Case Study Profile: What One Person Says About All

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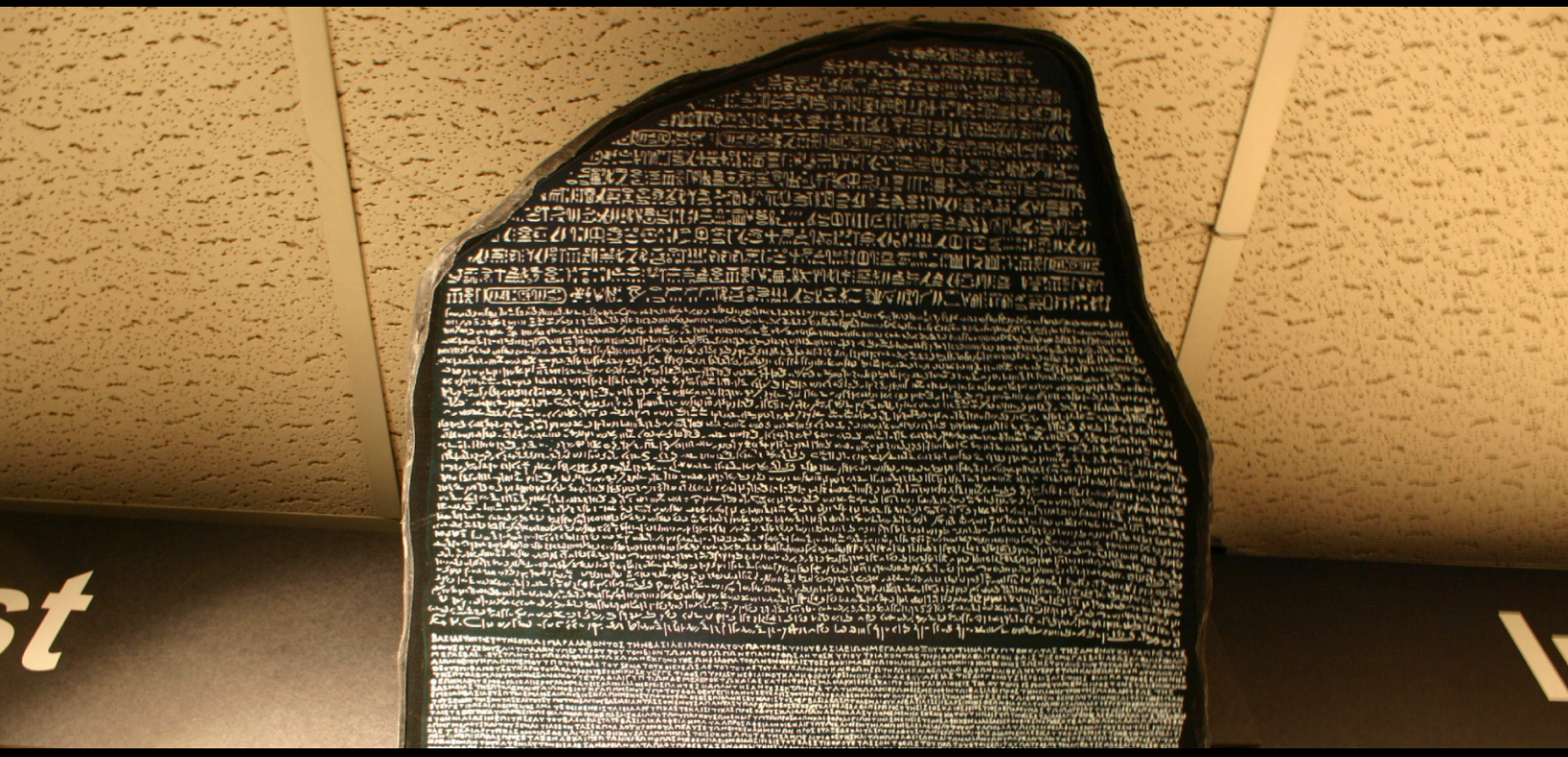


FIGURE 15.1 Throughout history, language differences have affected aspects of human life such as trade, diplomacy, and culture. Found in 1799 and at first indecipherable, the Rosetta Stone, pictured here, marks an important milestone in helping language researchers understand Egyptian hieroglyphics. In addition to language-related artifacts, case studies are another, far more frequently used tool that researchers rely on to understand how people learn and use languages. (credit: "Rosetta Stone" by Ryan Somma/ideonexus/flickr, CC BY 2.0)

CHAPTER OUTLINE

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15.2 Case Study Trailblazer: Vilayanur S. Ramachandran
15.3 Glance at Genre: Observation, Description, and Analysis
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15.5 Writing Process: Thinking Critically About How People and Language Interact
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INTRODUCTION Academic research is often about finding answers to human questions. *How do people live, and how do they learn? In what ways is language an expression of thought? Why do people act as they do? How do people's feelings affect their behavior?* Answers to these questions are not easy to find because many are hidden in the human brain. Indeed, researchers may spend years of study looking for such answers and, in doing so, may discover only more questions.

How do you begin to find answers to such behavioral research questions? One research tool, the case study,

gives researchers the opportunity to observe people and draw conclusions about their behavior. Education, psychology, sociology, and linguistics are just some of the research fields that rely on these studies as a way of drawing conclusions through observation.

A case study is a genre of academic writing in which researchers use firsthand evidence to share findings, draw hypotheses, and identify opportunities for further investigation. In this chapter, you will learn what a case study is, how it contributes to research, and how to conduct an informal one of your own.

15.1 Tracing a Broad Issue in the Individual

LEARNING OUTCOMES

By the end of this section, you will be able to:

- Define the term *case studies*.
- Explain the purpose of case studies in academic research.
- Identify ethical considerations of research on human subjects.

To gain more knowledge of or insights into human behavior, thoughts, or emotions, researchers conduct observations of participants. Case studies are the written results of these observations. Because authors of case studies interpret results within the context of a limited setting and sample size, these authors often theorize about their findings and aim to discover opportunities for further research rather than draw hard, universal conclusions.

Case studies depend on **qualitative research** and analysis. Qualitative research involves subjective evidence that is difficult to control and difficult to replicate. For example, if a researcher observes a classroom, business, or hospital setting, their observations are limited to what they observe at that particular location on that particular day at that particular time.

Case studies also depend on **quantitative research**. Quantitative research involves hard, specific data that can be replicated in a controlled environment. You may have read about health studies that suggest a moderate amount of red wine or chocolate is good for your health or that eating red meat is bad for your health. Authors of case studies use quantitative research by looking at data drawn from a group and using it as a basis for their findings. In other words, the data, not the researchers' observations, form the primary evidence.

Another thing to know about case studies is that their authors attempt to observe participants in their natural environments. For example, to learn something about customer-service skills for a case study, an author would observe employees at a call center or in a retail store as they do their jobs. Similarly, to learn about how people use language, an author might observe people communicating naturally with their friends, family, or colleagues. Because case studies take place in the participants' natural environments, analyzing case studies can help readers imagine themselves in that environment. For example, as part of their training, a nurse or doctor might read a case study about a patient to think about what they would do in the same situation. Examining case studies helps readers imagine a wide range of outcomes, while conducting case studies helps researchers discover opportunities for further research.

Case Study Ethics

Professional researchers must abide by a complex ethical and legal framework when conducting case studies. More importantly, participants must give their permission to be part of the study and to have their information shared. Researchers are obligated to act ethically when conducting case studies, *but what does "act ethically" mean, exactly?* Most people would agree that it is *unethical* to inflict harm on a case study participant, yet there are instances of researchers injuring their participants either physically or psychologically. One of the best-known examples of a case study conducted unethically (https://openstax.org/r/conductedunethically) is the Milgram Experiment (https://openstax.org/r/milgramexperiment), in which Yale University psychologist Stanley Milgram (https://openstax.org/r/stanleymilgram) (1933–1984) attempted to study the extent of people's willingness to submit to authority when ordered to do something they know is wrong. Participants

were instructed to deliver a range of electric shocks to other participants, who in fact were not actual participants but other researchers. Unbeknownst to the participants, the shocks were not real, and no electric current was delivered when participants pressed the button to deliver the shocks. Responses to shocks—screams and other indications of pain—were prerecorded. Yet some participants reported suffering psychological trauma from what they believed were their actions.

Most people also would consider it unethical to be dishonest about a case study. Researchers are expected to conduct their studies and analyze their data objectively, without bias. Over the years, laws and ethical codes have been implemented to protect case study participants. If you pursue an academic or career field that uses case studies, you will learn more about ethical and legal considerations specific to that field. For example, most academic case studies must be approved by an institutional review board (IRB) before the research can be conducted. Most universities have specific guidance on how faculty and students should go about research involving human subjects and most likely will have strict guidelines for conducting case studies. The assignment in this chapter, however, asks only that you conduct an informal case study. Your instructor will be your best resource to get answers to questions you have about your college's policies on conducting research and whether and how they apply to the research you intend to do.



15.2 Trailblazer

Case Study Trailblazer: Vilayanur S. Ramachandran

LEARNING OUTCOMES

By the end of this section, you will be able to:

- Apply critical thinking and communication in varying rhetorical and cultural contexts.
- Identify and describe the genre conventions and rhetorical situation of case studies.



FIGURE 15.2 "Vilayanur S. Ramachandran (credit: Vilayanur S Ramachandran 2011" by David Shankbone/Wikimedia Commons, CC BY 3.0)

"My . . . work . . . has been to unravel . . . the mysterious connections between brain, mind, and body."

Ramachandran's Case Study on Phantom Limbs

Neuropsychologist Vilayanur Subramanian Ramachandran (https://openstax.org/r/vsramachandran) (b. 1951) was born in Tamil Nadu, India. He was educated in India and Thailand before earning a PhD from the University of Cambridge in England. Both a physician and a medical researcher, Dr. Ramachandran is a distinguished professor of psychology at the University of California, San Diego. He is best known for his work in behavioral neurology, particularly his research on the phenomenon of phantom limbs.

Behavioral neurology is a specialty that focuses on the ways in which neurological damage and disease affect behavior, memory, and cognition and how these problems can be treated. Ramachandran is the author of the books *Phantoms in the Brain* (1998) and *The Tell-Tale Brain* (2011), among others.

Ramachandran's most significant contribution to the field of behavioral neurology is the mirror box (https://openstax.org/r/mirrorbox), a device used to treat patients with amputated limbs. Phantom limb, a condition that afflicts people who have had an arm or leg amputated, is characterized by a feeling or sensation in the area of the amputated limb. In some cases, patients report pain in a phantom limb. Connecting brain, mind, and body, Ramachandran theorized that in cases of phantom limb pain, the brain could be tricked into thinking the limb was still there. Thus, the brain would reorient itself (scientifically referred to as *neural plasticity*) and, consequently, reduce pain. He then conducted case studies to test this theory.

Ramachandran's first task was to identify a research question, which he formulated from a theory based on existing literature on neural plasticity. At the time, little scientific research existed on phantom limbs, thus

providing Ramachandran with an opportunity to gain new insights into the phenomenon. Aware that existing research suggested the brain could reorient, or rewire, itself, he posited that neural plasticity could be used to help people with phantom limb syndrome.

Ramachandran's methods included recruiting case study participants whom he could observe. He placed ads in newspapers seeking volunteers who had undergone amputations. He then conducted case studies on the volunteers to observe how phantom limbs affected them.

These observations, along with previous research, convinced Ramachandran that neural plasticity could be used to treat patients with phantom limb syndrome. Based on his observations of a limited number of people, Ramachandran analyzed the results of his studies and developed the mirror box, a treatment that is used today to help ease chronic pain when it exists on one side of the body. Focusing on the connections of brain, mind, and body, Ramachandran created a box containing a mirror that reflects the existing limb. The reflection of the limb, which the participant moves, creates an illusion in the brain, tricking it into thinking it has control of the missing limb.

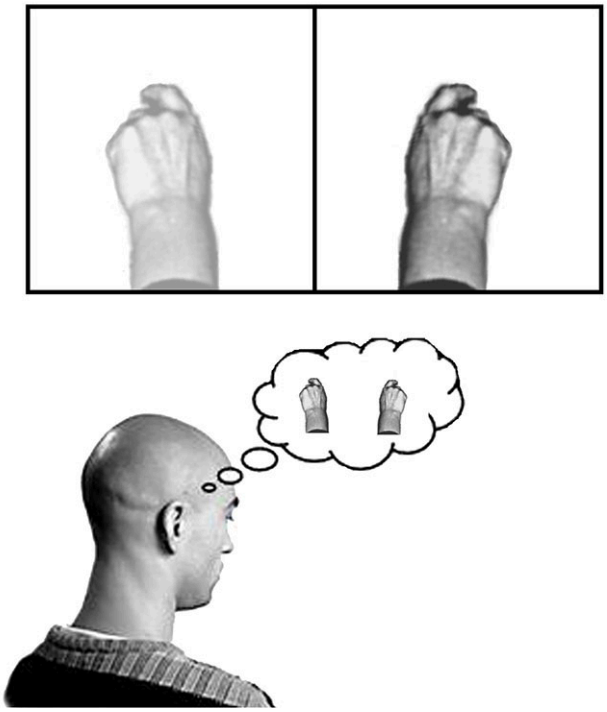


FIGURE 15.3 Dr. Ramachandran's research and case study established the link between visual perception and nerve transmission. Mirror therapy, resulting from this discovery, has helped bring some relief from phantom limb pain. (credit: "Mirror-box-comic" by Edward M. Hubbard/Wikimedia Commons, Public Domain)

To learn more about Dr. Ramachandran's research, see his TED Talks 3 Clues to Understanding Your Brain (https://openstax.org/r/3clues) and The Neurons That Shaped Civilization (https://openstax.org/r/thatshapedcivilization).

Discussion Questions

1. What advantages and disadvantages would a case study offer a researcher such as Ramachandran for finding information?
2. What do you think Ramachandran's research question was?
3. What would have constituted quantitative and qualitative research in Ramachandran's case study?

4. What do you think Ramachandran might have told participants regarding the ethics of the study?

15.3 Glance at Genre: Observation, Description, and Analysis

LEARNING OUTCOMES

By the end of this section, you will be able to:

- Identify the structural components of case studies.
- Determine the objectivity of case studies.
- Apply the genre conventions of case studies in your own research.

The goal of case study authors is to expand knowledge in a field of study. In many case studies, researchers look for "blind spots": areas of investigation that the current research is not addressing or not addressing sufficiently. Sometimes the authors of a study will explicitly state what they believe are the gaps in their research and call on other researchers to fill in those gaps.

Components of Case Studies

Case studies generally have five main parts. They begin by presenting an overview of previous case studies on the topic. Sometimes called a **literature review**, this part of the case study provides background and helps readers understand where the current study fits within previous research. The second component of a case study is a detailed description of the **participants** and the **observation environment**. These descriptions of the individuals being studied and the conditions under which they are being studied provide additional background and context. The third component is the **methods** section, in which the author explains the ways in which data will be collected, such as interviews, surveys, observations, document analysis, and so on. The fourth component, following the methods section, is an organized presentation of the data collected, or the **findings** of the study. Finally, an **analysis** of the results concludes the case study. In this section, the author provides an interpretation of the collected data. This section usually includes an explanation of the limitations of and gaps in the case study's data, methods, or anything else the author believes is important.

Similar to academic essays, case studies adhere to a formal structure and voice. They are organized clearly, edited carefully, and reflect objectivity. As with all academic work, sources are documented and cited, usually using APA Documentation and Format.

Key Terms

A case study, at its most basic level, is about close observation as a basis for analysis. By observing individuals or groups in a particular setting, researchers attempt to learn something about the participants' thoughts, actions, behavior, or feelings. To conduct a case study, you should be familiar with the following terms.

- **Analysis**: Interpretation of data gathered in a case study.
- **Data**: Information gathered from observation, interviews, research, or any other part of a case study.
- **field observations**: Observations made while participants are engaged in "real" activities at "real" places. Usually these are the workplace, school, or home. Other locations might be athletic or social venues or any other setting in which participants can be observed acting as they would if they were not being observed.
- **Results**: What collected data reveals about the research question.
- **Participants**: The human or, in some cases, nonhuman subjects observed in specific settings for the purpose of collecting data and evidence.
- **Observation environment**: The location and conditions under which participants are observed.
- **qualitative research**: Subjective information based on observations or elements that are difficult to replicate.
- **quantitative research**: Specific data that can be replicated in a controlled environment.
- **Research question**: Focused question about the topic being researched. A research question is the basis of a case study.

- **Survey** or **Interview**: Questions that the author of a case study asks participants in order to elicit relevant information.

15.4 Annotated Sample Reading: Case Study on Louis Victor "Tan" Leborgne

LEARNING OUTCOMES

By the end of this section, you will be able to:

- Apply critical thinking and communication in varying rhetorical and cultural contexts.
- Identify and describe the genre conventions and rhetorical situation of case studies.
- Analyze relationships between ideas and patterns of organization.

Introduction



FIGURE 15.4 Pierre Paul Broca (credit: "Paul Broca" by Anonymous/Wikimedia Commons, Public Domain)

French physician Pierre Paul Broca (1824–1880), an early researcher of brain science, is credited with developing theories about how the brain controls motor functions such as language. One of his patients, Louis Victor Leborgne, suffered from a continuing loss of speech that resulted in an inability to form any syllables other than *tan*. Following Leborgne's death, Broca examined Leborgne's brain and observed some abnormalities in the left frontal lobe. These observations would eventually lead to the larger discovery that different areas of the brain control different motor functions.

This sample case study imagines what Broca might have written about Leborgne. The contemporary references at the end of the study are those used by the actual writer of the case study, not Pierre Paul Broca.

LIVING BY THEIR OWN WORDS

Patient Admission

> This 50-year-old Caucasian male was transferred from the psychiatry division to the surgical ward of Bicêtre Hospital in Paris on 11 April 1861. I performed a thorough physical examination upon his admission. The presenting diagnosis is diffuse gangrenous inflammation and infiltration of connective tissue of the entire lower right extremity, extending from the instep upward to the buttock. The patient shows complete paralysis of his right-side limbs. The left limbs are mobile with adequate control and power. Both bowel and bladder control are intact. The eyes are equally focused and reactive to light, although the vision in the left eye has deteriorated more than in the right eye. The patient exhibits difficulty in swallowing food, but the tongue is not paralyzed, and voice is normal.

Introduction. *Broca first orients readers to the details of the case study: the participant, Leborgne, and how Leborgne came to be under his care.*

Background and Context. *Broca gives a detailed description of the case study participant. He notes physical details of Leborgne's paralysis so that readers understand that Leborgne retains control over his voice and tongue. This knowledge allows Broca to eliminate paralysis as a cause of the subject's inability to use language.*

> The patient is completely unable to form words other than the single syllable *tan*, which he most often repeats twice in rapid succession: "tan-tan." This is said in varying tones and inflections. Paralysis of the patient's dominant arm prevents writing. Nevertheless, the patient can communicate to a surprising extent through facial expressions and gestures with his left hand. His intellect appears normal, and he shows no signs of head trauma.

Research Question. *In this paragraph, Broca further describes his participant and begins to bring the case study into focus. The details he provides about Leborgne's ability to communicate and use language will be the focus of the study. Broca observes that Leborgne can communicate nonverbally, and no physical signs indicate that his brain may be affected. Broca wants to understand why Leborgne communicates as he does.*

Patient History

> ***Personal History.*** My personal interviews with family members revealed that Louis Victor Leborgne was born 21 July 1809, in Moret-sur-Loing. The town has many tanneries, a fact that may account for his use of the syllable *tan*. His father is an elementary school teacher. The patient is one of six siblings. His previous occupation was *formier* [artisan who made forms for shoemakers]. He is unmarried and has no children. Members of his immediate family visit but have been unable to provide care for him at home, resulting in an extended hospital stay of 21 years. Interviews with other patients in the ward have indicated that the patient is unfavorably viewed as egotistical and vindictive.

Description of Research Methods. *In this section, Broca notes that he interviewed Leborgne's family and other patients in the hospital and provides a hypothesis as to why Leborgne uses the syllable tan to communicate.*

Organization. *The author uses headings to organize the different sections of the case study. Main headings are centered; subheadings are left-justified.*

> ***Medical History.*** My interviews with family members and hospital staff responsible for his care yielded only a cursory medical history. They did, however, reveal that the patient developed epilepsy in his childhood or youth; the exact age is unknown.

> At age 30, the patient lost the ability to speak but did not immediately seek medical attention. When the condition persisted, he came to Bicêtre Hospital and was admitted to the psychiatry division in 1840 (exact date not recorded).

Limitations of Research. *Broca again notes the use of personal interview data as a research method / primary source. He acknowledges the limitations of this method ("only a cursory medical history") but was able to gather relevant details, such as when Leborgne developed epilepsy, when he lost the ability to speak, and when he was first admitted to the hospital.*

> Approximately 10 years after the onset of his first symptoms, Leborgne experienced gradual weakness of his right arm, which developed into complete paralysis in that limb. This condition was followed by weakness in his right leg and foot. Apparently, it took four years from the start of the paralysis of his right arm until the patient completely lost the ability to stand. In these years, his vision and mental faculties also deteriorated.

> The patient remains in bed, having refused to leave it for the past seven years. During this time, his clothing was changed once a week. The infrequent change of clothes caused a delay in discovering the extent of his gangrenous inflammation and infection. At this point, the patient could hardly move and was transferred to the surgical unit, where I first met him.

Background and Context. *More details of Leborgne's medical history are given. Broca concludes the patient history by relating the circumstances leading to his treatment of Leborgne. This section provides a detailed account of everything known about the participant and his condition. Broca doesn't rely only on records to gather this history, though. He interviews hospital staff to try to gather additional information not recorded.*

Treatment

> The gangrene being too extensive for surgery, I confined myself to testing his mental faculties and language comprehension. By using his fingers, the patient was able to respond accurately to mathematical questions. He understood and responded to verbal questions as well. At times, his answers were incorrect, such as claiming to have children; I attribute these lapses to sepsis, which by now was far advanced.

Research Methods. *In this section, Broca begins to relate how he observed Leborgne's ability to communicate.*

Analysis of Results. *Broca tries to explain the reason for Leborgne's incorrect responses.*

> Lacking any physical irregularities that would cause his loss of speech, I conclude the condition must be related to brain function. This condition is so singular that it seems useful to assign it a special name. I will designate it, therefore, as *aphemia*, or loss of speech.

> The patient expired on 17 April 1861 at 11:00 a.m. Cause of death was gangrenous infection and sepsis.

Broad Theory. *Broca poses a theory about Leborgne's limited ability to communicate: "the condition must be related to brain function." This theory will be tested later in the case study and, if correct, might be applicable to how the brain works for everyone.*

Autopsy Findings

> I performed an autopsy 24 hours postmortem and found a number of irregularities in the patient's brain. A softened area over the perisylvian region contained a cavity the size of a chicken's egg, filled with serous fluid. Volume loss affected the gyri, subcortical perisylvian area, insula, and part of the striate nucleus. I weighed the brain and discovered it to be lighter than normal. I attribute the low weight to the loss of volume in the left cerebral hemisphere.

> I observed a significant malformation on the left frontal lobe, which I believe to be the source of the patient's aphemia and, therefore, the brain location controlling speech production. Wishing to preserve the brain, I performed a surface examination only, without a full dissection. I have placed the preserved brain at the Musée Dupuytren in Paris.

Research Methods. *Broca provides details of the autopsy and describes the abnormalities he found in Leborgne's brain. These details are crucial to the study because of Broca's earlier comment about Leborgne's inability to communicate resulting from brain function.*

Analysis of Results. *Broca further hones his theories based on his observations of Leborgne's brain. Broca hypothesizes that this malformation is the cause of Leborgne's condition and, therefore, is located in the part of the brain that is related to speech.*

Discussion

> I presented Leborgne's case at the meeting of the Société d'Anthropologie de Paris on 18 April 1861, where it generated considerable controversy. My former teacher Jean-Baptiste Bouillaud had previously advanced the idea that the language function is localized in the frontal lobes, with which, based on my autopsy of Leborgne's brain, I concur. Anatomist Louis Pierre Gratiolet opposed the idea that there could exist a specific area responsible for speech, arguing that the brain functions as a whole. Esteemed physician Ernest Auburtin asserted that specific areas of the brain have specific functions and further stated that motor articulation is not directly relevant to the ability to conceive words and ideas.

Advancing Knowledge. *Broca uses his case study to contribute to the research on brain functions.*

Limitations of the Research. *Broca notes that not all attending the meeting are in agreement, suggesting that further research is needed to learn more about the brain and whether specific parts control specific functions.*

Conclusion

> Given my patient Leborgne's success at responding to verbal and mathematical questions despite his loss of speech, I am convinced that brain function is localized. Auburtin's theory of more compartmentalized specificity is intriguing, and I intend to pursue this idea. Leborgne's preserved brain remains at the Musée Dupuytren, where it is available for further study.

What's Next. *Inviting additional research, Broca calls on his audience to research localized brain function. He notes that Leborgne's brain is available for researchers to observe.*

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Discussion Questions

1. What methods does Broca use in his case study?
2. What are Broca's field observations?
3. What types of evidence does Broca gather for his case study?
4. How does Broca analyze his data? What conclusion does he reach?
5. If Leborgne had lived longer, what are some ways Broca could have expanded his study on his patient's use of language?

Language and Expression

One significant finding of Broca's case study was that Leborgne grew up in the town of Moret-sur-Loing. The town had many tanneries, leading Broca to theorize that Leborgne's use of the syllable *tan* was related to his home. *Why is this theory important?* It illustrates how personal history affects people. It is possible that Leborgne used language in this way because of his history and cultural association with his hometown. Culture and identity have a big impact on how people use language, even among people who speak the same language.

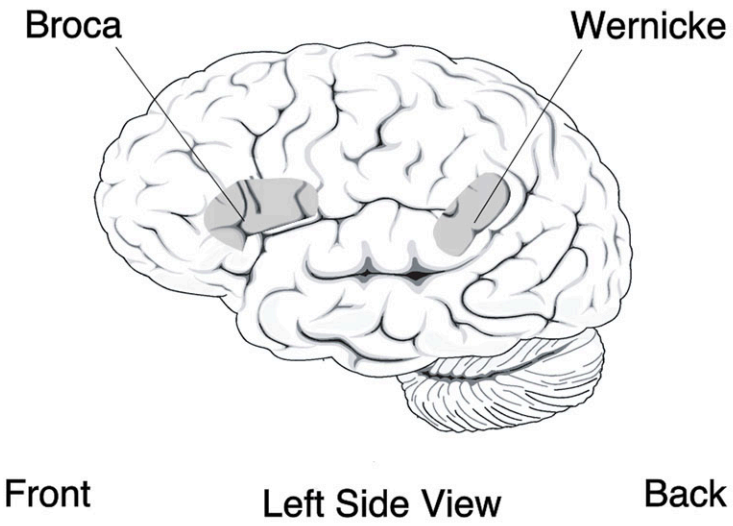


FIGURE 15.5 The Broca area—named for French anthropologist and pathologist Pierre Paul Broca (1824–1880), who discovered its function—is the part of the brain that controls articulate speech. The Wernicke area—named for German neurologist Carl Wernicke (1848–1905), who first described the area—is the part of the brain that controls the comprehension of speech. (credit: "BrocasAreaSmall" by NIH publication 97-4257/Wikimedia Commons, Public Domain)

15.5 Writing Process: Thinking Critically About How People and Language Interact

LEARNING OUTCOMES

By the end of this section, you will be able to:

- Identify and implement genre conventions of case studies for structure, paragraphing, voice, and mechanics.
- Articulate how genre conventions are shaped by purpose, culture, and expectation.
- Participate successfully in the collaborative and social aspects of writing processes.
- Give and act on productive feedback to works in progress.

Having learned about case studies and how they help advance research and knowledge, you are ready to do an informal one of your own. You will conduct an informal case study profile by selecting a topic to research, observing a setting and a participant (or participants), and using specified research methods. If applicable, see The Research Process: How to Create Sources for more information about selecting a research topic. You will then analyze the results of your study to determine its significance.

As indicated in Tracing a Broad Issue in the Individual, many universities and professional organizations will provide guidance on how to adhere to ethical standards when conducting a case study. Your instructor will be your best resource for answers to questions you have about your college's policies on conducting research and whether and how they apply to the research you intend to do. Remember, however, that for any research you do involving human subjects, you must obtain participants' written permission to be included in your study.

Summary of Assignment

Conduct an informal case study of a classmate, friend, or family member to gain insight into the participant's use of language, specifically the ways in which their culture(s) and language(s) interact. Try to find a willing participant who is either bilingual or fluent in, familiar with, or an occasional user of a language other than English. You can focus your case study on the ways in which your participant changes their language according to context, how their use of language is different when they interact with family and friends as opposed to in academic or professional contexts, or how using one language affects the other. Be sure to consult your instructor about the school's policy on student participation in studies, and obtain written permission from the participant before you begin. If you do not know anyone who speaks another language, consider these topics:

- Body language that accompanies linguistic communication
- Language shifts according to medium (text, phone call, email, in person)
- In-person vs. written communication
- Comparison of language use between two participants from different cultures or age groups

After you decide on your topic, formulate a research question that asks precisely what you want to learn from your study. Next, you will need to plan your case study by drafting questions for interviews and conducting observations at determined times and places. Then, using the information you collect from your interviews and observations, you will offer an interpretation about the participant's use of language that might be helpful to your college's instructors and administrators. Present your findings in a report of around 1,000 to 1,200 words.

Another Lens. Complete the same case study, and share your findings in a presentation that is 7 to 10 minutes in length. See Scripting for the Public Forum: Writing to Speak for more information about scripting for a public forum. For this version of the assignment, record your interviews on video or use a voice recorder. Play clips of your interviews in your presentation to illustrate the participant's use of language. Organize the presentation into clear, distinct sections with subtitles. Instead of long, dense paragraphs, use short bullet points to state your main points. Use visuals to communicate abstract ideas or data. Make sure your presentation flows logically and that you use appropriate transitions to maintain coherence. To indicate clear demarcations between sections, use headings and subheadings, as in the Annotated Sample Reading. In your presentation, include all of the typical sections of a written case study:

- **Background/Context.** Give an overview of previous research on the topic.
- **Methods.** Provide a detailed description of the methods you used to collect the data. Include a description of the participant and the observation environment.
- **Results.** Provide the data collected: answers to interview or survey questions, your observations, and any other pertinent information.
- **Analysis.** Interpret the data, and discuss any limitations of the case study.

See the resources below for some helpful presenting tips.

- 6 Tips to Calm Your Nerves before Speaking (https://openstax.org/r/6tips)
- Like, Eliminate Ums and Ahs, Right? (https://openstax.org/r/eliminateums)
- Do You Write the Way You Speak? (You Should!) (https://openstax.org/r/doyouwritetheway)
- Do You Write the Way You Speak? (You Should!) Part 2 (https://openstax.org/r/doyouwritetheway2)

Quick Launch: Research Question and Data Collection

Within your selected topic, begin to brainstorm possible research questions, keeping in mind the following characteristics:

- **Open Ended.** A good research question has multiple possible answers, all equally plausible. Avoid a yes-

or-no question or one with an obvious answer.

- **Debatable.** The research question should spark reasonable debate around the best answer or solution. If you think you know the answer to the research question or if you doubt that people can be open-minded about a range of answers, it is not a good research question.
- **Answerable.** You should be able to answer your research question by using the evidence you gather. You should be able to consult existing source material on the topic.
- **Consequential.** The outcome of the debate around your research question should be of consequence. In other words, what you or others choose to do going forward should matter and affect others.

You probably will revise the wording of your research question quite a bit before it aligns with the characteristics listed. Spend time thinking about your research question, and revise it as necessary to prepare to conduct your case study. See Table 15.1 for examples of how to revise research questions in various fields of study.

Research Questions

Topic	**Research question doesn't meet basic requirements. It is a yes-or-no question, of little consequence, easy to answer, or suggestive of the "right" answer.**	**Research question is of some consequence and could have multiple answers but needs further revision to be open-ended, more specific, or more consequential.**	**Research question is specific, open-ended, consequential, and suitable for a case study.**
Sports	Who are the best college athletes now? Should college athletes be paid?	Is it fair to other students to pay college athletes?	How do colleges benefit—or not—from paying student athletes? How do college athletes benefit—or not—from being paid?
Finance	Should you invest in stocks or bonds? Should the government regulate the economy? What was the GDP in the year 2016?	What are some things the U.S. government does to protect the economy?	How are individuals affected by government intervention in free-market economies?
Technology	Are high-quality cell phones too expensive? Is Apple a monopoly?	What will be the future of landlines?	Why do some people continue to use landlines? How do people combine cell phone and landline use?

TABLE 15.1 Revising research questions

Once you select a topic and research question, you can begin looking for background information.

Data Collection

Before starting your actual research, get a sense of the body of knowledge around your topic. Remember, case studies are about advancing research in a particular field. For a case study to effectively advance knowledge, it must show awareness of the research already done in the field. A literature review section, which includes previous research and background about the topic, is typically included in a case study. Browsing trade publications and academic journals can help you get a sense of existing research. Looking for articles frequently referred to in other articles is a good way to locate important research, as researchers typically cite significant studies. Look at important, groundbreaking research in addition to recently published work. The information you gather from existing literature may be either qualitative or quantitative. See The Research Process: Where to Look for Existing Sources for more information about conducting research.

Drafting:

After you have established your research question, you can begin your actual study. Start by planning how you will collect your primary source data. First, review the literature in the field if you have not yet done so. Next, draft questions to ask your case study participant. The strongest case studies provide a unique perspective that is applicable to your specific audience—in this case, students, teachers, and administrators at your college. Keep in mind that not every college is the same. Some colleges, such as "open admissions" community colleges, admit all who apply, whereas other colleges accept only 5 percent or fewer of their applicants. Interview questions are likely to be different depending on the individual characteristics of your college. To learn more about your college and its student population, search for information on the college website. Look for sections that have titles such as "About Us," "About Our Students," "College Facts" / "Factbook," and so on.

Brainstorm a list of characteristics that make your college and its students unique. Figure 15.6 shows how a student at Midlands Technical College began data collection for a case study on language use.

	Student Body Characteristics
	College: Midlands Technical College
	61% Female, 39% Male
	45% White, 25% Black, 15% Hispanic, 10% Asian, 5% Other
	Most students live in urban or suburban areas
	Most students (59%) are traditional college age (24 or under)
	Because this is a community college, all students live off campus; most have not relocated to attend school

FIGURE 15.6 Brainstorming data (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Create Interview Questions

Using your research and brainstorming ideas, draft a series of 10 to 15 questions you plan to ask your case study participant. Remember that these questions should be open-ended (no yes-or-no questions) and give the participant an opportunity to speak freely and extemporaneously. There are no right or wrong answers. With these questions, keep your purpose in mind: to gather information that will be helpful to students, teachers, and administrators about how a student at Midlands (or another school) uses language. Here are some sample questions:

- What are your hobbies, or what do you do for entertainment? (This question should elicit responses that provide insight into the student's leisure activities and the groups they identify with.)
- What new language uses did you have to develop when you became a college student?
- If you have a job in addition to being a student, what are some ways you use language to do that job?
- How do you communicate with friends and family? (Text messages? Apps such as Snapchat? Phone calls?)
- Describe your style of text messaging. (Probe for details about situations and contexts.)
  - When do you send long texts?
  - How long do you usually wait for a response before sending a new message?
  - How long do you usually wait before responding to a message?
  - When do you use standard English?
  - When and for what purposes do you use emoji?
- How do you communicate using voice or video chat (Zoom, video games, iMessage, etc.)?
- With whom do you communicate, and in what contexts?
- How do you adjust your use of language in these situations?

Remember to use the brainstorming and research you did previously to draft appropriate questions for your case study participant. Also, try to find ways to encourage the participant to provide as many details as they can and to identify an appropriate setting in which you can observe them using language.

Interview the person you have chosen to study. Record their responses on paper or on a digital voice recorder. If using a digital recorder, briefly note anything you want to review later in writing. If you find an opportunity to elicit further information or follow up, do so. You may find it helpful to print the bulleted list of questions and write the participant's answers directly on the page.

Field Observation

The next step is to observe. If you haven't already done so, decide on a setting in which to observe the participant. You might observe in person and/or use a messaging app or video chat to observe them using language at work, with their friends and family, or in some other setting. The setting should be one in which you can get a good idea of how the participant uses language naturally in that context. For example, you would not want to observe a student playing a video game if they aren't a gamer. Here are some suggestions about what to note as you observe. Be sure to take detailed notes during your observation. Consider printing this page as well and writing observation notes on it. See The Research Process: How to Create Sources to learn more about field research.

- What are some common words or phrases used?
- In what ways does the participant replace or substitute certain words with emoji, slang, acronyms, and the like?
- When does the participant's voice indicate shifts in volume, tone, or vocabulary? If you are observing texts or writing, how does the participant communicate tone?
- What specific words and phrases does the participant use? That is, what words and phrases might not be understood by you or others but *are* understood by the participant and the people with whom they are communicating?

Analysis of Data

After collecting data, analyze your findings and write your report. First, look closely at the data you have collected, and decide what the information is telling you about how the participant uses language. You should have data gathered from both qualitative and quantitative research. If you need more of either one, interview or observe the participant again, or conduct more background research. Practice identifying qualitative and quantitative data.

Access multimedia content (http://openstax.org/books/writing-guide/pages/15-5-writing-process-thinking-critically-about-how-people-and-language-interact)

Writing the Introduction: Background, Context, and Methods

In the introduction, provide background and context for the case study. To begin, write a detailed description of the study you have conducted and what you sought to learn from it. Also include the details of your literature review and the methods you used to collect data (interviews, observations, and so on). The example below is an introduction to the Midlands Technical College student's case study on how students use language:

Background and Context

> Midlands Technical College is a two-year public college in Columbia, South Carolina. Over the course of two weeks, I observed two students to better understand their uses of language. A generational shift in the average college student population is occurring, with millennials graduating and making up less of the college student population. At the same time, Gen Z's numbers on college campuses continue to grow. Studying how college students use language can provide valuable insights into how to communicate effectively with this population.

Methods and Participant

> I gathered my data using three methods. In the first method, I researched literature about both Midlands Technical College's student population and communication habits and attitudes among Gen Z students, and I looked into some case studies about the use of emoji. For the second method, I created a group chat consisting of me and two students enrolled in the same section of an introductory psychology course. We used this group chat to discuss the course, assignments, due dates, etc. For the third method, I created a survey of 10 questions asking the students to think about and reflect on how they use language at home versus at school. I then interviewed the students to record their answers. Using this data, I was able to analyze how students use language among their peers versus how they use language around their family.

Body: Presentation of Data

The next step in writing your case study is to present your data and analysis. How you set up your body paragraphs is up to you or your instructor. Like the sample study about Leborgne, most case studies are organized into sections and subsections, each devoted to an aspect of the study. You have already written an introduction in which you presented the scope of your study, the participant, the field of research, and other pertinent background information. Now you can continue by organizing each element that you studied into its own section, or you can choose another way of setting it up. For example, your overall structure might look like the structure in Table 15.2, using your own criteria and as many sections as you need. If you choose another structure, create a similar organizer to help you keep focused as you write.

Criterion 1 **Possible Criterion: *Telephone Greetings***	**Qualitative Research Data** **Quantitative Research Data** **Additional Information** **Analysis**
Criterion 2 **Possible Criterion: *Emoji***	**Qualitative Research Data** **Quantitative Research Data** **Additional Information** **Analysis**
Criterion 3	**Qualitative Research Data** **Quantitative Research Data** **Additional Information** **Analysis**
Criterion 4	**Qualitative Research Data** **Quantitative Research Data** **Additional Information** **Analysis**
Criterion 5	**Qualitative Research Data** **Quantitative Research Data** **Additional Information** **Analysis**
Criterion 6	**Qualitative Research Data** **Quantitative Research Data** **Additional Information** **Analysis**

TABLE 15.2 Organizational structure

Provide detailed descriptions of what you observed and the results of your research. Include qualitative data based on your observations as well as quantitative data based on measurable results. Be sure to acknowledge what you do not know or were unable to observe. The following example illustrates a typical body paragraph describing a student's use of capitalization and punctuation in text messages.

> Mateo's use of capitalization and punctuation appeared to change depending on the mood he wanted to convey. For example, "what time do u think prof chang will let us go today"—a casual message about class on Tuesday—lacked capitalization and punctuation ("What time do you think Prof. Chang will let us go today?"). On Thursday, Mateo sent a more formal message regarding the need for the group to study for an upcoming exam: "Guys, we need to settle on a time and place—Oscar's or Dawson Library—to study." It's not clear whether Mateo's use of capitalization and punctuation is connected to his social group or other factors, as I had limited ability to observe the use of capitalization and punctuation by the study participants. However, this question is worth exploring in more detail.

Using Visuals

One way in which an oral presentation of a case study will differ from a written case study is the number of visuals provided. Presenters are expected to use visuals when sharing data and illustrating points. However, writers also use visuals to help communicate abstract ideas. In addition to images, four main types of graphics are used to present data:

- **Bar Charts**. These charts typically use vertical bars to compare different data points. They are used primarily to compare similar groups to one another.

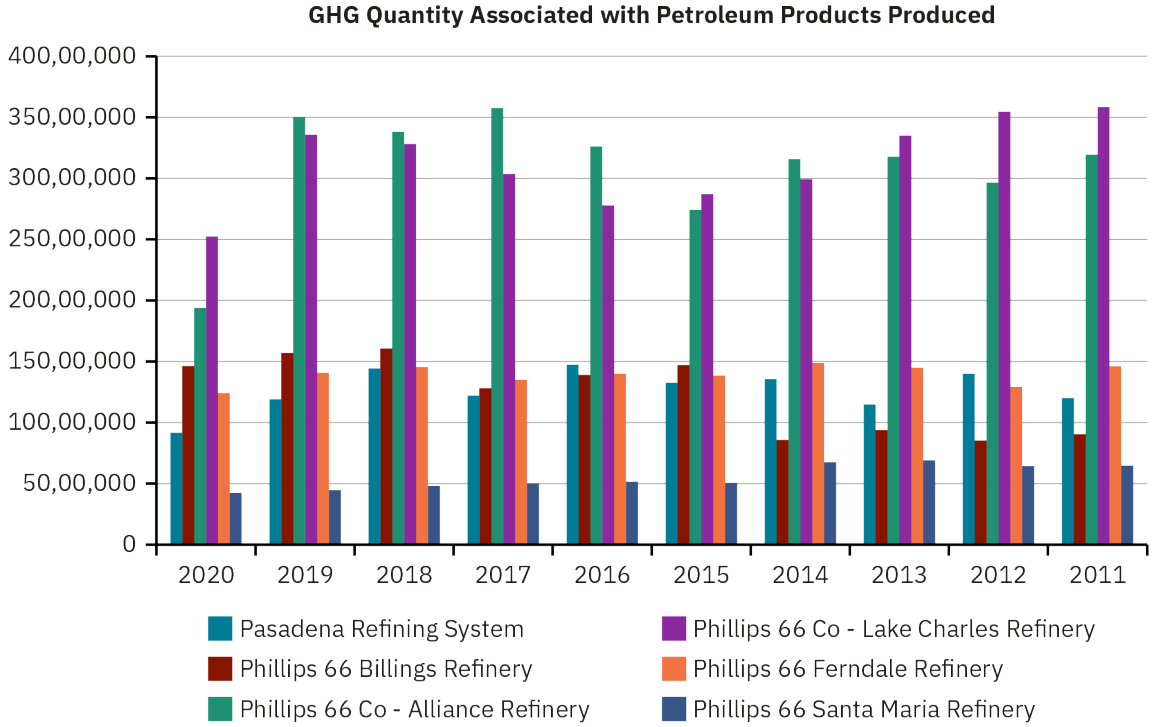


FIGURE 15.7 Bar chart (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

- **Line Graphs**. These graphs typically use one or more lines to show how a data point (or points) has changed over time. Line graphs are often used to show trends over a given period.

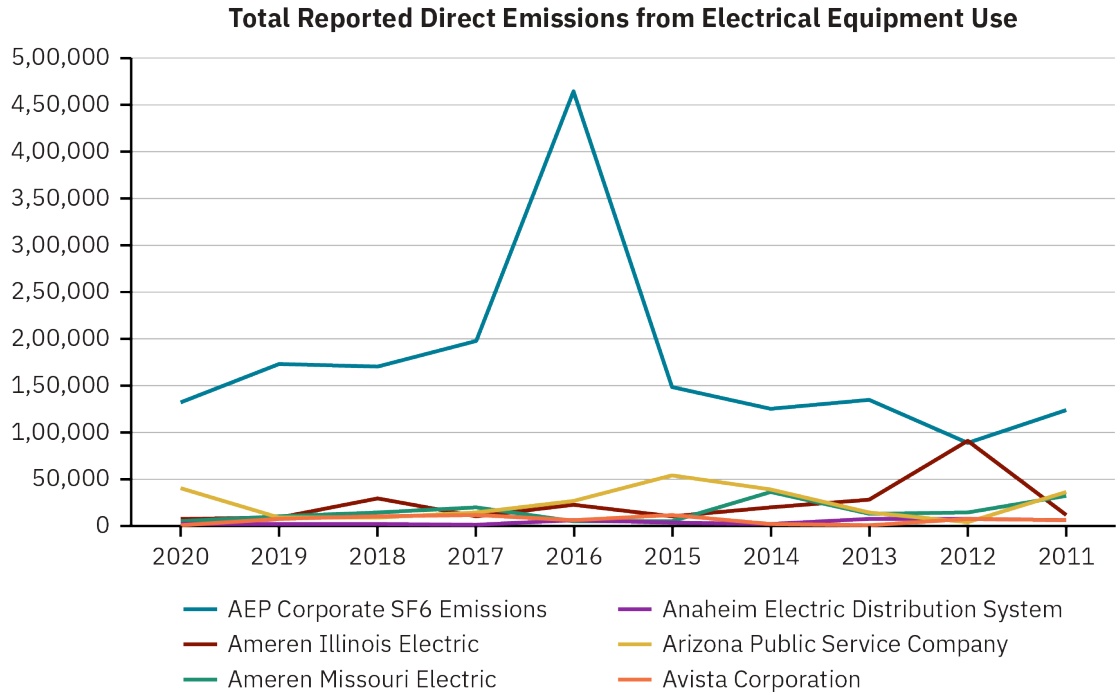


FIGURE 15.8 Line graph (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

- **Pie Charts**. These charts typically divide a circle (or "pie") that represents a group into sections that express a percentage of the whole. They are used to show relationships and proportions of these parts.

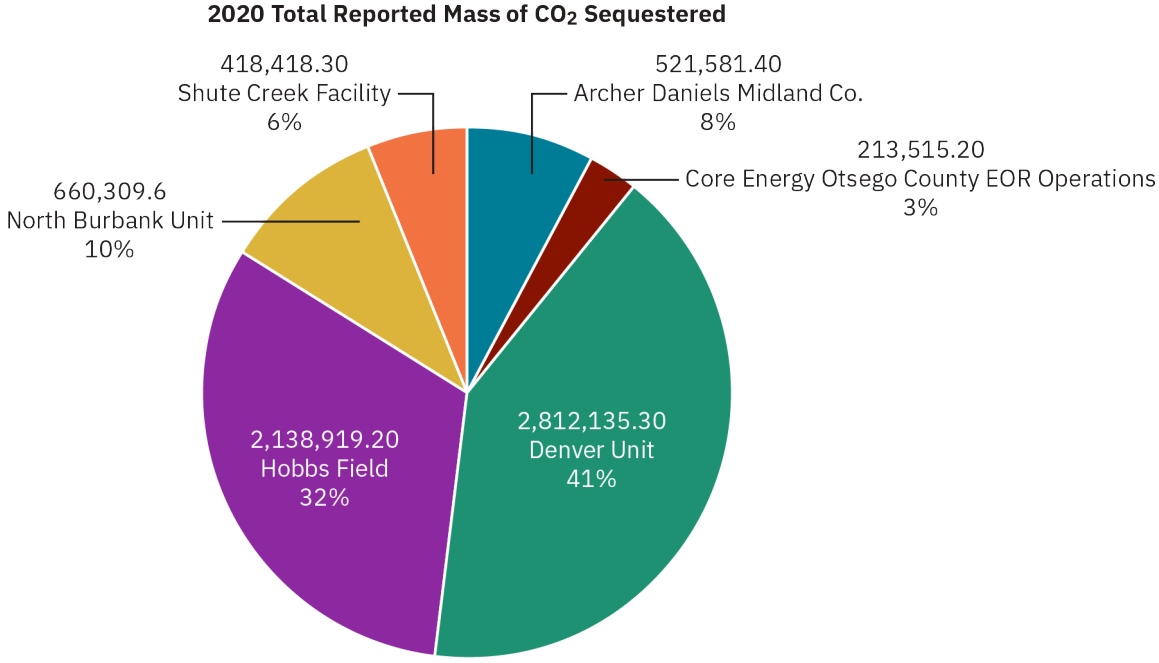


FIGURE 15.9 Pie chart (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

- **Tables**. Tables typically break down a set of specific data points that are hard to manage in words or charts. They present data in a linear way to help people locate a specific data point easily.

Category		Meaning
Index	Title	
0	Probably Extinct	Taxa and populations that inhabited Russian territory (or marine area) in the past and whose presence has been unconfirmed for the last 50 years.
1	Endangered	Taxa and populations whose abundance has decreased to critical levels, allowing them to become extinct in the near future.
2	Decreasing Number	Taxa and populations whose number is constantly decreasing. If the negative factors reducing the populations continue, the taxa can be moved to Category 1 in the near future.
3	Rare	Taxa and populations with a low number of individuals inhabiting limited territory (or marine area) or sporadically distributed over extensive territory (or marine area).
4	Uncertain Status	Taxa and populations which apparently belong to one of the above categories but there are considerable gaps in knowledge of them, or they do not exactly meet the criteria for the other categories.
5	Rehabilitated and Rehabilitating	Taxa and populations whose number and distribution is recovered or recovering due to protective measures. They are close to the state of stable existence without any current urgent measures on protection and rehabilitation.

FIGURE 15.10 A table sourced from information in the Red Data Book of the Russian Federation. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

When selecting visuals, ensure that they are clear and related to the topic. A visual's purpose is to illustrate a point that is too long or complex to express in words. Visuals should have a clear purpose and be clearly labeled. Your audience should be able to interpret and see the point of the visual without explanation. Include visuals to support your work, not simply because you are expected to include them.

Conclusion: What It All Means

Once you collect all your data, analyze it further and collectively to form your conclusions. Take a close look again at your interview responses and observation notes. *What did the participant say in the interview that led to insights about their use of language?* Try to identify any words or phrases that tell you something about the participants. See Analytical Report: Writing from Facts for more information about analyzing data. *How does the data from your interviews and observations reveal something that might lead to a generalization about how students use language?*

Arriving at conclusions can be tricky. Base your conclusion on observations of consistent behavior rather than reaching a broad conclusion based on limited evidence. Your conclusion should be something you notice that challenges your previous understanding or assumptions. For example, younger people appear to avoid the "laughing with crying eyes" emoji because it has been so overused that it now seems insincere. Young people are often the driving force behind new uses of language. To replace the "insincere" laughing-with-crying-eyes emoji, many young people turned to the skull emoji to indicate "I'm dead" (from laughing).

Your conclusion should present your theories. *Based on the evidence you gathered, what are some*

generalizations you can make about how students use language? What did you observe that provides opportunity for further study? The example conclusion from a case study on emoji below presents a theory on how students use them.

> Overall, I observed that students tend to be more informal when communicating to other students in the same age group. These students used emoji to communicate thoughts and feelings that differed from the more literal and more widely understood meaning of the emoji. I believe that students of this generation want to use language in a way that separates them from their older siblings, parents, and teachers. Thus, their use of emoji reflects that desire as they seek to change the meanings of some emoji. Whether this trend continues as students age is up for debate and presents an opportunity to further understanding of language use within this group.

Peer Review: Conferencing Electronically

After you finish your draft, receiving feedback from a peer will help you identify the strengths and weaknesses in your case study. Writers sometimes find it hard to view their work from the perspective of their audience. Therefore, peer feedback will help you focus on your writing in ways that are not obvious to you. Similarly, when you review your peer's work, react to their draft as a serious and conscientious reader. What suggestions can you offer to make this case study more informative or something you would want to read?

Technology has facilitated giving and receiving feedback. You are probably familiar with getting feedback during in-class peer reviews and conferences, but if you haven't done so already, consider electronic peer reviews. Conferencing electronically offers several advantages:

- **Convenience.** You don't have to be in the same room with your conferencing partner to give each other feedback. Within a reasonable time frame, you can review your partner's writing at a time that is convenient for you.
- **Time.** You have more time to think about your reactions to, and your feedback on, your conferencing partner's writing than you would in person.
- **Permanence.** The feedback you give and receive is stored digitally and easy to access.
- **Shareability.** Electronic feedback is easier to reproduce and share with others, such as an instructor or a tutor.

Multiple technologies exist to help you conference electronically.

- **Cloud Storage.** Cloud storage providers such as Microsoft's OneDrive and Google Drive store files on the Internet. You can access these sites from any device. Sharing, too, is easier because changes to the document are saved automatically. Therefore, every time you or someone else accesses the document, they are viewing the latest version.
- **Word Processors.** Microsoft Word and Google Docs have review features such as comment boxes and Track Changes as well as the capacity to suggest, accept, and reject changes.
- **Collaboration Platforms.** Slack, Google Hangouts, Zoom, and Microsoft Teams allow you to create a space where you can communicate with people in a shared online workspace. Features of collaboration platforms include file sharing and storage, chat, video conferencing, and task organizing.

When you are assigned a partner, open their draft and begin reviewing it. The following tutorial will explain how to use the review features of Microsoft Word. Other Microsoft Office and non-Office products (Google Docs and Apple's Pages) offer similar commenting and markup features.

1. Open the document you want to review, and click the Review tab above the tools ribbon.
2. Read the draft as you normally would, looking for areas to comment on. Note the places where you can provide positive comments as well as possible places for revision.
3. To add a comment, highlight the word, sentence, or phrase to which you want to add a comment.
4. Click New Comment in the tools ribbon to create a comment box in the margin.

5. Type your comment in the box.
6. Click anywhere outside the box to save the comment.
7. To delete a comment, click inside the comment box, and then click Delete next to or beneath New Comment in the tools ribbon.

Specific Comments

Provide specific comments when reviewing your peer's draft. Vague, general comments such as "revise this" don't explain the reason for revision or how to revise. When conferencing electronically, specificity is even more important because what you write might be the only feedback your peer receives, unless you conference over video chat.

Comments can generally be categorized as vague, somewhat helpful, and specific and clear.

- **Vague comments** might offer praise that doesn't point to anything specific about the writing, or they might offer criticism without providing a suggested revision or explaining why something should be revised. For example, a comment such as "Revise this sentence" is not helpful. Although it specifically identifies the sentence as needing revision, it doesn't indicate why or suggest how to revise.
- **Somewhat helpful comments** are still general, but they comment on something specific about the writing. They may also suggest some direction for a revision. For example, a comment such as "Revise this question so that it's more debatable" identifies the aspect that needs revision and briefly explains why. However, it does not provide further details about why the question is not debatable or how to revise it.
- **Specific and clear comments** identify precisely why the writing is good or needs revision. They also suggest a specific revision or revision strategy the writer can use. For example, "I think this question could be more debatable. 'Do college students struggle with time management skills?' is a yes-or-no question and would not lead to a strong argument either way. A better question could be 'How does lack of time management skills affect college students as a whole?' or 'What should be done about students' lack of time management skills?'"

Revising: Accepting and Rejecting Suggestions

After your partner finishes reviewing your draft, you will need to accept or reject their suggested changes. Use the image below to locate the tools in Word you will need to use. You can accept or reject edits to the wording, edits to the formatting, and comments in the margins.

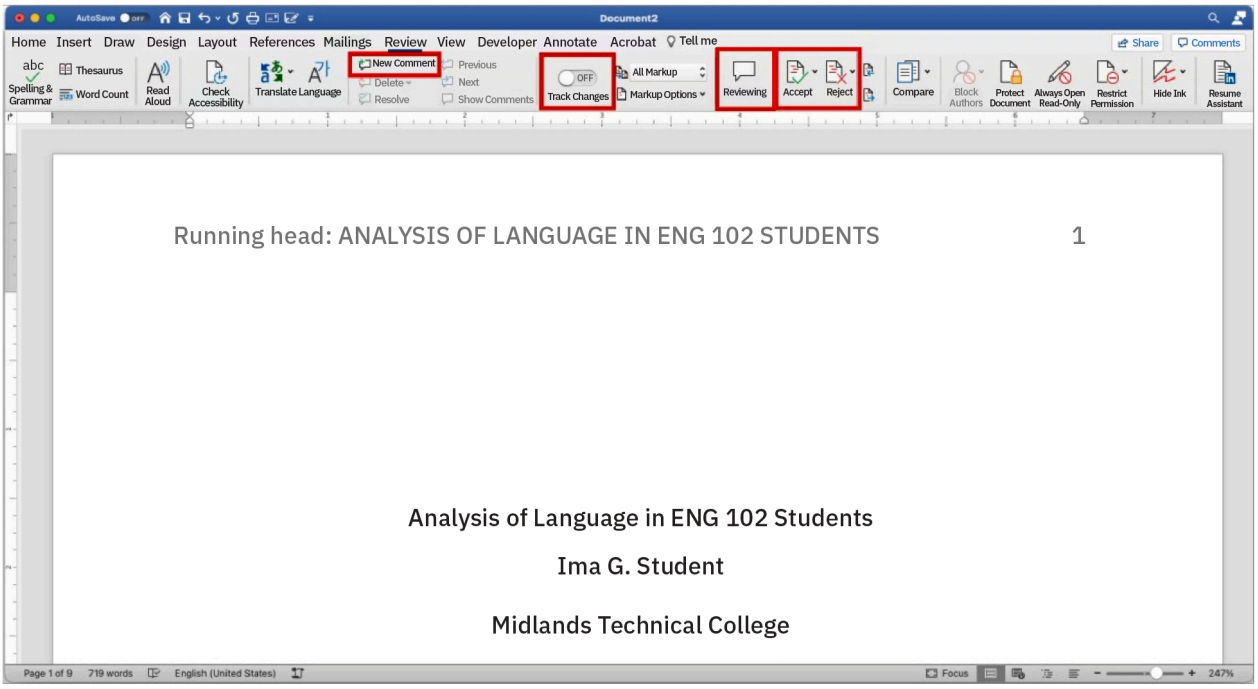


FIGURE 15.11 Microsoft Word Review ribbon (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Edits made directly to your document will appear in red (for added text) or red text with a strikethrough (for deleted text).

1. To accept or reject changes in a Word document, open the document and click the Review tab above the tools ribbon.
2. To ensure that changes you make to the document will not be saved as edits, go to the tools ribbon, and toggle Track Changes to off.
3. To open a panel that displays all changes, click Reviewing or Reviewing Pane in the tools ribbon.
4. To navigate to a specific revision, click the revision in this panel.
5. To navigate consecutively through changes, click the Previous and Next buttons beside the Accept and Reject options in the tools ribbon.
6. To accept a revision, click Accept in the tools ribbon.
7. To reject a revision, click Reject in the tools ribbon.
8. The arrows below or beside the Accept and Reject buttons open drop-down menus that give you the option either to accept or reject a change and then move to the next revision or to accept or reject all changes at once. Be careful not to accept or reject all changes without addressing each one individually.
9. When you finish, be sure you have accepted or rejected all of the edits and deleted all comments so that they don't appear in the final draft.
10. Check that no red text remains in the paper and that no comments remain in the right margin.
11. When you are finished, be sure to save your changes.

Sharing Your Work

Seek out a student conference or publication to present your case study. Many colleges host events and conferences to showcase student work. Your teacher or advisor can probably direct you toward opportunities to present your work at your college or in the community.

For example, the University of Central Oklahoma hosts the annual Language and Linguistics Student Conference (https://openstax.org/r/languageandlinguistic), which is open to all undergraduate and graduate students. Presenting at a student conference is a great opportunity not only to share your work but also to

network and gain experience that will make you stand out when applying to other schools, for scholarships, and for jobs.

In addition, a number of academic journals publish student research. For instance, Spectrum (https://openstax.org/r/spectrum), sponsored by the University of Alberta, is a student-run interdisciplinary journal that showcases students' work. See more undergraduate publishing opportunities provided by the Council on Undergraduate Research (https://openstax.org/r/ugjournalslisting).

If you publish or present your case study, remember to adhere to ethical standards. As explained in Tracing a Broad Issue in the Individual, many universities and professional organizations will provide guidance on what standards to follow when conducting a case study. Be sure to review these guidelines with the organization sponsoring the conference or publication.

Another option for sharing is to gather the case studies done by all class members and, with the approval of your instructor, go through them to ascertain what, if any, trends emerge. If you and your classmates think these studies might be useful to college administrators, consider sending them, along with a detailed cover letter, to the Office of Admissions, the Dean of Students, or another appropriate administrative office.

15.6 Editing Focus: Words Often Confused

LEARNING OUTCOMES

By the end of this section, you will be able to:

- Define and give examples of homonyms, homographs, and homophones.
- Demonstrate correct use of commonly confused words.

When writing about language, you don't want to make the mistake of misusing language. **Homonyms** are words that sound the same and are spelled the same but have different meanings. **Homographs** are words that are spelled the same but may sound different and have different meanings. **Homophones** are words that sound the same but might have a different spelling, a different meaning, or both. Because they sound the same, they are often confused. Other words frequently confused sound slightly different and have slightly different spellings. It's important to recognize and correct commonly confused words because spell checkers don't always catch these errors.

Homonyms

Because homonyms' spelling and pronunciation are the same but their meanings are different, you probably don't have to worry about misusing them, although they often belong to different parts of speech. However, some awareness of homonyms and their multiple meanings will help ensure that your language is precise. For more information about homonyms, see "Words and Language."

Here are some common homonyms and their meanings:

band	Verb: to come together Noun: group of musicians
rock	Verb: to move back and forth Noun: hard material found in the earth
tire	Verb: to become sleepy or lose energy Noun: ring-shaped rubber component that fits over the wheel of a vehicle

TABLE 15.3

current	Noun: flow of water or electricity Adjective: up to date
train	Verb: to teach or learn through practice Noun: group of connected railroad cars

TABLE 15.3

Homographs

Homographs have the same spelling but different meanings. They are considered different from homonyms because they may be pronounced differently. Some disagreement exists among scholars as to whether pronunciation *must* be different for a word to be considered a homograph. Some experts insist that origins must differ as well. However, all agree that meanings differ. For more information about homographs, see Words and Language.

Here are some common homographs and their meanings:

lead	Noun: a metal (pronounced *led*) Verb: to be at the front, to guide (pronounced *leed*)
bow	Verb: to bend forward Noun: a position in which one bends forward Noun: the front of a ship Noun: a type of knot (pronounced *boh*)
object	Noun: a material item; a grammatical term (accent on first syllable) Verb: to express disapproval (accent on second syllable)
close	Adjective: near (*s* pronounced like *ss*) Verb: to bar passage; to shut down (*s* pronounced like *z*)
minute	Noun: 60 seconds (pronounced *minit*) Adjective: tiny (pronounced *my-noot* or *my-nyoot*)

TABLE 15.4

Homophones

Homophones are words that are spelled differently and have different meanings but sound the same. Homophones are often the words that cause the most confusion and the most frequent errors. For more information about homophones, see Words and Language.

Here are some common homophones and their meanings:

weather/ whether	**Weather** means the conditions outside, such as temperature and sunshine. **Whether** is a conjunction that joins words or other parts of a sentence.
meat/meet	**Meat** is animal-based food. When you **meet** someone, you encounter or get together with that person.
hear/here	**Hear** is what you do when you listen to music. **Here** is a place nearby.
two/too/to	**Two** is a number, more than one and less than three. **Too** may mean "also," or it may mean "very" or "more (adjective) than desired." **To** is a preposition indicating direction or motion, as in "I wrote **to** the manager after I'd gone **to** the office."

TABLE 15.5

The following homophones are often confused. Note that one of each group is a **contraction**: two words shortened and joined by an apostrophe.

their	Possessive pronoun, belonging to *them*: "The family packed **their** suitcases for **their** vacation." Both the suitcases and the vacation belong to the *family*.
they're	Contraction joining *they* and *are*: "**They're** leaving for the airport at 10:30." In other words, *they are* leaving.
there	Referring to a location: "'Baggage claim is over **there**,' the airport worker said while pointing to the baggage carousels." This form indicates a physical place.
your	Possessive pronoun, belonging to *you*: "**Your** new phone will be mailed on November 4." The phone belongs to *you*.
you're	Contraction joining *you* and *are*: "**You're** registered for the conference." In other words, *you are* registered.
its	Possessive pronoun, belonging to *it*: "**Its** positive qualities outweigh **its** negative ones." Both the positive and the negative qualities belong to *it*. *It* could be a book, house, car, movie, phone, or any other object or idea.
it's	Contraction joining *it* and *is*: "**It's** raining today." In other words, *it is* raining.

TABLE 15.6

What Is the *Effect*? Or Is It *Affect*?

One final category of commonly confused words are words that sound and look *similar* but have different meanings.

Affect	Verb: to influence an outcome: "Increasing the minimum wage will **affect** the incomes of millions of Americans." Noun: body language that accompanies an expression of emotion: "The crime victim showed normal reactions and **affects."**
Effect	Noun: the outcome or result of an influence: "The **effect** of the increased minimum wage will be a 10 percent decrease in the federal poverty rate." Verb: to cause to come into existence: "Congress will **effect** the new law."
Insure	Verb: to protect against damage or loss: "Homeowners must **insure** their property for the cost of full replacement."
Ensure	Verb: to make certain of: "This policy will **ensure** that the bank doesn't incur a loss as a result of irreparable damage to the home."

TABLE 15.7

Practice

Choose the correct word to complete each sentence.

1. Can you (hear/here) the phone ring from (hear/here)?
2. Are you going (to/too/two) the movie theater at (to/too/two) p.m., or is that (to/too/two) early for you?
3. This show always has a depressing (affect/effect) on me.
4. (Its/It's) hard to find small apartments for rent in this neighborhood.
5. Let's (meet/meat) at the pizza place so that I can eat something without (meet/meat).
6. Although it will need work, (its/it's) basic structure is sound.
7. Check about (ensuring/insuring) personal items in your apartment.
8. You can set the groceries on the table over (their/there/they're).
9. I'm going to watch the game at (their/there/they're) house.
10. How do you think the elections will (affect/effect) the neighborhood?
11. (Their/There/They're) listening to music on (their/there/they're) headphones.
12. (You're/Your) going to trip if you don't tie (you're/your) shoelaces.
13. Bring (you're/your) phone to the store to exchange it for a new one.
14. (Weather/whether) we travel depends on the (weather/whether).

15.7 Evaluation: Presentation and Analysis of Case Study

LEARNING OUTCOMES

By the end of this section, you will be able to:

- Revise writing to follow the genre conventions of case studies.
- Evaluate the effectiveness and quality of a case study report.

Case studies follow a structure of *background and context*, *methods*, *findings*, and *analysis*. Body paragraphs should have main points and concrete details. In addition, case studies are written in formal language with precise wording and with a specific purpose and audience (generally other professionals in the field) in mind. Case studies also adhere to the conventions of the discipline's formatting guide (APA Documentation and Format in this study). Compare your case study with the following rubric as a final check.

Rubric

Score	Critical Language Awareness	Clarity and Coherence	Rhetorical Choices
5 **Skillful**	The text always adheres to the "Editing Focus" of this chapter: words often confused, as discussed in Section 15.6. The text also shows ample evidence of the writer's intent to consciously meet or challenge conventional expectations in rhetorically effective ways.	Paragraphs are unified under a single, clear topic. Abundant background and supporting details provide a sense of completeness. Evidence of qualitative and quantitative data collection is clear. Transitions and subheads connect ideas and sections, thus establishing coherence throughout. Applicable visuals clarify abstract ideas.	The writer clearly and consistently recognizes and works within the limits and purpose of the case study. The writer engages the audience by inviting them to contribute to the research and suggests ways for doing so. The implications, relevance, and consequences of the research are explained. The study shows mature command of language and consistent objectivity. Quotations from participant(s) are accurate and relevant.
4 **Accomplished**	The text usually adheres to the "Editing Focus" of this chapter: words often confused, as discussed in Section 15.6. The text also shows some evidence of the writer's intent to consciously meet or challenge conventional expectations in rhetorically effective ways.	Paragraphs usually are unified under a single, clear topic. Background and supporting details provide a sense of completeness. Evidence of qualitative and quantitative data collection is clear. Transitions and subheads connect ideas and sections, thus establishing coherence. Applicable visuals clarify abstract ideas.	The writer usually recognizes and works within the limits and purpose of the case study. The writer engages the audience by inviting them to contribute to the research and usually suggests ways for doing so. The implications, relevance, and consequences of the research are explained. The study shows command of language and objectivity. Quotations from participant(s) are usually accurate and relevant.

TABLE 15.8

Score	Critical Language Awareness	Clarity and Coherence	Rhetorical Choices
3 **Capable**	The text generally adheres to the "Editing Focus" of this chapter: words often confused, as discussed in Section 15.6. The text also shows limited evidence of the writer's intent to consciously meet or challenge conventional expectations in rhetorically effective ways.	Paragraphs generally are unified under a single, clear topic. Background and supporting details provide a sense of completeness. Some evidence of qualitative and quantitative data collection is clear. Some transitions and subheads connect ideas and sections, generally establishing coherence. Visuals may clarify abstract ideas or may seem irrelevant.	The writer generally recognizes and works within the limits and purpose of the case study. The writer sometimes engages the audience by inviting them to contribute to the research but may not suggest ways for doing so. The implications, relevance, and consequences of the research are explained, if not fully. The study shows some command of language and objectivity. Quotations from participant(s) are generally accurate, if not always relevant.

TABLE 15.8

Score	Critical Language Awareness	Clarity and Coherence	Rhetorical Choices
2 **Developing**	The text occasionally adheres to the "Editing Focus" of this chapter: words often confused, as discussed in Section 15.6. The text also shows emerging evidence of the writer's intent to consciously meet or challenge conventional expectations in rhetorically effective ways.	Paragraphs sometimes are unified under a single, clear topic. Background and supporting details are insufficient to provide a sense of completeness. There is little evidence of qualitative or quantitative data collection. Some transitions and subheads connect ideas and sections, but coherence may be lacking. Visuals are either missing or irrelevant.	The writer occasionally recognizes and works within the limits and purpose of the case study. The writer rarely engages the audience by inviting them to contribute to the research or suggests ways for doing so. The implications, relevance, and consequences of the research are haphazardly explained, if at all. The study shows little command of language or objectivity. Quotations from participant(s) are questionable and often irrelevant.
1 **Beginning**	The text does not adhere to the "Editing Focus" of this chapter: words often confused, as discussed in Section 15.6. The text also shows little to no evidence of the writer's intent to consciously meet or challenge conventional expectations in rhetorically effective ways.	Paragraphs are not unified under a single, clear topic. Background and supporting details are insufficient to provide a sense of completeness. There is little evidence of qualitative or quantitative data collection. Transitions and subheads are missing or inappropriate to provide coherence. Visuals are either missing or irrelevant.	The writer does not recognize or work within the limits and purpose of the case study. The writer does not engage the audience by inviting them to contribute to the research. The implications, relevance, and consequences of the research are haphazardly explained, if at all. The study shows little command of language or objectivity. Quotations, if any, from participant(s) are questionable and often irrelevant.

TABLE 15.8

15.8 Spotlight on … Applied Linguistics

LEARNING OUTCOMES

By the end of this section, you will be able to:

- Identify cultural and linguistic variations in the English language.
- Explain how case studies are used in the field of applied linguistics.
- Explain how the field of applied linguistics has contributed to understanding of language.

Scholars engaged in the field of **applied linguistics** seek to identify and offer solutions to real-life problems involving language. For example, immigrants who don't speak the primary language of their new country might have difficulty attending school, finding a job, or accessing services. One subfield of applied linguistics is **language acquisition theory**, which focuses on the ways in which people learn language.

Solving Language-Related Problems

Applied linguistics has far-reaching implications that affect the real world. Effective communication in the workplace is one of the language-related problems that linguists study.

For example, globalization of business means a greater likelihood that workers will need to collaborate with people from other cultures. It is not uncommon for American businesses to be owned by foreign companies or to hire foreign workers with temporary work visas. When different cultures interact, misunderstandings may occur. For example, directness when speaking is common and valued in American business culture, but indirectness is the norm in some other cultures. Understanding this difference can help workers communicate more effectively.

The work of UCLA professor John Schumann in applied linguistics has helped researchers understand how people learn new languages. In 1976, Schumann conducted a case study of non-English speakers. His observations of one participant, Alberto, a 33-year-old man from Costa Rica, led Schumann to develop the acculturation model of second-language acquisition. Discounting Alberto's age and ability, Schumann hypothesized that Alberto's inability to learn English resulted from lack of contact with native English speakers. This theory thus suggests that learning a new language depends on societal and cultural factors—that is, the most successful language learners are those who immerse themselves most in the culture associated with the language.

Consider also the research done by Dr. Kristine Hildebrandt (https://openstax.org/r/KristineHildebrandt), a researcher at Southern Illinois University Edwardsville. Hildebrandt's studies of endangered languages of Nepal led her to start the research project "Narrating Disaster: Calibrating Causality and Responses to the 2015 Earthquakes in Nepal." Soon after the earthquake that year, she and her team interviewed people in Nepal's remote villages—remote both physically and linguistically—to learn more about their feelings and actions following the quake. From hearing the firsthand stories of how people in the region responded, adapted, and rebuilt shortly after the disaster, Hildebrandt hoped that the project's findings could improve outside response to disasters in these areas by considering the perspectives and actions of their residents. Also of particular interest to her were the effects of culture on the response to disaster and the effects of disaster on the social, economic, and linguistic structures of a community.

Language Evolution

The work of linguists also guides people in how to use language and how to adapt it to contemporary situations. For example, speakers of English continue to revise their language to be more inclusive. The Associated Press and many other professional organizations have recently updated their stylebooks to refer to Americans of African descent as "Black" with a capital B instead of "African American." These organizations considered and debated the change for a long time but ultimately concluded that using *Black* better reflects the shared experience and common culture of Black people living in the United States.

Similarly, language is evolving to be more inclusive of people's gender identities. For a long time, many considered it grammatically incorrect to use the plural pronoun *they* with a singular verb. However, it is now widely accepted that *they* is a useful gender-neutral pronoun to refer to an individual person whose gender is unknown—and to include those who fall outside the gender binary.

Linguistics-Related Task

To learn more about language acquisition, set up an interview with a person you know who has learned another language. It may be English as a second language, another spoken language, a language no longer spoken, American Sign Language, Braille, or even musical notation. Ask questions similar to those you asked your case study participant(s) to find out how they acquired this language. Consider asking some of the following questions:

- What is your first language?
- What caused you to learn a second language?
- Under what conditions did you learn this language? (School? Surroundings? Family? Other?)
- With whom do you use each language?
- In which language do you feel more comfortable? Why?
- How often and in what circumstances do you use both languages?
- Do you think in your first language and then translate into the second language?
- In which language do you have a larger vocabulary?

When you have enough information, write a summary of the information you gathered, and draw a conclusion about this person's experience. Finally, suggest a question for further research.

15.9 Portfolio: Your Own Uses of Language

LEARNING OUTCOMES

By the end of this section, you will be able to:

- Write a reflection on the development of your composing processes.
- Articulate how those processes affect your work.
- Participate effectively in collaborative processes.




Think about the different groups to which you belong. When you go to work, you are part of a group in which you and your colleagues complete specific tasks to earn money. When you are with your family, you are with a group of people who are related to you. When you are with your friends, you are with a group of people who share interests similar to yours. When you are at school, you are with a group of people who are there to teach and to learn. These groups usually have hierarchies, language terms, dress codes (official or unofficial), and rules of behavior.

For example, think about the differences between standard English (formal, grammatically correct English) and the way you or people you know speak. Southerners might use expressions such as *y'all* and *ain't*, long considered slang and/or incorrect. Some people pluralize nouns that would be grammatically correct as singular. Specific uses of English variants are often linked to a geographical region, ethnicity, or both.

Variations of standard English are often the norm among people of color, and people who hold power over social mobility, such as teachers, hiring managers, and so on, traditionally consider use of standard English necessary to demonstrate education and professionalism. Thus, people of color often have to use two variations of English to navigate between professional and personal settings. A formal, grammatically correct sentence in standard English might impress an employer but might make you look out of touch to some in your community.

How Language Use Speaks to Who You Are




Pick a specific group of which you are a part, and reflect on that group's use of language. The group you pick can be somewhat broad, such as "employees of Target," or more specific, such as "members of the University of North Carolina marching band." Ask yourself: *What words are used in this group that might not be understood by people outside the group? Has the group changed the spelling or meaning of any words to communicate with one another? Does the group use any acronyms?* Reflect on how language is used in your group to communicate ideas.

Then, reflect on how language within your group is used to evaluate ethos, or credibility, of its members. *In other words, how is language used to identify people who are initiated as "part of the group"? What flaws in the use of language would show that someone is not part of the group?*

Write your reflection in your notebook. If appropriate, discuss your reflection with another student, noting areas of similarity and difference. Add this reflection to your portfolio along with your case study profile.

Further Reading

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Unit 3

Navigating Rhetoric in Real Life

Unit Introduction

Unit 3 is about the **real world**—the world outside the walls of your college or university. There is a common misconception among students that the writing they do in the classroom is not related to the real world. The works of the Trailblazers in this text have argued against this idea. They are all using the genres taught in the text in new and interesting ways as part of their work in the real world. As technology evolves, increasing numbers of platforms are available for people to publish their ideas for professional and personal purposes. However, with these options come new responsibilities to present one's ideas fairly, accurately, and respectfully. Your voice has power, and your developing ability to present it effectively to the public means your journey with writing is really just beginning.