writing assignment. We use the term authentic to describe the cognitive connections that an assignment demands. In this spirit, we see meaningful work in school as preparation for the future intellectual demands of productive employment, responsible citizenship, and successful management of personal affairs.

In other words, when students conduct disciplined inquiry in the pursuit of constructing new knowledge concerning a topic, issue, or situation that has personal meaning, then they are preparing for the intellectual demands of adult society.

Translating AIA into Criteria for Language Arts

To study the quality of intellectual work in writing in Chicago's schools, we translated these principles into three criteria for teachers' writing assignments and three for the writing that students completed in response to these assignments.

Let us clarify two assumptions. First, we hope these criteria will serve as guidelines and conversation starters, not absolute standards or a rubric for assigning grades. Our criteria do not offer a comprehensive measure of good writing, but a way of looking at authentic intellectual work in writing; other qualities of good writing, such as organization and voice, are not addressed here. We certainly do not intend to challenge the writing process, but to offer a way to discuss what students produce when they compose. Second, we do not assume that the only “good” assignments are ones that conform to our principles. We do not argue against basic skills or information, but ask that teachers also consider what students should do with those skills and that information. Would you want a car mechanic who didn’t know the parts of the engine to fix your car? Would you trust a historian who didn’t have the facts straight? Of course not. On the other hand, you would want the mechanic to be able to analyze what was wrong, and history does us little good if we don’t examine the causes and results of historical events.

Construction of Knowledge

Construction of knowledge (CK) evaluates the degree to which assignments call for and student work
demonstrates interpretation, analysis, synthesis, or evaluation. Assignments that emphasize CK ask students to move beyond reproducing information to apply one or more of these cognitive skills. An assignment that asks students to recount information on Mexico that they download from the Internet does not require them to construct knowledge to the same degree as does an assignment asking them to compare a Mexican village to their own neighborhoods. In turn, student work should go beyond paraphrasing information they read, heard, or viewed. Retelling the plot of Richard Wright’s *Black Boy* primarily involves reproducing information, whereas examining the novel to write about the effects of racism on a young boy in the South requires interpretation of the narrator’s motivations and analysis of his character.

We chose the terms interpretation, analysis, synthesis, and evaluation to capture a full range of cognitive processes; an assignment or piece of work needs only to target one of these cognitive skills to demonstrate CK. We do not see them as hierarchical, where evaluation, for example, represents a higher cognitive function than interpretation. (In this way, we differ significantly from Bloom’s taxonomy.) The boundaries between these skills are fluid rather than distinct, and we often apply more than one at a time. If we compare two political candidates, for example, we analyze their platforms, interpret their slogans and speeches, synthesize information from various sources, and evaluate their potential as leaders.

**Elaborated Written Communication**

Elaborated written communication (EWC) measures the extent to which an assignment asks students to elaborate, which by our definition requires students both to state an original point and support it with evidence. Applied to student work, this criterion evaluates the degree to which the work demonstrates elaboration. The original point may be a conclusion, a generalization, or an argument; the evidence may be examples, details, illustrations, facts, or reasons.

### Table 1.
**Newmann’s Theory of Authentic Intellectual Achievement As Applied to Writing**

<table>
<thead>
<tr>
<th>Newmann’s Principles</th>
<th>Criteria for Assignments in Writing</th>
<th>Criteria for Student Work in Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 <em>Construction of Knowledge:</em> Adult problems cannot be solved by routine, rote application of information, or skills.</td>
<td><em>Construction of Knowledge:</em> The assignment asks students to interpret, analyze, synthesize, or evaluate information in writing about a topic, rather than merely to reproduce information.</td>
<td><em>Construction of Knowledge:</em> Student performance demonstrates interpretation, analysis, or evaluation in order to construct knowledge, rather than merely to reproduce information.</td>
</tr>
<tr>
<td>2 <em>Disciplined Inquiry:</em> Adults use an <em>a priori</em> knowledge base, strive for in-depth understanding rather than superficial awareness, and express their ideas and findings through elaborated communication.</td>
<td><em>Elaborated Written Communication:</em> The assignment asks students to draw conclusions or make generalizations or arguments and support them through extended writing.</td>
<td><em>Elaborated Written Communication:</em> Student performance demonstrates an elaborated, coherent account that draws conclusions or makes generalizations or arguments and supports them with examples, details, illustrations, facts, or reasons.</td>
</tr>
<tr>
<td>3 <em>Value Beyond School:</em> Adults communicate ideas that have an impact on others beyond the simple demonstration that they are competent.</td>
<td><em>Connection to Students’ Lives:</em> The assignment asks students to connect the topic to experiences, observations, feelings, or situations significant to their lives.</td>
<td><em>Form and Conventions:</em> Student performance demonstrates proficiency in grammar, usage, mechanics, and vocabulary appropriate to grade level.</td>
</tr>
</tbody>
</table>

*Based on ideas first published in Newmann, Lopez, and Bryk.*
We stress that elaborated writing includes both original points and support, and it is coherent, which by our definition means that there is a logical connection between the original point and its support. Students are commonly asked to watch a movie, look at a picture, or read a text and then draw a conclusion about it, or to support a generalization with reasons, facts, or details. In the common parlance of the classroom, elaboration often means adding sensory details to help the reader see the object of a description, offering reasons to persuade the principal to allow the class to go on a field trip, researching statistics to argue that teens shouldn’t smoke, or finding evidence in *To Kill a Mockingbird* that supports the assertion that Boo Radley is a sympathetic character. Similarly, students may review a list of descriptors about a character to form a conclusion about that character, read a poem to determine what the poet meant by a certain image, or examine an article to reveal the writer’s argument. The intellectual work suggested here is similar to hunting in the closet for the second shoe in a pair: with the first shoe in hand, the goal is clear, but the student must find the second shoe to complete the picture.

**AIA** suggests that valuable intellectual activity has a better chance of occurring if students are not given the first shoe. The activities listed in the above paragraph are valuable, but we hope that students are also given opportunities to supply both halves of the equation: make an argument, draw a conclusion, or suggest a generalization and substantiate it in a coherent piece of writing.

**Connection to Students’ Lives**

AIA requires the formation of significant connections between the work students do in school and their own lives; we believe such connections strengthen the process of making meaning. One could claim that such connections are automatic when, for example, students read and write about teenage protagonists in literature. We argue that students appreciate the connection more keenly if they are asked to consider how what they’ve read, heard, or seen might influence their thoughts or actions after the bell rings. The spirit of this criterion, then, is to facilitate an interaction between what students learn in the classroom and their lives at home, on the sports field, or at work.

This criterion also calls us to question what constitutes authentic activity. In the name of authenticity, students are often asked to write letters, business reports, or journals. Yet in our view, writing a letter to a customer-service representative asking for a refund on a defective product is not a truly authentic assignment unless the product and the defect are actually part of the student’s life. Writing a letter to the city council asking them to repair the pothole on the bike path leading to school, on the other hand, could be. To truly serve an authentic purpose, students should go through the processes of discerning how a citizen can effect change, learning to whom such a letter should go, and determining the most likely connection to students.

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**Teacher’s Assignment**

Instructions: We usually think that money or objects of great value will give us happiness. However, in the novel *The Pearl* we see this does not happen. Give specific examples from the novel to show how wealth can bring unhappiness. You may relate your own experience to the event of the novel.

**Construction of Knowledge**

The above assignment calls for a moderate amount of CK. Notably, the teacher provides analysis for students when he or she says, “Give specific examples from the novel to show how wealth can bring unhappiness.” Providing examples to support the teacher’s analysis that wealth can bring unhappiness requires only moderate cognitive work on the part of the student. The assignment would be high in its call for CK if the teacher asked students to make their own analyses.

**Elaborated Written Communication**

The assignment calls for moderate EWC. The prompt provides the generalization (“... wealth can bring unhappiness”) and asks students to provide support (“... examples from the novel”). The assignment would be high on EWC if it asked students to both provide their own generalizations and support them with evidence from the novel.

**Connection to Students’ Lives**

This assignment would also be in the middle in its call for students to connect the topic to their lives. Students are not required to make such connections in order to complete the assignment in a satisfactory manner. However, the teacher does say in the assignment, “You may relate your own experience to the event of the novel,” allowing students the opportunity to relate the topic to their own lives.
means of achieving a successful response to a real problem. We invite teachers to consider how journal writing, too, can be used as authentically as possible.

Grammar, Usage, Mechanics, and Vocabulary (GUMV)

We all must command certain skills and conventions in order to clearly communicate our thoughts and ideas. Proficiency in GUMV represents a student’s mastery of language. In keeping with NCTE’s criteria for the “Essentials of English,” we believe students should “become aware how grammar represents the orderliness of language and makes meaningful communication possible” and “recognize that precision in punctuation, capitalization, spelling, and other elements of manuscript form is a part of the total effectiveness of writing” (www.ncte.org/positions/essentials.html).

Applying AIA

The AIA criteria provide a framework for evaluating assignments to determine if they truly demand the intellectual activities we want students to experience. Similarly, the criteria help us look at student writing to assess how well our students meet the authentic intellectual demands our assignments present. Included here is a sample application of these criteria to a short assignment for John Steinbeck’s The Pearl. (See Sidebar.) We discuss the teacher’s assignment and two first-draft student responses, avoiding absolute values (such as numbers) in favor of more general terms (moderate, substantial, etc.) in order to allow discussion groups to consider their own scales.

Student Sample 1

In the novel The Pearl, money and objects of great value didn’t bring happiness to Kino or his family. Kino was very determined to sell the pearl and get enough money to send Coyotito to school and give him and his family a good life. Juana knew that the pearl was evil. She knew it would bring bad things to the family. She wanted Coyotito to go to school, but not by relying on the pearl, because it was bringing only bad luck.

In the end, the pearl brought evil to everyone’s life. The pearl buyers fought over the pearl; robbers tried to get the pearl. Kino had to kill an invader. He hit Juana and his actions became more evil as the novel progressed. Finally, Coyotito was killed.

Juana was afraid that if they got the money from the pearl they wouldn’t be the same. They wouldn’t have peace. They would live with evil until they didn’t have money anymore. Everyone said the pearl was from the devil. The pearl was bringing devilish things and no one wanted Kino to keep the pearl, especially not Juana.

Construction of Knowledge

Student Sample 1 begins with a restatement of the teacher’s analysis given in the writing prompt. The student addresses this analysis, but also adds his or her own. The student makes analyses throughout the paper, such as, “. . . the pearl brought evil to everyone’s life” and “Juana was afraid that if they got the money from the pearl they wouldn’t be the same.” However, the student also reproduces information from the story without doing anything with it—for instance, citing it in support of an analysis or synthesizing it to form a conclusion about the story. Overall, we identify a fairly substantial amount of CK in this response.

Student Sample 2

In The Pearl, there were money problems. As in real life, lack of money makes life difficult. Kino and Juana thought selling the pearl would solve problems such as trying to pay for the doctor. I can relate to that problem when I was in the doctor’s office with my mother and this lady wanted to see the doctor but she didn’t want to wait. The lady was real impatient and she started to act very badly.

The Pearl demonstrated other problems that dealt with money, such as when they were trying to sell the pearl but no one wanted to buy it. This problem reminds me of when my friends and I were on First Avenue and a hustle man tried to sell us some ankle socks. None of us wanted to buy them. One reason was that they didn’t fit any of us. Another was that he wanted too much money for the socks. Finally, the main reason was that the socks were dirty. The man was upset that we wouldn’t buy the socks, he probly [sic] had money problems, too.

The Pearl gave many reasons why Kino and Juana wanted money, and much evidence of their money problems. In the end, the pearl didn’t bring them money or solve their problems.

Student Sample 2 provides an interesting contrast to the first sample. The student took a very different approach to constructing a response. Instead of doing direct analysis, this student chose to relate the story to events in his or her own life, picking up on the part of the assignment that said, “You may relate your own experience . . . .” The
method of analysis is different from Student Sample 1, but this student is working at demonstrating an understanding of the novel, and he or she constructs knowledge with comparisons between the story and his or her own life. We don’t feel that this student makes solid connections throughout, but he or she does a good job interpreting a theme of the novel, the impact of poverty, at various points in the response. We see a student who is striving to construct knowledge but doesn’t quite hit the mark in each personal example related to the story’s meaning. Therefore, this student work contains some CK; we can see how to help this student make more appropriate comparisons in a further draft of this response.

Elaborated Written Communication

The quality of EWC in Student Sample 1 is moderate, but uneven. The first paragraph is not elaborated well. There are unsupported generalizations, as well as support that is not tied to a generalization. The second paragraph is both elaborated and coherent, by our definition. The student begins with the generalization “. . . the pearl brought evil to everyone’s lives,” then goes on to provide appropriate and consistent support for that generalization with details from the story. The third paragraph is elaborated moderately well; the writer supports the main idea that Juana realized the pearl’s evil influence, but shifts focus a bit in the fourth sentence with “Everyone said . . .” The response, taken as a whole, is moderately coherent by our definition. It focuses on the idea that the pearl brought evil instead of happiness, but the connections between the support and the overall generalization are not always clear. (The writer might, for example, switch paragraphs two and three and add a concluding sentence or two.)

Student Sample 2 is comprised entirely of generalizations and their support. It is not an exemplar of the support we would like from students (we would like to see a stronger connection than is suggested by “This problem reminds me of when . . .”), but this student does understand the concept of making a generalization and supporting it with specifics and successfully uses this strategy. The student is ready for the teacher to help make the elaboration stronger and more appropriate; therefore, this paper demonstrates substantial evidence of EWC.

Grammar, Usage, Mechanics, and Vocabulary

Both student papers demonstrate a satisfactory use of GUMV. There are some errors, but they present no problem for understanding each student’s meaning.

Thinking about AIA in Our Practice

While we see our criteria as valuable tools for describing the nature and quality of the authentic intellectual demands of teachers’ assignments and student work, we believe their most valuable use is to motivate and guide conversations among teachers who want to ensure that they are encouraging meaningful work from their students. We invite educators to share assignments and student work and to join in frank, extended discussions based on these suggestions.

- Look carefully at individual writing assignments and ask whether each assignment explicitly calls for students to construct knowledge—to do something with the information or perspectives they have garnered by reading, listening, observing, or discussing. If an assignment does not call for CK, consider whether you can justify that fact.
- Ask whether the projects and assignments you give to students explicitly call for EWC. If an assignment does not, consider whether you can justify that fact.
- Consider how the array of writing assignments you give to students in a grading period relate to one another in terms of CK and EWC. Which assignments could most strongly emphasize CK and/or EWC? From one course to another, or from one grade level to the next, discuss how to incrementally introduce students to principles of CK and EWC in writing.
- Consider which assignments should be most strongly connected to students’ lives. Have honest discussions about both the benefits and the drawbacks of asking students to inquire into and write about topics connected to their lives, realizing that such topics may be fraught with emotional, personal, or family difficulties for some students. How might these connections be drawn without exacerbating these students’ difficulties?
Share student papers together and discuss what it is you are looking for when you teach and assess GUMV. In our scheme, we consider it vital to determine if errors interfere with the reader’s ability to glean meaning from a paper; we appreciate students’ attempts to “stretch” their abilities and do not weigh it heavily when, for instance, a student misspells a word he or she is not expected to know; and we recognize that an exemplary paper may have some error. Decide if you do or do not agree.

We realize that the principles of AIA may also call for larger systemic changes. They encourage teaching practices that creatively and critically engage students in the process of learning. They indicate that teachers need time and space in the school day to meet and that sharing the work of our classrooms must be the core component of these discussions, not relegated to the time available after discussion of duty schedules and textbook inventory. Finally, the principles may call for changes in our means of assessment and a reevaluation of notions of school accountability. Discussions about the rigor of our assignments and the intellectual quality of our students’ work represent a step in the right direction. Through these conversations we can begin to advocate for less emphasis on standardized test scores and more emphasis on the intellectual quality of both our students’ work and our own.

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Works Cited


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