

Why students learn more with Murach books

If you compare one of our books to competing books using the guidelines that follow, you'll see why students learn more using our books. Although a comparison like this can be time-consuming, it is also likely to reveal why your students haven't been doing better. In short, a good book helps students learn faster and better, and no other books offer the features that ours offer.

Our books present the skills that are used in the real world

Unlike the books from other publishers, all of our books are designed to teach the skills that are needed by professional programmers.

To make sure that our books do that, we start the content planning with an analysis of the tasks that are required on the job. Then, we make sure that our books show how to do all those tasks.

Although I'm not suggesting that every course should only present the concepts and skills that are required on the job, that focus makes a course more interesting for most students. So at the least, I think every programming course should give an honest representation of what programming is like in the real world. And if your intent is to teach professional programming skills, it just makes sense to use the same books that the professionals use.

Better structure leads to better retention

If you study our books, you'll see that they are highly structured from top to bottom: sections, chapters, and topics within chapters.

Specifically, each section groups chapters into a logical structure, and each chapter groups topics and subtopics into a logical structure. As the students read our books, this structure becomes apparent to them, and that helps them understand how all the components and skills of application development are related. This also helps the students retain what they've learned, and it helps them find what they're looking for when they need to review a topic.

In contrast, most college textbooks don't have much structure. For example, they don't use sections to organize chapters, so the chapters represent just one long sequence of subjects. Many chapters contain two or more topics that have no reason to be together, except that they're probably used in the examples for the chapter. And the sequence of topics within a chapter is frequently tortured. Unfortunately, when the books don't offer any structure for the content, the students are forced to develop their own structures, but most students aren't able to do that effectively.

Our paired-pages format lets students read less and learn more

If you page through one of our books, you'll see that all of the information is presented in two-page spreads. In each spread, the right page is a figure that contains the critical syntax, guidelines, and examples, and the left page is text that contains perspective and extra explanation. One of our customers dubbed this the "paired-pages" format, and our customers tell us that they love it.

One benefit of this format is that it lets students learn faster because they don't have to read as much. To test that, just compare a topic in one of our books with the same topic in a competing book. You may be surprised to find out how efficient our treatment is.

Curiously, some instructors don't like our paired-pages format because they're used to a traditional textbook approach. But I'm happy to report that some of these instructors have eventually been convinced that they should adopt our books...by their students!

Our paired-pages format also lets students review more efficiently

Our paired-pages format also makes our books better for review because you never have to dig through the text to find the information you need. Instead, you can get that information from just the figure on the righthand page. This makes it easier for your students to review before tests. But it also helps them do the exercises and projects more efficiently because they can easily refresh their memory about how something works.

Our exercises provide more practice in less time

The exercises that are available for our books give students a chance to get valuable, hands-on experience without wasting any time. That's because we provide the starting code, either from our web site or the Instructor's CD, so that students don't have to enter routine code that they already know.

Sometimes, these exercises guide the students through the application of what they've just learned. Sometimes, they challenge the students to apply what they've learned in new ways. And you can assign the exercises so your students do them in computer lab or on their own.

Incidentally, *our exercises never present new skills or information*. As we see it, this is the only sensible approach to text and exercise design. In contrast, the exercises for some competing books do present new skills. Unfortunately, this means that (1) students who don't do the exercises don't learn the skills, and (2) there's no easy way for students to get the information they need if they're having trouble since the skills haven't been covered yet.

Concepts and theory are never presented without showing application

To paraphrase Jerome S. Bruner, the Harvard educational psychologist, "Concepts and theory introduced without application never introduced anything but boredom."

But that's what many college textbooks do, especially in the introductory chapters. You can spot these portions of a book because they consist of many text pages with little or no illustration. For instance, one of the leading Java textbooks presents all of the following concepts and terms in a 5-page span: object, instance, instantiation, encapsulation, inheritance, base class, subclass, data hiding, polymorphism, overloading, and overriding...with no examples. Isn't it obvious how frustrating and useless a text like that is to the student?

In our books, though, we avoid this trap in three ways:

1. We select the content for a book based on a task analysis as described above. That means we only present the concepts and theory that are necessary for applying the skills.
2. We never present a concept or theory without showing how it's applied.
3. Our paired-pages presentation method forces us to illustrate every concept and term that we introduce.

Our 10th grade reading level helps students learn faster

If you run a readability check on any of our books, you'll find that they are at the 10th grade reading level. For technical books that have to use many cumbersome terms, that's outstanding.

This, of course, helps students who don't read that well to learn faster. But it also helps the best students learn faster because a lower reading level means they can use their energy for mastering concepts and skills, not decoding verbose language.

Keep in mind, though, that reading level is only one part of clarity. Structure, page format, and illustration also mean a lot. Above all, clear writing depends on clear thinking, and that's where most college textbooks fail.

Our complete, real-world applications lead to mastery

From the first book we published in 1974 to the present, all of our books teach by presenting complete, real-world applications, including design, code, and all related components. These applications help your students get started quickly and also help them reach new skill levels. As we see it, studying applications like these is the best way to learn how all of the parts of an application work together, so this is an essential part of the learning process.

Of course, all programming textbooks present complete applications. So what's different about ours?

First, they always illustrate business applications that are typical of the work done by professionals. Second, they illustrate data validation and exception handling so the applications are "bulletproof," as they have to be in business. Third, they move from the simple to the complex so students get a true idea of the demands of programming in the real world.

In contrast, most competing books tend to trivialize programming by presenting simplistic applications throughout the entire book. Many Java books, for example, use "toy" applications to illustrate object-oriented programming. Some of the best selling VB books never present data validation or exception handling or a segment of code that's more than several lines long. And the best-selling COBOL book uses structured code that would be unacceptable in a professional environment.

To a large extent, then, the illustrative applications in a book determine how much a student can learn. If students never see realistic applications that illustrate the best professional practices, they can't be expected to reach that level of excellence. And that's a serious shortcoming in most programming texts.

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