1 Why Measurement?

An Introduction

Difficulty Index ☺☺☺☺☺ (the easiest one in the book)

It's been happening to you, and you've been doing it since you were very young—being tested and taking tests.

When you were born, the doctor administered the APGAR to assess your *A*ppearance (or color), *P*ulse (or heart rate), *G*rimace (or response to stimulation), *A*ctivity (or muscle tone), and *R*espiration (or breathing). You were also screened (and it's the law) for certain types of metabolic disorders (such as PKU, or phenyl ketonuria)—and that may have been tests number one and two.

Then there may have been preschool tests, spelling tests, the ACT (American College Testing) or the SAT (which is actually not an acronym—see Chapter 15 for more on this), maybe even the GRE (Graduate Record Exam). Along the way, you might have received some career counseling using the SVIB (Strong Vocational Interest Blank) and perhaps a personality test or two such as the MMPI (Minnesota Multiphasic Personality Inventory) or the Myers-Briggs Type Indicator.

My, that's a lot of testing, and you're nowhere near done.

You've still probably got a test or two to complete once you graduate from school, perhaps as part of a job application, for additional studies, or for screening for a highly sensitive job as a secret agent. (Indeed, the CIA student program wants SAT or ACT scores!)

Testing is ubiquitous in our society, and you can't pick up a copy of the *New York Times,* the *Chicago Tribune,* or the *Los Angeles Times* without finding an article about testing and some associated controversy.

The purpose of *Tests & Measurement for People Who (Think They) Hate Tests & Measurement* is to provide an overview of the many different facets of testing, including the design of tests; the use of tests; and some of the basic social, political, and legal issues that the process of testing involves.

This first part of *Tests & Measurement for People Who (Think They) Hate Tests & Measurement* will familiarize you with a basic history of testing and what the major topics are that we as teachers, nurses, social workers, psychologists, parents, and human resource managers need to understand to best negotiate our way through the maze of assessment that is a personal and professional part of our lives.

Let's start at the beginning and take a brief look at what we know about the practice of testing and how we got to where we are.

A FIVE-MINUTE HISTORY OF TESTING

First, you can follow all of this history stuff by using the cool time line shown below and throughout this chapter for what happened when. Here's a written summary.

Imagine this. It's about 2200 years B.C.E. (Before the Common Era), and you're a young citizen living in a large city in China looking for work. You get up, have some breakfast, walk over to the local "testing bureau," and sit down and take a test for what we now know as a civil service position (such as a postal mail carrier). And at that time, you had to be proficient in such things as writing, arithmetic, horsemanship, and even archery to be considered for such a position. Must have been an interesting mail route.

Yep—testing in one form or another started that long ago, and for almost 3,000 years in China, this open (anyone could participate), competitive (only the best got the job) system proved to be the model for later systems of evaluating and placing individuals (such as the American and British civil service systems that started around 1889 and 1830, respectively).

Interestingly, this system of selection was abandoned in China around the turn of the 20th century, but we know from our own experience that the use of testing for all different purposes has grown rapidly.

Way back (around 2200 B.C.E)

Public officials tested in China

How Much to Take That Test?

Testing is on the increase by leaps and bounds (see Chapter 19), and it's not getting any cheaper. Eduventures, a consulting company in Boston (you can find out more about them at www.eduventures.com) estimates that $1.8 billion was spent on assessment for only the K–12 crowd—no college-level testing included. That's a ton of money, and the entire endeavor is expected to get even more expensive as the federal government moves toward expanding standardized testing to more grades in the near future. But even at these lower levels of testing (age or grade wise) additional costs of coaching and tutoring increase the whole package total multifold.

Not much of a formal or recorded nature occurred before the middle of the 19th century, and by about the end of the 19th century, along comes our friend Charles Darwin, who you may know from some of your other classes as the author of the *Origin of Species*. This book (of which only 11 copies of the first edition have survived) is a groundbreaking work that stresses the importance of what he called "descent with modification" (which we now call evolution). His thesis was that through the process of variation, certain traits and attributes are selected (that is, they survive while others die out), and these traits or attributes are passed on from generation to generation as organisms adapt.

So why are we talking about Charles Darwin and biology in a tests and measurement book? Two reasons. First, Darwin's work led to an increased interest in and emphasis on individual differences—and that's what most tests examine. And second, Darwin's cousin (how's that for a transition?), Francis Galton, was the first person to devise a set of tools for assessing individual differences in his anthropometric lab, where one could have all kinds of variables measured such as height, weight, strength, and even how steady you can hold your

"If something exists, it exists in some amount. If it exists in some amount, then it is capable of being measured."
Rene Descartes, *Principles of Philosophy*

hands. Galton also thought that male pattern baldness was the result of furnace-like brain activity that just singed off the hair. But that's another story. His motto was "Wherever you can, count" (and by the way, Sherlock Holmes's motto was "Data! Data! Data!"). They must have been *very* busy guys.

Once physical measurements were being made regularly, it was not long before such noted psychologists as James Cattell were working on the first "mental test." Cattell was a founder of the Psychological Corporation in the early 1920s, now known as one of the leading publishers of tests throughout the world.

When we get to the 20th century, testing and measurement activity really picks up. There was a huge increase in interest devoted to mental testing, which shortly became known as intelligence testing and also included the testing of cognitive abilities such as memory and comprehension. More about this in Chapter 16.

A major event in the history of testing occurred around 1905 when Alfred Binet (who was then the Minister of Public Instruction in Paris) started applying some of these new tools to the assessment of Parisian schoolchildren who were not performing as well as expected. Along with his partner, Theodore Simon, Binet used tests of intelligence in a variety of settings—and for different purposes—beyond just evaluating schoolchildren's abilities. Their work came to America about 1916 and was extended by Lewis Terman at Stanford University, which is probably why one of the most commonly used, modern intelligence tests is named the Stanford-Binet.

As always, necessity is the mother and father of invention, and come World War II, there was a huge increase in the need to test and classify accurately those thousands of (primarily) men who were to join the armed services. This occurred around World War I as well, but with nowhere near the scientific deliberation or extent.

And as always, intense efforts at development within the government usually spill over to civilian life, and after the war (World War II, that is), hundreds of different types of tests were available for use in the civilian sector and made their way into hospitals, schools, and businesses. Indeed, we have come a long way from spelling tests.

While all of these mental and ability tests were being developed, increased attention was also being paid to other dimensions of psychological functioning, such as personality development (see Chapter 14). People might be smart (or not smart), but psychologists also wanted to know how well adjusted they were and whether they were emotionally mature enough to assume certain important responsibilities. Hence, the field of personality testing (around World War I) got started in earnest and certainly is now a major component of the whole field of tests and measurement.

But our brief history of testing does not stop with intelligence or personality testing. As education became more important, so did evaluating achievement (see Chapter 13). For example, in 1937, the then-called Stanford Achievement Tests (or SATs) became required for admission to Ivy League schools (places such as Brown, Yale, and Princeton)—with more than 2,000 high school seniors taking the exam. Another example? In 1948, the Educational Testing Service (known as ETS) opened, almost solely to emphasize the assessment of areas other than intelligence. They are the folks that bring you today's SAT, Graduate Record Exam (or GRE), and the always popular and lovable Test of English as a Foreign Language (or TOEFL)—all taken by hundreds of thousands of students each year.

Now, thousands upon thousands of high school students take standardized tests at the beginning of their senior year, and so do college seniors, trying to gain admission to medical, law, and other graduate programs.

It's no wonder that services offering (and sometimes guaranteeing) success began to proliferate around 1945 with Stanley Kaplan. A very smart New Yorker (who was denied admission to medical school because of his religion), he started tutoring students in the basement of his home for $0.25 per hour. His success (and it's still a hotly debated issue whether you can indeed raise people's scores through instruction) led him to create an empire of test centers (sold off for a bunch of millions to a big test company) that is still successful today.

Today, thousands and thousands of tests (and hundreds of test publishers—see Appendix B) measure everything from Advanced Placement Examination in Studio Art, which is designed to

measure college-level achievements in studio arts, to the Health Problems Checklist, which is used to assess the health status and potential health problems of clients in psychotherapy settings.

SO, WHY TESTS AND MEASUREMENT?

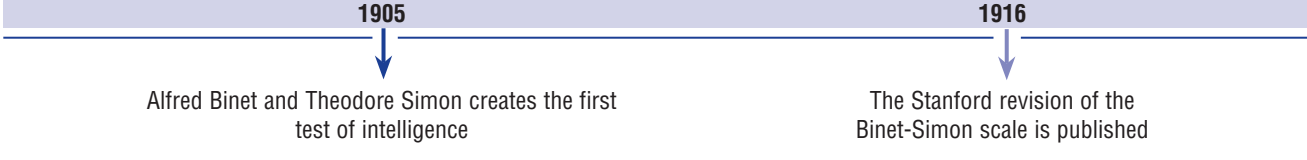
This question has a pretty simple answer, but simple does not mean lacking in complexity or implications.

No matter what profession we enter, be it teaching, social work, nursing, or any one of thousands, we are required to make judgments every day, every hour, and, in some cases, every few minutes about our work. We do it so often that it becomes second nature. We even do it automatically.

In the most straightforward of terms, we use a test (be it formal or informal) to measure an outcome and make sense of that judgment. And because we are smart, we want to be able to communicate that information to others. So, if we find that Russ got 100% on a spelling test or a 34 on his ACTs, we want everyone who looks at that score to know exactly what that score means.

For example, consider the teacher who records a child's poor grade in math and sends home some remedial work that same evening; the nurse who sees a patient shivering and takes his or her temperature; or the licensed clinical social worker who recognizes that a client has significant difficulties concentrating and administers a test to evaluate that client's ability to stay on task and, based on the score, designs an intervention—these people all recognize a symptom of something that has to be looked into further, and they take appropriate action.

What all these professionals have in common is that in order for them to take action to help the people with whom they work, they need to first assess a particular behavior or set of behaviors. And to make that assessment, they use some kind of formal test (such as a standardized test in the case of the nurse) or informal test (such as in the teacher's case) to complete an assessment. Then, based on training and experience, a decision as to what course of action to take is made.



For our purposes here, we are going to define a **test** as a (pick any of the following) tool, procedure, device, examination, investigation, assessment, or measure of an outcome (which is usually some kind of behavior). A test can take the form of a 50-question, multiple-choice history exam or a 30-minute interview of a parent's relationships with his or her children. It can be a set of tasks that examines how good someone is at fitting together blocks into particular designs or whether they prefer multigrain Cheerios® to plain Cheerios®. We use tests that come in many different forms to measure many different things.

What We Test

We test many, many different things, and the thousands of tests that are available today cover a wide range of areas. Here's a quick review of some of the content areas that tests cover. We'll go into greater detail in each of these in Part IV of *Tests & Measurement for People Who (Think They) Hate Tests & Measurement*.

We'll define these different general areas here, and in Table 1.1, you can see a summary along with some real-world examples.

Achievement tests assess an individual's level of knowledge in a particular domain. For example, your midterm in history was an achievement test.

Personality tests (covered in Chapter 14) assess an individual's unique and stable set of characteristics, traits, or attitudes. You may have taken an inventory that determined your level of introversion or extraversion.

Aptitude tests (covered in Chapter 15) measure an individual's potential to succeed in an activity requiring a particular skill or set of skills. For example, you may take an aptitude test that assesses your potential for being a successful salesperson.

Ability or intelligence tests (covered in Chapter 16) assess one's level of skill or competence in a wide variety of areas. For example, intelligence tests are viewed as measures of ability (but don't be fooled

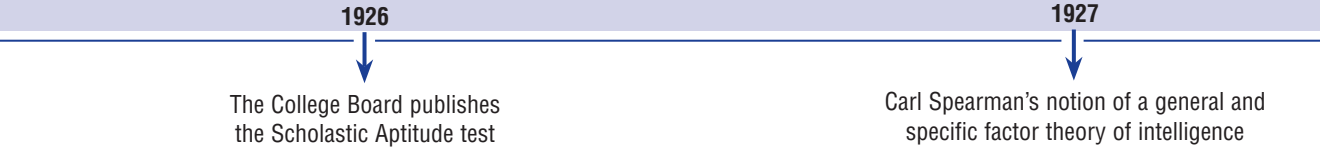
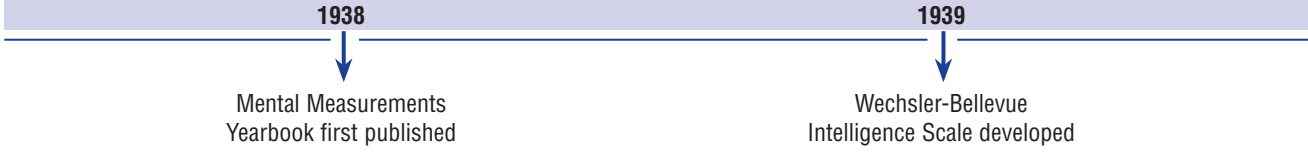


Table 1.1 An Overview of What We Test and Some Examples of Such Tests

Type of Test	What It Measures	Some Examples
Achievement	Level of knowledge in a particular domain	• Closed High School Placement Test • Early School Assessment • Norris Educational Achievement Tests • Test of Basic Adult Education
Personality	Unique and stable set of characteristics, traits, or attitudes	• Achievement/Motivation Profile • Aggression Questionnaire • Basic Living Skills Scale • Dissociative Features Profile • Inventory of Positive Thinking Traits
Aptitude	Potential to succeed	• Differential aptitude tests • Scholastic Aptitude Scale • Aptitude Interest Category • Evaluation Aptitude Test • Wilson Driver Selection Test
Ability or Intelligence	Skill or competence	• Wechsler Intelligence Scale for Children • Stanford-Binet Intelligence Test • Cognitive Abilities Test • General clerical ability tests • School of Readiness Test
Performance	Basic performance of particular tasks	• Achenbach System of Empirically Based Assessment • Assessment in Nursery Education • Functional Communication Profile • The Egan Bus Puzzle Test
Vocational or Career	Job-related interests	• Adaptive Functioning Index • Career Interest Inventory • Prevocational Assessment Screen • Rothwell-Miller Interest Blank • Vocational Adaptation Rating Scales

NOTE: You can find out more about each and every one of these tests by going to the Buros Center for testing at http://www.unl.edu/buros/index.html.



by the name of a test—there are plenty of intelligence tests that are also seen as being aptitude tests as well—see the following light bulb!).

Finally, **vocational or career tests** (covered in Chapter 17) assess an individual's interests and help classify those interests as they relate to particular jobs and careers. For example, you may have taken a vocational test that evaluates your level of interest in the culinary arts or the health care professions.

Table 1.1 summarizes what these different types of tests measure and gives you a few real-world examples.

Just What Test Is That?

There is always a great deal of overlap in the way people categorize particular types of tests and what they assess. For example, some people consider intelligence to be an ability (and would place it under ability tests), whereas others think of it as an achievement test because it tests one's knowledge about a particular area of information. Or, aptitude tests can end up as ability tests as well as personality tests, or they can stand all on their own.

So, what's right? They are all right. The way in which we classify tests is strictly a matter of organization and convenience, and even a matter of how they are used. I think that the definitions and examples I have given best reflect the current thinking about tests and measurement. Others feel differently. Welcome to the real world.

Why We Test

Now you know that there are different forms of tests and that there are many different areas of human performance and behavior that are tested regularly. But for what purpose? Here's a summary of the five main purposes (and there are surely more) for which tests can be used.

Tests are used for *selection*. Not everyone can be a jet pilot, so only those men or women who score at a certain level of performance on physical and psychological assessments will be selected for training.

1940

Development of the Minnesota Multiphasic Personality inventory

1941

Raymond Catell's theory of fluid and crystallized intelligence

Tests are used for *placement*. Upon entering college, not everyone should be in the most advanced math class or in the most basic. A placement test will determine where the individual belongs.

Tests are used for *diagnosis*. An adult might seek out psychological counseling, and the psychologist may administer a test or group of tests that helps diagnose any one of many different mental disorders. Diagnostic tests are also used to identify individual strengths and weaknesses.

Tests are used for *hypothesis testing*. A hypothesis is simply an "if . . . then" statement. For example, if children get extra reading help throughout the week, then they will score better on a reading test of comprehension than will children who do not get extra help. One important part of testing this question is using a test that measures reading comprehension accurately.

Finally, tests are used to *classify*. Want to know what profession might suit you best? One of several different tests can provide you with an idea of your aptitude (or future potential) for a career in the culinary arts, auto mechanics, medicine, or child care.

THINGS TO REMEMBER

Tests are used widely for a variety of purposes; among them selection, placement, diagnosis, hypothesis testing, and classification.

SOME IMPORTANT REMINDERS

You'll learn many different things throughout *Tests & Measurement for People Who (Think They) Hate Tests & Measurement* (at least I sure hope you will). And with any vibrant and changing discipline,

1941

Invention of M&Ms, used in countless tests and measurements classroom demonstrations

1942

Beginning of General Education Development

there are always discussions both pro and con about different aspects of the subject. But there are some constants as well, and we want to bring you a few of those now.

1. *Some behaviors can be observed more closely and more precisely than others.* It's pretty easy to measure one's ability to add single digits (such as 6 + 5 = ?), but to understand *how* one solves (not *if* one can solve) a quadratic equation is a different story. The less obvious behaviors take a bit more ingenuity to measure, but that's part of the challenge (and delight) of doing this.

2. *Our understanding of behavior is only as good as the tools we use to measure it.* There are all kinds of ways that we try to measure outcomes, and sometimes we use the very best instruments available—and at other times, we may just use what's convenient. The best takes more time, work, and money, but it gives us accurate and reliable results. Anything short of the best forces us to compromise, and what you see may, indeed, not be what you get.

THINGS TO REMEMBER

No matter how interesting your theory or approach to a problem, what you learn about behavior is only as accurate and as worthwhile as the integrity and usefulness of the tools you use to measure that behavior.

3. *Tests and measurement tools can take many different forms.* A test can be in a paper-and-pencil, self-report, observation, or performance format and often gives us very similar information on some outcome in which we are interested. The lesson here is to select the form of test that best fits the question you are asking.

1947

Educational Testing Service

1957

Donald Super's theory of career development

4. *The results of any test should always be interpreted within the context in which they were collected.* In many communities, selected junior high students take a practice Scholastic Achievement Test. Although some of these students do very, very well, others perform far below what you would expect a high school junior or senior to do—these younger children simply have not yet had the coursework. To interpret the results of the younger children using the same metric and scoring standards as for the older children would surely not do either group any justice. The point is to keep test scores in perspective—and, of course, to understand them within the initial purpose for the testing.

5. *Test results often can be misused.* It doesn't take a rocket scientist to know that there have been significant controversies over how tests are used. You'll learn more about this in Part V of *Tests & Measurement for People Who (Think They) Hate Tests & Measurement,* but many of you know how non-English-speaking immigrants who tried to get sanctuary in the United States were turned away in the 1930s based on their test scores. To use tests fairly and effectively, you need to know the purpose of the test, to whom it should be administered, the quality of the test, how it is administered and used, and how the results are interpreted. We'll do all that in *Tests & Measurement for People Who (Think They) Hate Tests & Measurement.*

6. *Many tests, especially achievement tests, have as their goal distinguishing between those who know the material and those who do not.* We want the biology student to understand evolution and the sixth grader to know something about American and world history.

WHAT AM I DOING IN A TESTS AND MEASUREMENT CLASS?

There are probably many reasons why you find yourself using this book. You might be enrolled in an introductory tests and measurement

class. You might be reviewing for your comprehensive exams. Or, you might even be reading this on summer vacation (horrors!) in preparation and review for a more advanced class.

In any case, you're a tests and measurement student whether you have to take a final exam at the end of a formal course or whether you're just in it of your own accord. But there are plenty of good reasons to be studying this material—some fun, some serious, and some both.

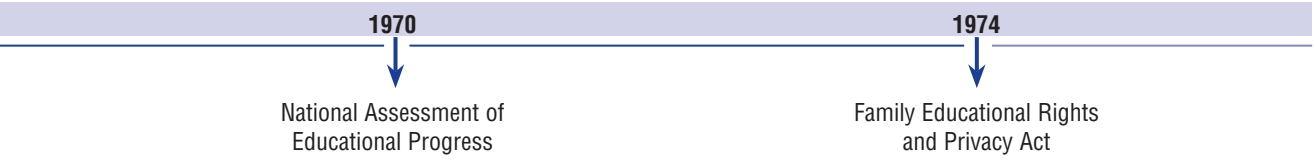
Here's a list of some of the things that my students hear at the beginning of our introductory tests and measurement course.

1. Tests and Measurement 101 or Introduction to Testing or whatever it's called at your school looks great listed on your transcript. Kidding aside, this may be a required course for you to complete your major. But even if it is not, having these skills is definitely a big plus when it comes time to apply for a job or for further schooling. And with more advanced courses, your résumé will be even more impressive.

2. If this is not a required course, taking a basic tests and measurement course sets you apart from those who do not. It shows that you are willing to undertake a course that is above average in regard to difficulty and commitment.

3. Basic information about tests and measurement is an intellectual challenge of a kind that you might not be used to. A good deal of thinking is required, as well as some integration of ideas and application. The bottom line is that all this activity adds up to what can be an invigorating intellectual experience because you learn about a whole new area or discipline.

4. There's no question that having some background in tests and measurement makes you a better student in the social or behavioral sciences. Once you have mastered this material, you will have a better understanding of what you read in journals and also what your professors and colleagues may be discussing and doing in and out of class. You will be amazed the first time you say to yourself, "Wow,



I actually understand what they're talking about." And it will happen over and over again because you will have the basic tools necessary to understand exactly how scientists reach the conclusions they do.

5. If you plan to pursue a graduate degree in education, anthropology, human development, economics, nursing, sociology, or any one of many other social, behavioral, and biological pursuits, this course will give you the foundation you need to move further.

6. Finally, you can brag that you completed a course that everyone thinks is the equivalent of building and running a nuclear reactor.

TEN WAYS TO USE THIS BOOK (AND LEARN ABOUT TESTS AND MEASUREMENT AT THE SAME TIME!)

Yep. Just what the world needs—another tests and measurement book. But this one is different. It's directed at the student, is not condescending, is informative, and is as basic as possible in its presentation. It assumes only the most basic information at the start, and if you don't have that, you can go to Appendix A and get it.

However, there has always been a general aura surrounding the study of tests and measurement that it's a difficult subject to master. And I don't say otherwise, because parts of it are challenging. On the other hand, millions and millions of students have mastered this topic, and you can, too. Here are a few hints to close this introductory chapter before we move on to our first topic.

- *You're not dumb.* That's true. If you were, you would not have gotten this far in school. So, treat tests and measurement like any other new course. Attend the lectures, study the material, and do the exercises in the book and from class, and you'll do fine. Rocket scientists know how to use this stuff, but you don't have to be a rocket scientist to succeed.

- *How do you know tests and measurement is hard?* Is this topic difficult? Yes and no. If you listen to friends who have taken the course and didn't work hard and didn't do well, they'll surely volunteer to tell you how hard it was and how much of a disaster it made of their entire semester, if not their lives. And let's not forget—we always tend to hear from complainers. So, I suggest that you start this course with the attitude that you'll wait and see how it is and judge the experience for yourself. Better yet, talk to several people who have had the class and get a good general idea of what they think. Just don't base your opinion on one spoilsport's experience.
- *Form a study group.* This is one of the most basic ways to ensure some success in this course. Early in the semester, arrange to study with friends. If you don't have any who are in the same class as you, then make some new ones or offer to study with someone who looks to be as happy about being there as you are. Studying with others allows you to help them if you know the material better, or to benefit from others who know the material better than you. Set a specific time each week to get together for an hour and go over the exercises at the end of the chapter or ask questions of one another. Take as much time as you need. Studying with others is an invaluable way to help you understand and master the material in this course.

Stay on Task and Take One Thing at a Time

Material about testing and measurement can be tough to understand, especially if you have never heard any of these terms before or thought about any of these ideas. Follow the guidelines mentioned here and talk with your teacher as soon as you find yourself not understanding something or falling behind.

- *Ask your teacher questions, and then ask a friend.* If you do not understand what you are being taught in class, ask your professor to clarify it. Have no doubt—if you don't understand the material, then you can be sure that others do not as well. More often than not, instructors welcome questions. And especially because you've read the material before class, your questions should be well informed and help everyone in class to better understand the material.
- *Do the exercises at the end of a chapter.* The exercises are based on the material and the examples in the chapter they follow. They are there to help you apply the concepts that were taught in the chapter and build your confidence at the same time. How do the exercises do that? An explanation for how each exercise is solved accompanies the problem. If you can answer these end-of-chapter exercises, then you are well on your way to mastering the content of the chapter.
- Practice, practice, practice. Yes, it's a very old joke:

  Q. How do you get to Carnegie Hall?

  A. Practice, practice, practice.

Well, it's no different with basic tests and measurement. You have to use what you learn and use it frequently to master the different ideas and techniques. This means doing the exercises in the back of the chapter as well as taking advantage of any other opportunities you have to understand what you have learned.

- *Look for applications to make it more real.* In your other classes, you probably have occasion to read journal articles, talk about the results of research, and generally discuss the importance of the scientific method in your own area of study. These are all opportunities to look and see how your study of tests and measurement can help you better understand the topics under class discussion as well as the area of beginning statistics. The more you apply these new ideas, the better and more full your understanding will be.
- *Browse.* Read the assigned chapter first, then go back and read it with more intention. Take a nice leisurely tour of *Tests & Measurement for People* . . . to see what's contained in the various chapters. Don't rush yourself. It's always good to know what topics lie ahead as well as to familiarize yourself with the content that will be covered in your current statistics class.
- *Have fun.* This indeed might seem like a strange thing for you to read, but it all boils down to your mastering this topic rather than letting the course and its demands master you. Set up a study schedule and follow it, ask questions in class, and consider

this intellectual exercise to be one of growth. Mastering new material is always exciting and satisfying—it's part of the human spirit. You can experience the same satisfaction here—just keep your eye on the ball and make the necessary commitment to stay current with the assignments and work hard.

- *Finally, be easy on yourself.* This is not material that any introductory student masters in a matter of hours or days. It takes some thinking and some hard work, and your expectations should be realistic. Expect to succeed in the course and you will.

And, in the Real (Testing) World . . .

At the end of each chapter (starting with the next one), we'll provide you with three examples of real-world studies, their purpose, and the tests they used or the related topics they addressed. This should give you an even more comprehensive introduction to what happens in the real world of tests and measurement.

About Those Icons

An icon is a symbol. Throughout *Tests & Measurement for People Who (Think They) Hate Tests & Measurement,* you'll see a variety of different icons. Here's what each one is and what each represents:

This icon represents information that goes beyond the regular text. It might be necessary to elaborate on a particular point, and that can be done more easily outside of the flow of the usual material.

In TechTalk, I select some more technical ideas and tips to discuss and to inform you about what's beyond the scope of this course. You might find these interesting and useful.

Every now and then, but not often, you'll find a small staircase icon like the one you see here. This indicates that there is a set of steps coming up that will direct you through a particular process. These steps have been tested and approved by whatever federal agency approves these things.

That finger with the bow is a cute icon, but its primary purpose is to help reinforce important points about the topic that you just read about. Try to emphasize these points in your studying because they are usually central to the topic.

The Famous Difficulty Index

For want of a better way to give you some upfront idea about the difficulty of the chapter you are about to read, I have developed a highly secret difficulty index using smileys. This lets you know what to expect as you begin reading.

How Hard Is This Chapter?	Look at Mr. Smiley!
very hard	☺
hard	☺ ☺
not too hard, but not easy either	☺ ☺ ☺
easy	☺ ☺ ☺ ☺
very easy	☺ ☺ ☺ ☺ ☺

GLOSSARY

Bolded terms in the text are included in the glossary at the back of the book.

SUMMARY

Now you have some idea about what a test is and what it does, what areas of human behavior are tested, and even the names of a few tests you can throw around at tonight's dinner table. But most of all, I introduced you to a few of the major content areas we will be focusing on throughout *Tests & Measurement for People Who (Think They) Hate Tests & Measurement.*

TIME TO PRACTICE

(And no correct answers for these, unlike the others to follow. Just answer as best you can and be sure to explore ideas as you work.)

1. What are some of your memories of being tested? Be sure to include (if you can) the nature of the test itself, the settings under which the test took place, how prepared or unprepared you felt, and your response upon finding out your score.

2. Identify five journal articles in your area of specialization, such as teaching math or nursing or social work. Now, create a chart like this for each set of five.

Journal Name	Title of Article	What Was Tested	What Test Was Used to Test It?
1.			
2.			
3.			
4.			
5.			

   a. Were most of the tests used developed commercially, or were they developed just for this study?
   b. Which test do you think is the most interesting, and why?
   c. Which test do you think got the closest to the behavior that the authors wanted to measure?

3. Using any search engine you choose, search the Internet for the words "intelligence testing" and then do a separate search for "personality testing" (include the quotes). Try to classify the hits and reach some conclusion as to what the content of these different areas is and how they might differ.

4. One of the things we did in this opening chapter was to identify five different purposes of tests (see pages 11–12). Think of at least two other ways that tests might be used, and give a real-world example.

5. Interview someone who teaches in your department (personally or through e-mail). Try to get an idea of the importance he or she places on being knowledgeable about testing and what role it plays in his or her research and everyday professional career. Is he or she convinced that tests assess behavior fairly? Does he or she use alternatives to traditional testing? Does he or she find the results of tests useful for helping students further?