GETTING AT THE MEANING

How To Help Students Unpack Difficult Text

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A STUDY THAT we conducted in 1991 on students' history learning included interviewing eighth graders as they finished their study of early American history. A question about what happened in the Revolutionary War prompted the following response from Jennifer, one of the students:

> I don't really remember this too well; I don't know why. We always learn about this and I always forget. It's so important too. Something like one of the colonies was too strong and something happened and they got into a war over it, and it was going on for a while and that's just one of the things. I don't know why I don't remember this. It's pretty embarrassing. (Beck & McKeown, 1994)

How many teachers have heard or expressed a sentiment that reflects Jennifer's confusion: "I've spent all week teaching this chapter and the students just aren't getting it"? That students do not "get it" is a common concern among educators. Despite the best efforts of teachers and the seeming attentiveness of students, students often fail to understand the ideas presented in their textbooks. In particular, students often are unable to connect the ideas they have encountered to information that is presented later. As one teacher expressed with frustration, "Sometimes the kids learn something; they even seem to know it for the test, and then, a month later, it's like they've never even heard of it!"

P. David Pearson, a reading researcher and the former Dean of the College of Education at the University of Illinois, recently described his encounter with this problem (Pearson, 1996):

> ...when I ask teachers about their most serious concerns in literacy instruction, they invariably say—and this is especially true if they teach fourth grade or higher—'Well, if you think my kids have trouble with stories, you should come and see what we do with our social studies and science class. That's where the real trouble begins.'
>
> ...If you look in middle school and high school classrooms to examine the role of expository text, you are virtually forced to conclude that it has none. Occasionally teachers assign expository texts for homework, but when students come to class the next day, clearly having avoided the assignment, teachers provide them with an oral version of what they would have gotten out of the text if they had bothered to read it. Most high school teachers have quite literally given up on the textbook for the communication of any important content. While understandable, this approach is, of course, ultimately counterproductive. There comes a time in the lives of students—either when they go to college or enter the world of work—when others expect them to read and understand informational text.

The concern about reading comprehension—particularly comprehension of expository, informational text—is clearly widespread. Students are simply not garnering much meaning from much of the expository text they confront. Why? Part of the answer, of course, is that the texts are often not well written. They assume background information that the students do not have; they give inadequate explanations of the information they present; they fail to show the connections from a cause to an event and from an event to a consequence; and so on.

Earlier in our research, we confronted this problem head on. That is, we examined the extent to which more coherent text presentations would facilitate students' understanding. We revised textbook passages, establishing textual coherence by clarifying, elaborating, explaining, and motivating important information and by making relationships explicit. To some extent, it worked. When the revised passages were presented to the students, they recalled significantly more of the text and answered more questions correctly (Beck, McKeown, Sinatra, & Loxterman, 1991).

But even if we could count on all expository texts being as student-friendly as the revised versions we worked so hard on—and we clearly *can't* count on that happening—it wouldn't be sufficient.

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Despite the advantages shown for readers of the revised passages, the results of our study indicated that readers still had considerable difficulty understanding the texts. The recalls of many students pointed to surface-level treatments of text information. Reading the recalls gave us the impression that students took what they could get in one swift pass through the words on a page, and then formed that into a shallow representation of the text. This kind of cursory use of the text suggests that students resist digging in and grappling with unfamiliar or difficult content.

At this point, our research interests shifted to exploring ways to get readers to engage with texts and to consider ideas deeply. Over time, this led us to develop an approach we call Questioning the Author (QtA), which is designed to get students to build understanding of text ideas by becoming actively involved as they read, by diving into difficult information and grappling to make sense of it.

QtA is an approach that can be used equally well with either expository or narrative (fictional) texts. In this article, we will draw our examples from expository texts only—the genre of content area textbooks—because many teachers feel this is the harder nut to crack, the place where students are most likely to glaze over, disconnecting themselves from any chance for meaningful learning.

BUILDING UNDERSTANDING is not a new idea, but the way understanding is built distinguishes Questioning the Author from other approaches. Ideas in a text are cumulative, so in order to build meaning along the way, text is dealt with "on-line," as ideas are initially encountered, rather than waiting until after reading has been completed.

In QtA, we teach students that readers must try to "take on" a text little by little, idea by idea, and try to understand while they are reading what ideas are there and how they might connect or relate those ideas. To understand this approach, consider what is often done in classrooms when teaching from a text. It is typical practice to assign material to be read and then to pose questions to evaluate student comprehension. This read-question-evaluate pattern is an "after-the-fact" procedure. There are two problems with this approach. First, students may have questions as they read or may simply finish a text knowing only that they are lost but are not sure why. The questions posed by the teacher only serve to expose their embarrassment over their lack of understanding. Also, there is no way for teachers to know if some students have constructed misconceptions about the passage and think they have understood. Second, even though students hear right answers, they may never understand what makes them right.

In QtA, however, the goal is to assist students in their efforts to understand as they are reading for the first time. Not only is this orientation a better reflection of how a reader needs to address text content to build understanding, but it is also an opportunity for valuable teaching and learning experiences. First, it gives teachers repeated opportunities to facilitate student efforts as they are trying to understand what they are reading. Teachers can model confusion, identify problematic language and difficult ideas in text, and ask *Queries* that focus student thinking. All these actions can serve as comprehension strategies that students ultimately learn and use on their own. Second, grappling with ideas during reading gives students the opportunity to hear from one another, to question and consider alternative possibilities, and to test their own ideas in a safe environment. Everyone is grappling, everyone is engaged in constructing meaning, and everyone understands that the author, not the teacher, has presented them with this challenge. The chance for cumulative misconceptions diminishes, and the opportunity for meaningful discussion increases.

Constructing meaning during reading means going back and forth between reading relatively small segments of text and discussing the ideas encountered. This back and forth process requires decisions about where to stop reading a text and to begin discussion of ideas. It is the task of a teacher using the QtA approach to prepare for this construction of meaning by analyzing and identifying the important concepts of a text and making decisions about how much of the text needs to be read at once and why. Making decisions about how much text to read is referred to as *segment-*

ing text, that is, identifying starting and stopping points. Decisions about segmenting the text are made based on the text content and the ideas and information presented, not on the length of a page or the point at which a page or paragraph ends.

QUESTIONING THE Author incorporates three major strategies. The first is what we call *Queries*, which are the probes used to prompt discussion. The second strategy consists of discussion "moves," such as modeling, revoicing, and annotating, which are necessary if discussion is to become a real vehicle for grappling with ideas and building understanding. The third component of QtA is the careful teacher planning required to make *Queries* and discussion effective tools for digging into meaning. It is beyond the scope of this article to elaborate all that's involved in these three strategies. Rather, we will focus on *Queries,* the engine that drives QtA.

How *Queries* Differ from Some Traditional Questions

We begin by considering what *Queries* are and what appears to differentiate them from some traditional questions. The major points of comparison are summarized in Table 1. One difference between questions and *Queries* is that some questions are used to assess student comprehension of text information after reading. In contrast, *Queries* are designed to assist students in grappling with text ideas as they construct meaning.

Table 1
Characteristics of Some Traditional Questions and QtA *Queries*

Questions	*Queries*
1. assess student comprehension of text information after reading	1. assist students in grappling with text ideas to construct meaning
2. evaluate individual student responses to teacher's questions and prompt teacher-to-student interactions	2. facilitate group discussion about an author's ideas and prompt student-to-student interactions
3. are used before or after reading	3. are used during initial reading

Earlier, we referred to a typical pattern of instruction in which students read a passage, the teacher initiates a series of questions, students respond, and the teacher evaluates their responses. This pattern, which has been documented as a prevalent teaching practice, is referred to as the IRE pattern of instruction: Initiate, Respond, and Evaluate (Dillon, 1988; Mehan, 1979). The IRE pattern *assesses* comprehension; it does not *assist* the process of comprehending. Moreover, the IRE pattern of asking questions after the reading is completed tends to involve questions that are more effective in encouraging students to recall what they have read rather than in supporting students as they build an understanding of what they are reading.

Queries, in contrast, are less focused on assessing and evaluating student responses than on supporting students as they dig in to make sense of what they are reading. *Queries* focus attention on the quality and depth of the meaning that students are constructing rather than on the accuracy of the responses they give. As indicated in Table 1, another difference between questions and *Queries* is that the purpose of some traditional questions seems to be to evaluate individual student responses and to prompt teacher-to-student interactions. In contrast, *Queries* aim to facilitate group discussion about an author's ideas and tend to prompt student-to-student interactions.

Questions are often useful in giving teachers a quick idea of which students are comprehending text and which are not. However, what also tends to happen is that, although a question is directed to the entire class, only one student provides the answer. This individual assumes all the responsibility and releases the other students from any share in it. The action takes place between the teacher and one student, and the rest of the class is not involved. Students tend to compete for the chance to say the right answer, and the teacher lets students know when their answers are correct.

Queries, on the other hand, are designed to change the role of the teacher to a facilitator of discussion. A teacher who uses *Queries* evaluates student responses less often and focuses more on encouraging students to consider an author's ideas and to respond to one another's interpretations of those ideas. As a result, student-to-student and student-to-teacher interactions tend to increase, and the context for learning is a classroom of spirited learners grappling with an author's text and working together to understand it.

Our last point, as noted in the table, is that questions typically are used before or after reading. In contrast, *Queries* are used continually during the initial reading of a text. When teachers ask questions after reading, students may get messages that teachers may not intend. For example, students may assume that questioning is a different and perhaps unrelated exercise from reading. Right and wrong is the focus of attention for both teacher as evaluator and student as evaluatee. Are these the messages we want to convey to students? A more correct message is that readers are always questioning as they read. Questioning and reading are symbiotically related, enhancing each other in mutually beneficial ways.

When teachers use *Queries*, students are more likely to get the message that reading and trying to determine the author's intended meaning are aspects of the same process. The thinking elicited by *Queries* is part of the reading experience, not something that is separate from that experience. *Queries* supplement the text, helping students deal with what is there as well as with what is not there. The focus of *Queries* is on building understanding, not on checking understanding.

Comparing the Effects of Questions and *Queries*

To provide a better sense of the nature of *Queries*, what they are, what they accomplish, and how they differ from some traditional questions, we will consider an example of a question-driven lesson and an example of a *Query*-driven lesson. The first example is

based on an excerpt from a social studies textbook about early Polynesians that was used in a fourth-grade class. We will look at a transcript of the lesson as it unfolded with the teacher's traditional questions driving the discussion. In the second example, we will show how the same text excerpt was handled one year later by the same teacher after she had learned about QtA and how *Queries* can be used to direct discussion. Finally, we will consider the difference in what students seem to understand as a result of a *Query*-driven lesson in contrast to a question-driven lesson.

Here is the excerpt about early Polynesians from a social studies textbook (Laidlaw, 1985, p. 148):

> When the Polynesians settled on the Hawaiian Islands, they began to raise plants that they had brought with them. One kind of plant that the Polynesians raised was the taro plant. This is a kind of plant raised in warm, wet lands, mostly for its roots. The early Hawaiians cooked the roots, and then they generally pounded them on a board to make a paste called poi. This was a favorite food of the early Hawaiians. Sweet potatoes, bananas, breadfruit, and coconuts were some of the other plants that the early Hawaiians raised for food. Animals raised by the early Hawaiians for food were chickens, pigs, and dogs.

In the first example, to start the lesson, the teacher asks the question, "What did the early Hawaiians eat?" As indicated below, the students answer by naming things they read in the text, and the teacher repeats what each student says, sometimes interjecting other questions.

RANIA: Sweet potatoes.
TEACHER: Sweet potatoes. Excellent. Brent?
BRENT: Breadfruit.
TEACHER: Breadfruit. What is breadfruit? What is it? Is it bread? No, what is it? Carmen?
CARMEN: A tree that has fruit.
TEACHER: Yes. It's a tree that has a fruit. And when you cook the fruit, it looks like...
JIM: Bread.
TEACHER: Bread. That's why we call it breadfruit, isn't it? And it has no seeds. Excellent. Good readers. Nakisha?
NAKISHA: Coconut.
TEACHER: Coconuts. Beth?
BETH: Bananas.
TEACHER: Bananas. John?
JOHN: Chicken.
TEACHER: Chicken.
NICOLE: Pigs.
TEACHER: OK.

As the lesson proceeds, the students offer more examples of foods eaten by the early Polynesians, such as seaweed and roots. Then, the teacher asks questions that lead students to describe poi, the Hawaiians' favorite food, again through single-word responses, breaking the pattern only to elicit more information:

JIM: Seaweed.
TEACHER: Seaweed. Kelvin?
KELVIN: Roots.
TEACHER: Roots? What do you call those roots?
KELVIN: Uh. Poi.
TEACHER: OK. What did we call the roots?
JIM: Taro.
TEACHER: Good. Now, what did they make out of taro?
JIM: Poi.
TEACHER: Poi. What's the Hawaiians' favorite food?
JIM: Poi.
TEACHER: And what does it look like? How can we describe it? What's the poi look like, Nakisha?
NAKISHA: Like paste.
TEACHER: Paste. It doesn't taste like paste, goodness no, but it looks like paste. It has the same consistency, and it is called poi, and that was their favorite food. Did we miss anything. Nicole?
Nicole: Seafood.
Teacher: Seafood. I think we have it all. John?
John: They said they ate a kind of seaweed.

After naming all the foods, it is not clear if the students have any understanding of what this information means or how it connects to an important idea. Additionally, the tone of this lesson is dull and uneventful. There is a kind of monotonous pendulum-like effect, with the teacher and students echoing one another in one-word exchanges.

Now, we will look at how the same text excerpt was handled a year later by the same teacher, using *Queries* instead of questions to drive the lesson. Recall that the first time the teacher taught this lesson, she had the students read the entire text excerpt and then answer her questions. One year later, the lesson begins as follows, after the class had read just the first sentence of the text excerpt: "When the Polynesians settled on the Hawaiian Islands, they began to raise plants that they had brought with them." Then the teacher begins the discussion as follows:

TEACHER: What does the author mean by just this one sentence?
ANTONIO: He means that they brought some of the food that they had there with them.

Antonio's response misses a key point that is essential to understanding the message of the paragraph: The Polynesians brought certain foods with them that they then began to raise in their new environment. The teacher's next *Query* emphasizes this point and leads to an important exchange with Temika:

TEACHER: Um-hmm, we decided that yesterday. But what does the author mean by they began to *raise* the plants they brought with them. Temika?
TEMIKA: Like the plants and stuff, they began to plant them.
TEACHER: They began to plant them, why?
TEMIKA: For their food!
TEACHER: Right! They can plant the things that they brought, then they're going to have their own crops in Hawaii. OK, good.

When the important concept about raising crops is brought out, notice how the QtA orientation of digging into text information produces a question from a student:

ALVIS: Why do they need to plant things when they already brought things over?

Alvis realizes that he does not understand the significance of the author's point. Notice that rather than an-

swering the student herself, the teacher returns the responsibility for thinking and grappling with the issues to the students:

TEACHER: Who can answer Alvis's question? He said, they already had food, why did they have to plant the food? Roberta?
ROBERTA: Maybe because, like back then in the Hawaiian Islands ... probably, you couldn't drive to the store, like they do now.
TEACHER: OK, so Roberta's saying they couldn't get in their car and drive to the stores, but Alvis still has a point. Why not just eat the food they brought?
ALVIS: They could run out.
TEACHER: Oh, I think you just answered your own question. Alvis, say what you just said.
ALVIS: 'cause they'll run out of food.

Turning back the question to students gives them a chance to rediscover the idea that food eventually runs out and that to survive the Hawaiians needed to plant their own crops. Roberta's explanation helps Alvis realize that the food may have run out. Once the issue has been resolved, the teacher is ready to continue. This segment of the lesson transcript suggests that the combination of deliberate segmenting of text based on the ideas in the text and a sequence of carefully developed *Queries* make it possible for students to grapple with important ideas.

To capture some of the important differences between the two lessons about early Polynesians, a summary of some characteristics of the question-driven and the *Query*-driven discussions is presented in Table 2. First, the *Query*-driven discussion seemed to change student responses. In the question-driven discussion, students tended to respond in short, one-word answers, and they frequently used the author's language. In the *Query*-driven discussion, the students gave longer, more elaborate answers that reflected original thought and analysis expressed in the students' own language.

Second, the text orientation of the *Query*-driven discussion was different from the question-driven discussion. Students tended to use a text in the question-driven discussion as a resource for retrieving information, a place to check the facts against their own memories. The text was little more than a source for finding correct answers. In contrast, in the *Query*-driven discussion, the text seemed to take on a different role. It seemed to become a working reference for connecting ideas and analyzing an author's style and motivation. The text became an ally in constructing meaning.

Table 2
A Comparison of Question-Driven and *Query*-Driven Discussions about Early Polynesians

Question-Driven Discussions	*Query*-Driven Discussions
Student Responses	
■ one-word answers	■ longer, more elaborate answers
■ in author's language	■ in student's language
Text Orientation	
■ resource for retrieving information	■ reference for connecting ideas
■ source for finding correct answers	■ ally in constructing meaning
Discussion Dynamics	
■ teacher-to-student interactions	■ student-to-student interactions
■ dull pace: little student engagement	■ exciting pace: student engagement
■ product oriented	■ process oriented
■ all questions teacher initiated	■ some questions student initiated

Third, there were differences in the dynamics of the question-driven and the *Query*-driven discussions. Questions tend to promote teacher-to-student interactions with few opportunities for students to respond to one another or debate issues. As a result, question-driven lessons had a dull pace with little student engagement. The question-driven discussion was product oriented, and the product was what students remembered or what they could find in the text.

In contrast, the *Query*-driven discussion tended to promote student-to-student interactions as well as student-to-teacher exchanges, a more natural context for considering ideas. The *Query*-driven discussion seemed to have an exciting pace, with evidence of student engagement. In addition, the *Query*-driven discussion was process oriented. The goal was not focused completely on getting the right answer; rather, the goal was to get involved in the process of approaching a text in ways that encourage deep thinking.

Finally, in the question-driven discussion, almost all questions were teacher initiated. In the *Query*-driven discussion, at least some questions were student initiated.

Let's look at another text example. The following lesson transcript is from a social studies lesson about life in Siberia. The teacher begins by expressing concern about some sentences from the text and rereading those sentences:

TEACHER: Hold on. I'm concerned about these sentences: "During the summer months these people spent time preparing reindeer meat. They also made cheese from reindeer milk. These foods were then stored for the long winter months." What's the author trying to tell us here? "These foods were then stored for the long winter months." Charles?

Students begin to respond, focusing mainly on it being too cold in Siberia to gather food in the winter. The teacher persists in trying to get the students to go beyond the words in the text and reach for greater meaning:

CHARLES: They, they had to gather up food because they um, because they'd need food for the winter since it's so cold.

TEACHER: Oh, OK. Charles said 'cause it's so cold. I'm still a little confused. What do you think, Antonio?

ANTONIO: I think that the author thinks that during the summer months they had to go out and be gathering up the food 'cause it's not as cold but it's still cold. And then when it's winter, they don't have to worry about uh, trying to get their food.

TEACHER: I think we're all agreeing that in the wintertime, they're not gonna get anything to eat, but I'm not sure I understand why. What do you think, Alvis?

ALVIS: I think, I think they do it in the summer because in the winter it's too hard to find all the food, because there's a lot of snow. And the trees and the plants and everything are dead because it's too cold.

TAMMY: I think that they store all their food because the animals like, go away for the winter. They can't find animals to kill because it's too cold.

BETTY: I think that they do it in the summer because, I agree with Tammy, 'cause it's warmer so they can find animals.

The teacher then recaps the ideas students have suggested and points out that they—not the author—came up with the ideas:

TEACHER: Those are really good ideas. The author just told us, "These foods were then stored for the long winter months." But did he tell us why?

STUDENTS: No.

TEACHER: No. And Tammy thinks it's 'cause the reindeer kind of hibernate. Is that what you mean? And Alvis and Betty said it's because it's too cold for the hunters to hunt. And you know what? I don't really know the answer. But I think you have some good ideas that might possibly be why. And it's important that you were able to come up with those ideas.

Gradually, as the contributions of Antonio, Alvis, Tammy, and Betty are combined with the teacher's summarizing, the students build the understanding that climate affects behavior and motivates action, and that the author did not express this idea very clearly. We do not believe that these understandings would have been as likely to be constructed without the *Initiating Query* that began the discussion.

To summarize, we observed three specific effects of the *Initiating Query* in the "life in Siberia" lesson. First, students did the work of constructing meaning. The teacher asked students to do the thinking and started a discussion and set things in motion with a clear goal in mind. She guided the students to a realization about the text, but she did not tell them what the realization was.

Second, students discovered the difference between knowing what an author says and knowing what an author means. They also helped one another get the job done; they needed to combine ideas, and with prompting and encouragement, they dug into the text more than once to unravel the meaning.

Finally, the tone of the interactions was positive; there was evidence of engagement and personal investment in ideas and thought. The students were learning, and they were enjoying the activity.

Now, let's analyze one final example of how Questioning the Author can help students build meaning. This example is from a discussion about these two sentences in a social studies text (Laidlaw, 1985, p. 87): "There is no sunlight during most of the winter months in Antarctica. However, during the summer months, the sun shines twenty-four hours a day." The teacher begins with an *Initiating Query* that draws a response that does not address the issue represented by the text:

TEACHER: What's the author trying to tell us here?

ALETHA: The earth keeps on going around, keep on going around 24 hours a day.

The teacher then poses a *Follow-up Query* that directly addresses the difficulty: The author is presenting information that conflicts with what the students already understand about night and day.

TEACHER: Aletha says the earth keeps going around, twenty-four hours a day. So right now on one side of the earth it's daylight, and over here it's dark (pointing on a globe). So what does the author mean when he says there's no sunlight during most of the winter, and the sun shines twenty-four hours a day in the summer?

DARLEEN: Um, I think it's like, um, every time it goes around from the light to dark, every time it goes around it changes from light to dark, every twenty-four hours.

Darleen's response misses the point, so the teacher presses with another *Follow-up Query*. The *Query* urges students to put the pieces of information together, which the next student called on begins to do very nicely:

TEACHER: Well, I think Darleen's saying the same thing that a lot of you are saying, that the globe is turning around and when it's light on this side, it's dark over here. Does that make

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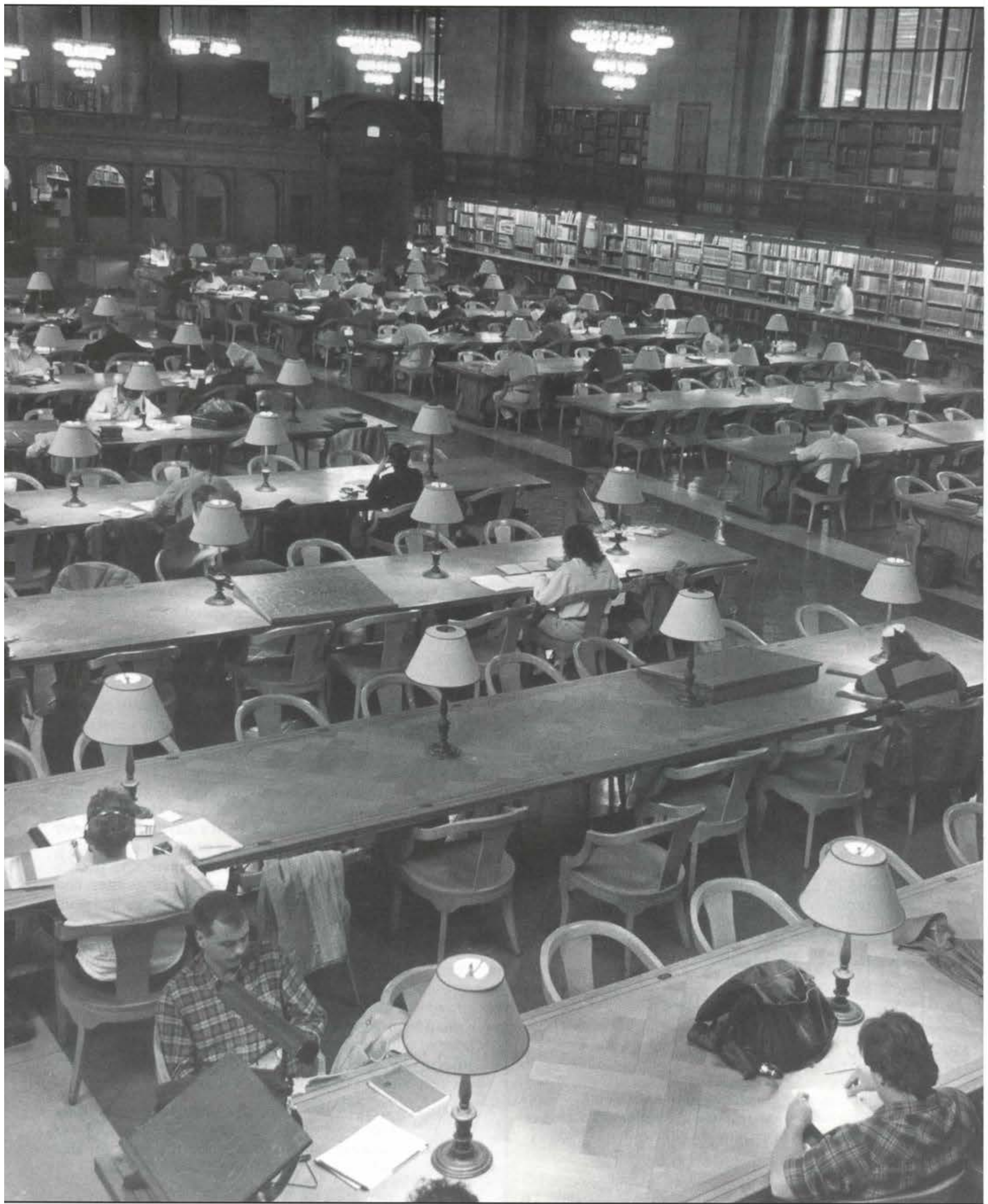
Examples of Queries

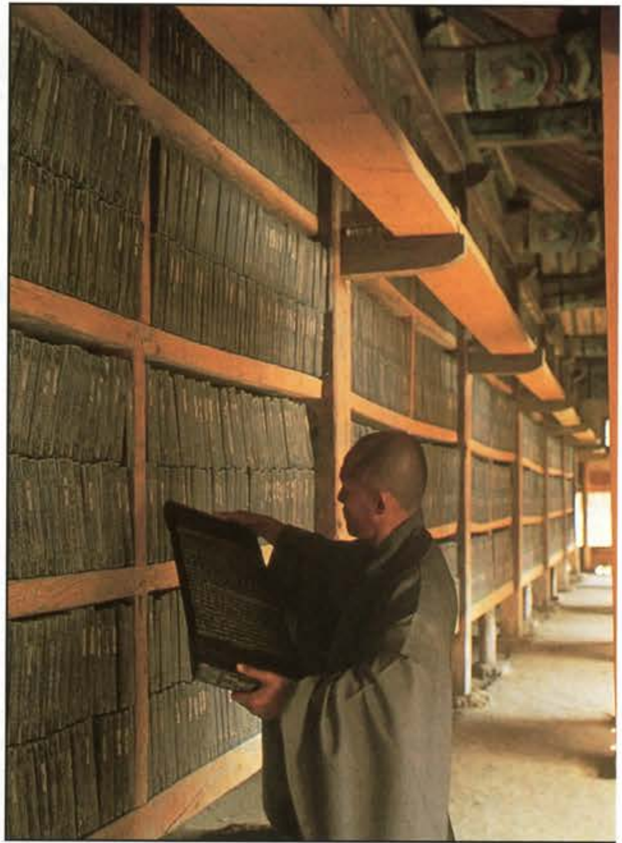
Initiating Queries

- What is the author trying to say here?
- What is the author's message?
- What is the author talking about?

Follow-up Queries

- What does the author mean here?
- Did the author explain this clearly?
- Does this make sense with what the author told us before?
- How does this connect with what the author has told us here?
- Does the author tell us why?
- Why do you think the author tells us this now?





Above, From the library at Haeinsa Temple: Korea National Tourism Organization; at left, New York Public Library reading room 315 from Library: The Drama Within, *by the author and photographer Diane Asseo Griliches, published by the University of New Mexico Press, 1996; below, a girl peruses a book in Queens Public Library's Flushing branch:* Mitsu Yasukawa / The Washington Post, 1998