Recently, a prominent group of English educators claimed that the “ultimate rationale for the teaching of language arts” is “creating a just society whose citizens are critically literate about their world.” The writers further stated, “Literacy education lies at the center of achieving our stated goals of fostering critical thought, critical dialogue, and a circumspect and vigilant American citizenry . . . [and] has particular value and potential in a culture increasingly unable to distinguish fact from fiction, truth from lies” (Alsup et al. 279–81).

This is an important statement, I think, and puts critical thinking in the forefront of what we ought to be doing in the English education of our students. However, while I believe many hold this ideal in high regard (I can’t imagine anyone debunking it!), there are few statements in the secondary English education literature that define what precisely we mean by critical thinking.

What Textbooks Say about Critical Thinking and Argument

When it comes to writing, the most advanced secondary textbooks for English and most state rubrics for judging writing do not deal with what is involved in critical thinking in writing. Rather, they opt for vague discussions of “persuasive writing.” One significant text of over 1,100 pages devotes only 45 pages to persuasive writing and only 1.5 pages to “logical appeals” (Kinneavy), which are the essence of argument. In a brief note intended to differentiate between formal argument and persuasive writing, the writer explains that “formal argument [is] a line of reasoning that attempts to prove by logic.” He does not explain what logic entails or provide an explanation of how we might recognize logic when we see it. Rather the text goes on to explain that most examples of persuasive writing “aren’t formal arguments. Their purpose is to persuade, not to prove by logic. In a persuasive essay you can select the most favorable evidence, appeal to emotions, and use style to persuade your readers. Your single purpose is to be convincing” (305). The same might be said of propaganda and advertising. In short, the volume virtually dismisses argument entirely.

The page and a half that deals with “logical appeals” tells students that “readers expect you to have good reasons for your opinion.” Then, without explaining the nature of a good reason, the text goes on to state that “most people want more than reasons: They want evidence or proof to back up the reasons” (Kinneavy 302). The text goes on to explain that evidence or proof consists of facts or expert testimony and provides examples of each. But it does not provide any explanation of how either facts or expert testimony can become proof of anything. For Kinneavy’s and other textbooks that treat logic too simplistically, persuasive writing is the only relevant thing to teach in high school. Moreover, it is what is tested in the state examinations. However, argument is at the
heart of critical thinking and academic discourse, the kind of writing students need to know for success in college.

**What Students Need to Know for Success in College**

Those of us who know the needs of college writers and who are familiar with the new ACT and SAT writing samples know that persuasive writing will not suffice. For college and career one needs to know how to make an effective case, to make a good argument. Gerald Graff was recently cited in *Education Week* as giving the following advice to college students: "Recognize that knowing a lot of stuff won’t do you much good,” he wrote, “unless you can do something with what you know by turning it into an argument” (qtd. in Viadaro).

In 2009, the National Governor’s Association Center for Best Practices and the Council of Chief State School Officers put a document on the Internet entitled *College and Career Ready: Standards for Reading, Writing, and Communication*. It says this of writing argument:

The ability to frame and defend an argument is particularly important to students’ readiness for college and careers. The goal of making an argument is to convince an audience of the rightness of the claims being made using logical reasoning and relevant evidence. In some cases, a student will make an argument to gain access to college or to a job, laying out their qualifications or experience. In college, a student might attack an interpretation of a work of literature or of history and, in the workplace, an employee might write to recommend a course of action. Students must frame the debate over a claim, presenting the evidence for the argument and acknowledging and addressing its limitations. This approach allows readers to test the veracity of the claims being made and the reasoning being offered in their defense. (2B)

Calls for increased attention to logical thinking and argumentation should be heard. Here I provide information and an example from a real classroom for teaching logical argument in a complex and effective manner.

**What Kind of Logic Can We Teach?**

In this day of postmodernism and the widespread notion among literacy scholars and certain philosophers that we cannot know anything with certainty, the question is this: What can count as logic in arguments? If argument demands logic, and if we are going to teach it, then we must have an answer.

The kind of logic taught in schools since the time of Aristotle and through the early 20th century centers in the syllogism, thought to be the most important, if not the only, path to truth (see Aristotle, *Prior*). The syllogism derives a conclusion from a set of statements called premises, which are thought to be true and which have a common or middle term in each. For example,

- **Major premise:** All men are mortal.
- **Minor premise:** Socrates is a man.
- **Conclusion:** Therefore, Socrates is mortal.

In most disciplines (with the exceptions of mathematics and sometimes physics) and in most everyday problems and disputes, we do not have premises that we know to be absolutely true. We have to deal with statements that may be true or that we believe are probably true—but not absolutely true.

Aristotle, the chief inventor of the syllogism whose works were used throughout the Middle Ages and the Renaissance as the Bible of syllogistic thinking, recognized that the syllogism was not appropriate for the problems that he saw being debated in the senate and elsewhere. These were arguments of probability, arguments that were not amenable to syllogistic reasoning. His response to that problem was his *Rhetoric*, long recognized as one of the most important texts in the field of rhetoric. It deals with arguments of probability of three kinds: forensic, epideictic, and deliberative, or what I like to call arguments of fact, judgment, and policy.

In the past two or three decades, colleges and universities have turned to a newer treatment of arguments of probability, that by Stephen E. Toulmin in *The Uses of Argument*. Several popular college
writing texts are based on the theories of Toulmin and devote considerable space to the explication and teaching of the methods involved (e.g., Lunsford and Ruskiewicz; Ramage, Bean, and Johnson; Williams and Colomb).

Toulmin’s basic conception of argument includes several elements: a claim based on evidence of some sort, with a warrant that explains how the evidence supports the claim, backing supporting the warrants, qualifications, and rebuttals or counterarguments that refute competing claims. Figure 1 provides a representation of these elements and their relationships.

Although many teachers begin to teach some version of argument with the writing of a thesis statement, in reality, good argument begins with looking at the data that are likely to become the evidence in an argument and that give rise to a thesis statement or major claim. A thesis statement arises from a question, which in turn rises from the examination of information or data of some sort. This year, I had an opportunity to examine a set of lesson plans that began the year with the writing of thesis statements. There was no mention of data of any kind. Apparently, students were supposed to find problems somewhere and make some claim about them. However, without analysis of any data (verbal and nonverbal texts, materials, surveys and samples), any thesis is likely to be no more than a preconception or assumption or clichéd popular belief that is unwarranted and, at worst, totally indefensible. For that reason, my students and I have approached the teaching of argument from the examination of data as a first step. We have tried to find data sets that require some interpretation and give rise to questions. When the data are curious, do not fit preconceptions, they give rise to questions and genuine thinking. Attempts to answer these questions become hypotheses, possible future thesis statements that we may eventually write about after further investigation. That is to say, the process of working through an argument is the process of inquiry. At its beginning is the examination of data, not the invention of a thesis statement in a vacuum.

Once we have examined data to produce a question and have reexamined the data to try to produce an answer to the question, we may have a claim or thesis worthy of arguing. Occasionally, our readers or listeners are willing to accept data as appropriate support for our answers to these questions, but, more often, especially in serious arguments, they will want explanations of why the data we produce support the claims we make and are trying to demonstrate. This is the job of the warrant.

Warrants

Warrants may be simply commonsense rules that people accept as generally true, laws, scientific principles or studies, and thoughtfully argued definitions. In contemporary crime scene investigation programs on TV, considerable time is devoted to establishing warrants. Most viewers of such programs are likely to be fully aware, for example, that fingerprints at a crime scene may lead to an arrest of the person to whom those prints belong because any given person’s prints are unique, and therefore indicate the presence of that person at the scene.
Similarly, we also know that pistols and rifles leave distinctive markings on bullets fired from them. Thus, a bullet found in a victim or at a crime scene may become the evidence that links a gun owner to the shooting of the gun and the commission of the related crime. The prints and the markings on bullets are the evidence that indicate the identity of perpetrators by way of warrants concerning their uniqueness.

**Backing**

Anyone familiar with these programs also knows that the warrants may be challenged. In Toulmin’s terms, the backing is the support for the warrants. In the case of fingerprints and ballistics, there have been many studies that can be cited in the support of the warrants as to the uniqueness of fingerprints and bullet markings. However, in the TV shows themselves, sometimes considerable time is devoted to developing the backing for warrants. One frequently visited kind of backing in one program has to do with the development of studies of the development of beetles in corpses as the backing for warrants for assertions or claims concerning the length of time a corpse has been dead. Sometimes we see the criminalist studying the development of beetles from larva to adult to establish a time-line for the development of the insect through its various stages. This study will be the backing for the warrant for claims about how long a corpse has been deceased.

In more complex arguments of judgment and policy, the most crucial arguments pertain to the warrants and their backing. Platonic dialogues often deal with the backing for warrants. For example, in the *Euthyphro*, Socrates questions Euthyphro concerning his claim that he is justified in prosecuting his father for the death of a slave. The U.S. Supreme Court’s discussions of cases are debates about the warrants used in lower court cases that have been appealed. In *Scott v. Harris*, for example, the argument concerns whether a police officer may use lethal force to stop a driver doing on average 90 mph on a two-lane road and crossing the double yellow line even in the face of oncoming traffic. Harris claimed that the officer’s ramming of his car was a violation of his Fourth Amendment right protecting him against unjust seizure.

**Qualifications and Counterarguments**

In addition, because these are arguments of probability, two other elements are necessary: qualifications and counterarguments. Simply because we are dealing with statements that cannot be demonstrated to be absolutely true, qualifications are necessary in stating both claims and warrants. For claims, I like to encourage the use of words such as *probably*, *very likely*, *almost certainly*, and so forth. Some instructors refer to these as *hedge terms*. But they are not.

The idea that we are dealing with arguments of probability suggests that differing claims are likely to exist. For example, for over a hundred years, available evidence has shown that the teaching of traditional school grammar does not contribute to increasing the quality of student writing (see Braddock, Lloyd-Jones, and Schoer; Graham and Perin; Hillocks, “What Works”). Despite what I regard as massive evidence, many teachers and writers continue to argue for the teaching of traditional school grammar, the teaching of the parts of speech, parts of sentences, and concepts of grammar such as gerunds, appositives, and introductory adverbial clauses through the exercises presented in grammar books such as Kinneavy’s. If I wished to make an argument as to the folly of teaching grammar again, I might have to make a counterargument to their position.

**Teaching the Basic Elements of Argument (Arguments of Fact): A Classroom Example**

All of this has been discursive and what I call presentational (Hillocks, “What Works”) and declarative (Hillocks, *Ways of Thinking*). Students at the high school level and even above are unlikely to learn anything from such a method. Perhaps they will learn the terms, but I am quite certain they will not learn to develop strong arguments on their own. To learn that, they will have to become engaged in a highly interesting activity that is both simple and challenging, for which feedback is immediate and clear, that allows for success and inspires further effort, what Mihaly Csikszentmihalyi calls the flow experience. For over 30 years, my students and I have been working on the development of such activities
for teaching argument and other important aspects of English as well. We have often used the following problem to introduce forensic argument to Chicago high school students. Recently, I used it with a class of 30 ninth graders, six of whom had been labeled as learning disabled. Of the 30, 21 were Latino/Latina, four were African American, and four were white, one of whom had Polish as a first language, and one was Asian with Mandarin as a first language. It was a new class for me, which I had borrowed for seven weeks to try lessons and to collect writing samples.

For the first day of talk with the students, I distribute what might be called the crime scene picture (Treat). It is a line drawing of a woman dressed in a formal gown looking down at a man lying at the foot of the stairs, face up, his right foot resting on the third step of the staircase, a glass held in his left hand between his forefinger and thumb. He is nattily dressed in tuxedo trousers, a smoking jacket, a dress shirt, and a bow tie. His clothing is quite neat. Had he been coming down the stairs, the banister would have been on his left. The candelabras and mirror opposite the banister are undisturbed.

I say, “We are going to be the investigators who try to determine what really happened at this crime scene.”

I read a passage entitled “Slip or Trip” to the students as they examine the picture. (I notice that it has immediately captured their interest. They are scrutinizing it.) The passage tells us that Queenie, the woman in the gown, had gone to the country club after a fight with her husband, Arthur, the man on the floor. She left the club shortly before one in the morning and invited a few friends to follow her home and have one more drink. They got to the Volupides’ house about ten minutes after Queenie, who met them at the door and said, “Something terrible happened. Arthur slipped and fell on the stairs. He was coming down for another drink—he still had the glass in his hand—and I think he’s dead. Oh, my God—what shall I do?”

The autopsy concluded that Arthur had died from a wound on the head and confirmed the fact that he’d been drunk.

I say, “I want you to assume that you are on the scene to try to determine what happened. Our first question should be, ‘Can we believe what Queenie says?’ Most of you have learned, from watching various crime shows, that witnesses are not always reliable. What do you think? Is what you see in the picture consistent with what Queenie says? If you have any ideas, raise your hand.”

There is a rustling of paper and squeaking of chairs as students bend over their copies of the picture. I wait. I have the overhead on with a transparency divided in two columns. The left column is labeled Evidence and the right, Rule. Some of the kids are whispering to each other, but I can tell it is about the picture because they are pointing to it. After no more than 10 to 15 seconds, Marisol has her hand in the air. I wait for a few more seconds. Soon Jorge and William have their hands in the air as well. Then Isobel, and Lucita. I call on Marisol.

“He’s still got the glass in his hand. I mean, if you fell, you would drop the glass, wouldn’t you?”

I say, “Well, I’m not sure. What do the rest of you think?”

Jorge does not wait to be called on. “Yeah, you drop stuff when you fall, except, maybe like a football when you get tackled.”

Dantonio responds, “Yeah, but that a special thing. You drop the ball, everybody hate you. But the glass ain’t important. You drop the glass to save you ass.” The class laughs. I decide to let it go. Dantonio is supposed to be learning disabled, and I am pleased to have him contribute. Besides, I had already laughed involuntarily. (It is interesting to note that this young man, through my seven weeks, is one of the strongest students in the class. So much for school labels.)

Isobel responds to that, “It depends on what you’re carryin’. I was carryin’ my baby sister once, and I tripped, but I di’n’t drop her. I tried to keep her from hittin’ the floor.”

Dantonio says, “That what I sayin’. It depend on how important what you carryin’.”

“OK,” I say. “How many of you think that the fact that Arthur still has a glass in his hand is important evidence?” I pause to look around the room. Nearly all hands are up. I write in the left-hand column, under Evidence, “Arthur still has a glass in his hand.”

“Now,” I say, “let’s see why that is important. Can someone explain why that is important?”
Almost immediately, Marisol’s hand is up. I point to her. “It’s important because if you fall down stairs and die, you’re gonna drop the glass. That’s obvious.” Under Rule, I write Marisol’s response.

“Do we only drop glasses?” I ask. “Or does it apply to other things?”

Dantonio does not wait again. “If it be important, you hold on, like a football. But if it ain’t nothin’, you probably drop it to save you self.”

“Does everyone agree with that?” I ask. Most heads are nodding in agreement. “Let’s see if we can make that into a general rule. We can work with what Marisol said earlier and with what Dantonio just said. Take a minute to think about how to say it and write down a version of the rule.” I look around the room. Some students are trying to write something. Some are looking puzzled. A few are staring off into space, perhaps thinking, perhaps not. I wait several more seconds. “Try to write something,” I say. Several students begin to write. I walk about the room encouraging everyone to write something. I tell Dantonio to use what he just said to the class. I suggest that Maria begin with the word when to write a sentence explaining what happens when people fall down the stairs. Most students are writing a sentence or two. But nearly all of them are using second person, just as they had in the preceding discussion. I will try to explain how to make the rule third person so that it is more general than what happens to a you. I call for volunteers. Barbara raises her hand. “When you fall down the stairs, you drop what you’re carrying unless it’s really important.”

“Very good,” I say and write Barbara’s sentence on the overhead. I call for other sentences and students read several aloud, all more or less like Barbara’s. I write another two on the overhead. “Let me summarize what we know so far. Arthur still has a glass in his hand. We know that when people fall down the stairs, they probably drop what they are carrying to save themselves. What can we conclude from that?” Students are silent. I wonder if they know what I mean by conclude. I try again. “What do you make of Queenie’s story now?”

Marisol has her hand up along with about five other students. I call on Victoria. “I think she’s lying.”

“What do the rest of you think?”

Dantonio says, “Yeah, she lyin’—probably.”

“Why did you add probably?”
that this is probably the case. What you have stated in that sentence is a general rule that most of us agree with. Right? So we can say that. “As a rule, when people fall down stairs, they drop what they are carrying to save themselves.” I write that sentence on the overhead opposite “Arthur still has a glass in his hand.”

“I would like us to refer to statements like this as rules or general rules.” I underline the label, Rule, of the right-hand column on the overhead. “Now, who can put this whole argument together?” Several hands go up. Roberto looks as though he is going to fall out of his seat in his eagerness. I call on him.

“Um, Arthur still has a glass in his hand. As a rule, when people fall down stairs, they drop what they are carrying to save themselves. So I think Queenie is probably lying about him falling down the stairs.” On a clean overhead transparency, I write what Roberto has said, each sentence on a separate line. “Good,” I say. “What we have here are four basic parts of a simple argument.” I label the sentences Evidence, Rule, and Claim; I underline Probably and beneath the line I write Probably = Qualification.

As we continue to discuss the picture, students note several other details and think through the warrants that make them evidence: The glass is in Arthur’s left hand (But when people come down the stairs drunk, they are likely to hold on to a banister, which would have been on his left); Arthur’s clothing is very neat (When people fall down the stairs, their clothes “get messed up”); the glass is still in his hand, even though he is dead (When people die, their muscles relax and anything they are holding will slip from their hands); Arthur is lying face up (As a rule, when people fall down stairs, they are likely to land on the chest, face down, not on their backs); the fixtures on the wall opposite the banister are undisturbed (When people are falling, they tend to reach out for anything to keep themselves steady); Arthur’s forefinger is inside the glass (Generally, when people intend to get another drink, they are unlikely to place their fingers in the glass they are using). Discussing these details and developing the warrants usually takes the remainder of the class period.

Once we have completed these discussions, we turn to writing a report that will include the full argument. I begin by asking students, “If you were really an investigative team and if this were a real crime, to whom would you have to write a report?” Students suggest the boss, the Chief Inspector, the District Attorney, or the Chief of Police. We usually settle on the Chief of Police or the District Attorney. I ask, “What would we need to explain to that audience?” I make a list of their suggestions on the overhead. If they miss any of the following, I ask a direct question, e.g., “Should we explain when we arrived on the scene?” Here is what this class listed:

When we arrived.
What we found.
What Queenie said.
What the autopsy found.
Does the evidence support what Queenie said?
Our conclusion and/or recommendation.
Explanation of evidence supporting our conclusion and recommendation.

Next, I begin to write what students dictate on the overhead. Ordinarily, this involves asking a lot of questions to help students clarify their thinking and organize it. But once we have the outline above, organization of the major sections is not a problem. We begin with when we arrived on the scene. I simply ask, “When did we arrive?” In this class, students produced the following:

We arrived at the home of Arthur and Queenie Volupides at about 2:15 AM. on the night of February 6, 2007.

I encourage students to be specific about the scene, asking questions to produce more specific details. Students tend to begin with general statements that have to be specified. For example, the first response to “What did we find?” was simply, “We found Arthur dead on the floor.” Through a few questions, we finally arrived at the following:

We found Arthur Volupides lying at the bottom of the main stairs on his back, face up, his feet on the third step and still holding a glass in the finger tips of his left hand. His clothes were neat. Nothing on the wall beside the stairs is disturbed. The
carpet where he lay was undisturbed. Queenie said that Arthur slipped and fell on the stairs. He was coming down for another drink. He still had the glass in his hand.

The next problem is to present our thinking about the situation. Students, by this time, have given up any claims that Queenie is telling the truth. A few questions bring us to sentences such as the following:

We believe that Queenie is not telling the truth. The evidence does not support what she says happened.

At this point, since students have worked through all the evidence pretty thoroughly, I ask them individually to write out the evidence and the rules (warrants) that allow them to interpret the evidence. I ask that they include at least five pieces of evidence, each with an appropriate warrant and any necessary explanation. Here is the presentation of evidence from Marisol's paper. She begins her claim immediately after quoting Queenie:

However, we believe that the evidence does not support her claim. First, the cup is in his hand. When people fall down the stairs, they let go of what they are holding to try and get a grip of something to stop. Second, the way Arthur is facing is weird. When someone falls down the stairs, their body would be face down. Arthur, though, is faced upwards. Third, she waited to long to call the police or ambulance. She waited for her friends to do anything. When someone sees another person hurt they automatically call the police for help.

The last reason I believe she is lying is because the things on the wall are all straight. They seem like if they hadn't been disturb. If someone falls down the stairs, they will try to hold on to anything. Especially if they see things in the wall you will try to brake your fall.

Marisol has Spanish as a first language. She makes several errors in this passage, but her basic grasp of the syntax of argument is sound. She simply needs to learn the punctuation of introductory adverbial clauses. But she is using them appropriately. Note also that she slips from third person to second in her final warrant. She needs to learn to proofread for spelling, unnecessary words, and other minor problems. But this essay, written with a good deal of support, makes me happy as the teacher after only four days of instruction. For detail about this teaching and what follows, see my Teaching Argument: Critical Thinking for Reading and Writing.

Worth the Effort

This has been only a brief introduction to the teaching of argument using a system of logic that is widely accepted in colleges and universities. An effective curriculum for teaching argument would include attention to arguments of judgment in which warrants and their backing become far more important and complex and arguments of policy that will include both arguments of fact and arguments of judgment. Doing all of this takes time. But it is well worth the time and effort.

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National Governor's Association Center for Best Practices and the Council of Chief State School Officers. College
George Hillocks Jr. is professor emeritus at the University of Chicago in the Departments of Education and English Language and Literature. He is a recipient of NCTE’s Russell, Meade, and Distinguished Service Awards. He is a member of the National Academy of Education and a Fellow of the American Educational Research Association. He is author of several books and many articles. His most recent book is Narrative Writing: Learning a New Model for Teaching, which won the Meade award in 2008. His current research is an exploration of the impact of classroom activities on student achievement in writing. He enjoys working with teachers, English departments, and school districts on assessment and curriculum development especially in writing and literature. He may be reached at ghillock@uchicago.edu.

Lisa Storm Fink, RWT

In “Analyzing Symbolism, Plot, and Theme in Death and the Miser,” students apply analytical skills to an exploration of the early Renaissance painting Death and the Miser by Hieronymous Bosch—similar to the crime scene photo used in the article. Students sketch and label the painting, use an interactive tool to explore its elements, apply literary analysis tools to their interpretation, predict the painting’s plot, and conclude the unit by creating a project that identifies and explains their interpretation of the painting. http://www.readwritethink.org/classroom-resources/lesson-plans/analyzing-symbolism-plot-theme-833.html

Trying to Teach Travis

On his arm he’s drawing two snakes; his fingers are busy and green.
His beautiful eyes are great salt lakes and his mind is a submarine.
His fingers are busy and green and I ask for his homework in vain.
This boy’s mind is a submarine and his book was left out in the rain.
I ask for his homework in vain. His sister ran off last night.
His sister ran off last night and his book was left out in the rain. He says there was some kind of fight.

His beautiful eyes are great salt lakes and the things that were shouted aren’t true.
He’s pouring a puddle of glue.

On his arm he’s drawing two snakes.
—Ginny Lowe Connors
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An English teacher in West Hartford, Connecticut, and executive board member of the Connecticut Poetry Society, Ginny Lowe Connors was named Poet of the Year by the New England Association of Teachers of English in 2003. She is the author of the poetry collection Barbarians in the Kitchen and has edited three poetry collections: Essential Love, To Love One Another, and Proposing on the Brooklyn Bridge.