# Reading a Research Report

Research reports in psychology cover an enormous range of topics. However, most use a very similar format. This format is referred to as American Psychological Association (APA) style.

The value in having a specific format for a research report is that a reader knows where to find similar kinds of information in each report. Sometimes, sections of the report are combined (e.g., Results and Discussion) and articles in some journals have no section headings (e.g., Science) but the contents of a research report are almost always presented in the same order.

Here is a brief synopsis of the parts of a research article:

* First presented is an **Abstract**, which conveys without technical jargon what the study was about, how it was conducted, what the findings were, and what the implications of the findings are.
* The **Introduction** presents a review of the literature and outlines the purpose of the study and the researchers’ hypotheses.
* The **Methods** section describes the participant sample (e.g., age, ethnicity), the materials used (e.g., a paper-and-pencil questionnaire), and the procedure (i.e., how the study was conducted).
* The **Results** section outlines the statistical findings of the study, and the **Discussion** section explains the results and relates the findings to the previous literature. In the discussion sections, limitations of the study are usually addressed, as are ideas for future research.
* Finally, the **References** section documents the literature sources used (following APA format).

Now that you have learned how to find peer-reviewed research articles and have reviewed the parts of a research article, you are ready for the careful reading of a research article. For this activity, we will use a short article on a study that looks at what is called the “Mozart effect.” If you have not already done so, retrieve the article now. For information on how to access journal articles in the Library, go back to the “Resources” section at the beginning of this module.

Nantais, K. M., & Schellenberg, E.G. (1999). The Mozart effect: An artifact of preference. *Psychological Science, 10*(4), 370–-373.

Although most research articles in psychology follow a similar format and are arranged in a logical order, it is often helpful to read an article in a non-sequential order. Specifically, you may read the last paragraph of the **Introduction** first. This paragraph typically summarizes the procedure and the hypotheses of the study. If you read this paragraph first, then you have a general framework for understanding the research report. This framework usually helps the reader grasp the methods and motivation of a study more efficiently. After you have developed this framework, it may be helpful to read the first paragraph of the **Discussion**. This paragraph typically summarizes the results of the study by giving a very short description of the study’s purpose and then describes the findings without the statistical analyses. After reading this paragraph, you can more easily comprehend the **Results** section of the article.

Now, use this approach to read “The Mozart Effect: An Artifact of Preference.” Try reading the last paragraph of the **Introduction** first and then the first paragraph of the **Discussion**. The **Abstract** is the first paragraph of the paper and is followed by the **Introduction**. The **Introduction**, unlike the other sections of a research report, does not have a heading. In the article in the text on the Mozart effect, the last paragraph of the **Introduction** is in the second column of the first page of the article, halfway down. It begins with “Our goal in Experiment 1.” After reading these two paragraphs, you will have an understanding of the article’s hypotheses, methods, and results. With this understanding, you may find it much easier to comprehend the entire article (and if you were doing research for an assignment or for your project exam, you could quickly decide whether or not the article meets your needs). For each section, there is a series of questions and answers for critical readers (these questions are listed below). Try to answer the questions on your own and then compare your answers to those provided.

1. What are the authors’ goals?

The authors propose to replicate earlier studies (Rauscher et al., 1993, 1995) indicating that performance on spatial-temporal tests improved after listening to pieces by Mozart. This goal is important given that others have failed to replicate the Mozart effect (for example, Steele, Bass, & Crook, 1999). In Experiment 1, the authors wanted to see if the boost in performance was specific to music by Mozart or whether any classical music would similarly improve performance. In Experiment 2, the authors tested a possible alternate explanation for the Mozart effect—namely, that performance improves after participants do something that they enjoy

1. What hypotheses will be tested?

The hypotheses are listed as questions to be answered before one can accept the validity of the Mozart effect: (1) Does performance on spatial-temporal tests improve after listening to music by Mozart? (2) If so, does the effect only occur following Mozart’s music? (3) Is the so-called Mozart effect simply the result of people having just done something that they enjoyed?

1. What are the independent and dependent variables?

The independent variable is the type of intervening task (in Experiment 1, Mozart, Schubert, silence; in Experiment 2, Mozart, story). The dependent variable is the number of items correct on the spatial-temporal test.

1. How would you interpret the results of this experiment?

The Mozart effect is not specific to Mozart—and it is not even specific to music. As well, it is unclear whether or not Mozart helps performance or whether silence hinders performance.

Questions and answers for “The Mozart Effect” are taken from Elmes, D. G., Kantowitz, B. H., & Roediger, H. L. III. (2003). *Research methods in psychology* (7th ed., pp. 281, 283–285). Toronto, ON: Thomson Learning, Inc.