

## AN INTRODUCTION TO UNDERSTANDING RESEARCH

Discussions of research are all around you in your day-to-day life. You see research reported in the local news, hear about recent findings from your physician, and may even consider it when deciding which new cell phone to buy. You may even have participated in research by responding to a survey conducted over the phone about an upcoming election or answering questions about your opinions of a new product at a store. Research also plays an important role for us as professionals. Whatever our professional area is, research is often used to justify new policies and form the basis for new materials and practice guidelines.

The importance of research in our personal and professional lives is clear, but learning to understand research is not always easy. Researchers have developed a specialized process and language for conducting and reporting their studies, and you need to learn how to interpret the relevant steps and vocabulary as you read research reports. By developing your skills for understanding research, you will open up resources and knowledge that can help you become better informed about topics important to you personally and professionally. By understanding research, you will also become a critical consumer of research who is better able to evaluate the basis of new information reported from research studies.

Your first step to becoming a critical consumer of research is to develop a big picture of what research is to help you decipher the information included in research reports. Let's consider an analogy to help us think about how researchers conduct and report their research studies. When a researcher conducts a study and writes up a report, it is a lot like a traveler taking a journey to a destination and putting together a scrapbook of the trip. Travelers use road maps to find their way along unfamiliar territory and researchers use the process of research to guide their research "journeys." In Chapter 1, you will be introduced to the steps in the process of research that researchers use to plan and conduct the activities in their research studies. Knowing about this process will provide you with a general research "road map" for navigating the information you read in research reports. Travelers also take different types of journeys to reach their destinations—some use specific routes planned from the start and others allow the routes to unfold as they go in order to explore unexpected places along the way. Likewise, researchers conduct different types of studies to cover the "terrain" of interest. In Chapter 2, we will focus on two major types of research—quantitative and qualitative—that researchers use when conducting different studies. We will consider how to understand research articles that report these different types of research "journeys" using the same general "map" of the research process.

Let's get started on your own journey to becoming a critical consumer of research!

**FIGURE 1.1**  
A Rating Scale  
for Determining  
Whether an  
Article Reports  
a Research  
Study

- Examine the article's title, abstract, and Method section.
- For each criteria in the following rating scale, assign a rating of no (0) or yes (1) and record your evidence and/or reasoning behind the rating.
- Add up the ratings. A total of 3 should indicate that the article is a report of a research study. A total of 0–2 likely indicates that the article does not report a full research study and instead reports another type of article such as a literature review.

Criteria	Rating		Your Evidence and/or Reasoning
	0 = No	1 = Yes	
1. Terms are present that identify the report as research, such as <i>study</i> , <i>investigation</i> , <i>empirical research</i> , or <i>original research</i> .			
2. The authors describe gathering data.			
3. The authors describe analyzing the gathered data and report results of the analysis.			
<b>Overall Determination</b> 0–2 = Likely not research 3 = Likely research	<b>Total Score =</b>		<b>My Overall Determination =</b>

types of writings that you may be familiar with and may encounter as you read about topics that interest you, such as literature reviews; opinion papers; and creative writing, such as fictional stories. In addition, the table provides an example of how each type of writing might be applied to the topic of children's physical activities. In most of the forms of scholarly writing listed in Table 1.1, the authors start by posing a question in some way, but only in research studies will the authors report the systematic collection

**TABLE 1.1** Different Types of Writings About Topics

Type of Writing	Typical Use	Example
Research	To collect and analyze data in order to increase our knowledge about a topic or issue	The author collected and analyzed data about daily time spent being physically active for children in first through seventh grades
Literature Review	To summarize and critique a collection of different writings about a topic	The author summarized 18 writings available in the literature about children's physical activity
Theoretical Discussion	To synthesize ideas about a topic into a framework or model that identifies key concepts and how they are related to each other	The author developed a model of the factors believed to encourage and discourage children to be physically active
Opinion Paper	To provide one individual's opinions on a topic based on his/her experiences and perspectives	The author provides her opinions on promoting children's physical activity levels based on 25 years as an elementary school physical education teacher
Program Description	To provide a description of the features involved in the implementation of a particular program from the individuals who are running the program	The author describes a special "Get Active!" program used at one middle school
Fiction Writing	To tell a story about a topic that engages the reader to think about that topic	The author tells a story of three girls growing up and playing together on a volleyball team
Poetry	To bring forth an emotional response on a topic through creative uses of language	The author creatively uses words to convey one man's memories of running through the fields by his house as a child to convey the meaning of physical activity for one person

### Check Your Understanding

From this abstract, we can conclude that this article does report a research study. The author did not use the word *study*, but she notes that she “examined” an issue. We also have direct evidence that the author collected data (“oral and sight vocabulary pre- and posttests and reading achievement posttests”). Clues that these data were also analyzed are found by noting that the two groups of students were compared and different types of results from the analysis are reported (e.g., students in the treatment classrooms performed significantly higher).

## Why Do You Need to Read Research Reports?

Now that you are able to identify reports of research, it is important to next consider *why* you might want to read research reports that you identify. It turns out that the reason to read research is actually suggested by its definition. Recall that research is defined as a process of steps used to collect and analyze information to increase our knowledge about a topic or issue. So far we have focused on the first half of the definition that emphasizes the collection and analysis of data, but the second half of the definition is just as important. The reason that researchers conduct and report research studies is to add to the overall knowledge base that exists about a topic. In fact, the primary way that new knowledge is gained about important issues is by scholars conducting research. Researchers are much like bricklayers who build a wall brick by brick with each study. They continually add to the wall by conducting studies about an issue and, in the process, create a stronger structure or understanding.

Whether you are a teacher, counselor, administrator, nurse, special educator, social worker, or other practitioner, the knowledge base of your profession is continually advancing because of the research that is being conducted and reported. When researchers create a strong understanding from many research studies, this understanding also can provide a strong knowledge base for practitioners. Therefore, you need to read research in order to take advantage of the new knowledge that is generated for your own knowledge base, position in policy debates, and practices.

### Read Research to Add to Your Professional Knowledge

No matter how experienced you are in your practices, new problems continue to arise. For example, today we face problems such as increased violence in our schools, the increased use of technology by individuals, and rising rates of childhood obesity. You can be better equipped to develop potential solutions for problems such as these if you remain up to date in your field and continue to add to your knowledge base. Research can play a vital role in our understanding of problems because researchers study questions to which the answers are previously unknown. For example, you can better understand the problem of school violence if you read research studies that provide knowledge about the extent of violence in schools, the factors that encourage and discourage violence, and the meaning that school violence has for individuals. By reading what researchers have learned, you add to your own knowledge about a topic.

### Read Research to Inform Your Position in Policy Debates

Research also creates conversations about important policy issues. We are all aware of pressing issues being debated today, such as policies regarding immigrants and their children, policies about access to health care, and policies that mandate the use of high-stakes testing. Policy makers range from federal government employees and state workers to local school board members, council members, and organization administrators. These individuals take positions and make decisions on issues important to constituents. For these individuals, research offers results that can help them weigh various perspectives. By reading research on issues related to policies, you become informed

about current debates and stances taken by other public officials as well as form your own opinions. For example, research useful to policy makers might examine the alternatives to welfare and the effect on children's schooling among lower income families, or it might examine the arguments proposed by the opponents and proponents of school choice.

### Read Research to Improve Your Practice

The third reason that it is important to read research is to improve your practice—that is, to improve your ability to do your job effectively. Armed with results based on rigorous research, practitioners become professionals who are more effective, and this effectiveness translates into better outcomes, such as better learning for children or improved mental health for individuals.

#### *Here's a Tip!*

When reading a research study, look for recommendations for how the results apply to practice. These suggestions are usually listed near the end of the report and may be found under a heading such as *Implications for Practice*.

Today there is a push for practitioners across disciplines to use evidence-based practices. **Evidence-based practices** are personal and professional practices that have been shown to be effective through research. This means that individuals are encouraged to use practices for which there is support from research (the evidence) and not to rely solely on practices that have been done in the past. Here are three ways that research can influence your practices:

- **Reading research can suggest improvements for your practice.** When researchers conduct studies to add to our knowledge about a topic, this new knowledge may result in specific suggestions for how your practice can be improved. You can learn about these suggestions by reading research reports and looking for statements at the end of the report where the authors explain the implications of the results that might pertain to your practice. For example, in a study about youth literacy habits, Nippold, Duthie, and Larsen (2005) concluded their research report with suggestions for numerous programs that could be initiated by speech-language pathologists to promote youth reading habits for all students, including those with language disorders.
- **Reading research can help you improve practice by offering new ideas to consider.** You can learn about new practices that have been found to be effective in other settings or situations by reading research. For example, a high school counselor concerned about the smoking rates of students placed at risk in her school may read about a peer-counseling program reported from a different location that was found to help adolescent smokers successfully quit smoking. She could use the results of the research that she read to consider the idea of starting a peer-counseling program at her own school.
- **Reading research can help you learn about and evaluate alternative approaches to use.** In many situations, there are multiple approaches that could be used in our practices. We may learn about these approaches from reading research or because they are suggested by other practitioners or policy makers within our professional settings. When faced with multiple alternatives in your practice, reading research can help you not only identify alternative approaches, but also choose the best approach from among the alternatives. When you read several research studies that have been conducted for different approaches, you can evaluate and compare the evidence that is available for the effectiveness of the different approaches. Connelly and Dukacz (1980) provided a useful process that you can use to sift through available research studies to learn about different approaches and determine which will be most useful for your situation. The process is demonstrated in Figure 1.2, which focuses on three steps that practitioners might use to select a new strategy to implement in their practice.

As shown in the figure, a reading teacher decides to incorporate more information about cultural perspectives into the classroom and wants to find the best strategy that will increase students' understanding of multiculturalism. By reading research on the topic, this teacher learns about four lines of research that suggest alternative strategies. Research suggests that incorporating diverse cultural perspectives may be done with classroom interactions by inviting speakers to the room (line A) or by having the children consider and think (cognitively) about different cultural perspectives by talking with individuals at a local cultural center (line B). It may also be accomplished by having the children inquire into cultural

## Where Do You Find Reports of Research?

We hope you are convinced that it is important for you to read research to learn about the current state of knowledge about topics that interest you, to understand different sides of policy issues, and to improve your practices. If so, your next question might be: Where do I find reports of research to read? It turns out that you can find research discussed in a variety of published formats. Because the goal of research is to add to knowledge about various topics, researchers report their studies in formats where many different audiences, including other researchers and practitioners, can read and learn from them. In Chapter 4, we will discuss strategies you can use to find good research studies in the literature on specific topics that interest you. For now, it is helpful to simply start with an introduction to the different formats where you might read reports of research studies.

Figure 1.3 illustrates several different types of documents where you can find reports of research. Modified from a classification originally developed by Libutti and Blandy (1995), the figure is a guide to types of available published documents, including books, journal articles, and early stage materials. Let's examine these formats by considering a brief description and examples of each.

- **Books.** Books (including e-books) are major publications on a topic that are typically hundreds of pages in length and screened for quality by editors and/or book publishers. There are several types of books where you can find reports of research discussed. Reference summary books such as encyclopedias and handbooks provide overviews of available research written by a group of leading specialists in the field. These books discuss many research studies that have been conducted within a topic area. For example, the following handbook for nurses provides an overview of an extensive amount of research available about patient safety and quality:

- Hughes, R. G. (Ed.) (2008). *Patient safety and quality: An evidence-based handbook for nurses*. Rockville, MD: Agency for Healthcare Research and Quality.

You can also find books that report on the results from single research studies. For example, the following book describes Winkle-Wagner's (2009) research study about Black women's experiences in college:

- Winkle-Wagner, R. (2009). *The unchosen me: Race, gender, and identity among Black women in college*. Baltimore, MD: The Johns Hopkins University Press.

When reading about research on a topic, books can be advantageous to read because they are a format that is familiar to you, can provide you with a good introduction to the topic, and typically include an extensive amount of information. You should

**FIGURE 1.3**  
Different Types  
of Documents  
Where Research  
Reports Are  
Found

Source: Adapted from Libutti and Blandy (1995) and Creswell (2008).

