

CHAPTER 3

Getting Started Designing a Project

Selecting a Topic

How do you find a topic to study? Typically you begin with a broad, general interest and then move to a research topic. I initially began conducting interview research with women about their body image as a result of personal interests I cultivated during the many years I took ballet and theatre arts classes, during which I witnessed many people struggling with body image issues. Later, when I was in graduate school, a professor who studied body image and eating disorders presented me with opportunities to conduct research in this area. My current interview research with women about their relationships and identities—a topic I have long been interested in and investigating—developed as a result of those early research experiences coupled with my personal experiences. As you can see from my own example, researchers initially come to a topic because of their personal interests, experiences and values, previous research experience, and/or opportunities in the form of funding or collaborations.

Table 3.1 presents several examples of research topics, which at this stage are extremely broad. I present three columns of research topics: The first is the broadest and most general, which may be where you begin; the second is more specific in terms of the population or setting you are interested in; and the third is the most specific.

Note that even in the second and third columns, the topics remain fairly general. These examples are meant to show you how broad your initial idea is likely to be and how you may begin focusing on one aspect of that topic or narrowing down the particular group in which you are interested. If you begin with a very broad topic such as “music” and are having trouble finding a more specific direction, I suggest conducting a quick keyword search in an online library database to see what kinds of topics come up. Or talk to your peers to see what they suggest. By describing your topic in the manner shown in the second and third columns, you are identifying the focus of your study.

TABLE 3.1. Narrowing Down Initial Research Topics

Bullying	→ Bullying in the workplace	→ Bullying between peers in the workplace
Homelessness	→ Homelessness among women and children	→ Homeless shelters and safety for women and their children
Athleticism	→ Athleticism in college	→ Division 1 college athletes balancing athletics and school
Body image	→ Body image among college athletes	→ Comparing body image among female and male college athletes
Gender identity	→ Gender identity among school-age children	→ Gender identity and self-esteem among middle school-age children
Sexual assault	→ Sexual assault on college campuses	→ Sexual assault on college campuses with fraternities and sororities
Race/racism	→ Race in the criminal justice system	→ The effect of race in sentencing in nonviolent crimes
Music	→ Music in education	→ Music and multiculturalism programs in public secondary schools

After you have identified a general topic, you will need to make sure it is **researchable**. In other words, is it feasible to conduct research on this topic? This is a pragmatic question. At this early stage, consider issues such as whether or not you'll have access to the participants or data needed to investigate the topic. For example, if you are interested in studying people's behaviors at private country clubs, but you are neither a member nor have a close contact who is, this may be an impractical research topic. Beyond access, you will eventually need to consider other pragmatic issues such as funding, the time commitment, and your emotional readiness for the project. However, it is likely that you won't consider those barriers until you have further defined your topic, developing a specific research purpose and hypothesis or research questions.

In addition to pragmatic issues, consider the **significance, value, or worth** of the project. This is where your ethical compass comes to bear. To begin, does this topic align with your values system, sense of morality, or political orientation? Is there a social justice imperative to learning more about this topic? Is it important, in relative terms, to learn more about this topic? The value of the topic is also connected to timeliness. Do current events or "the current political, economic, and social climates" make it important to study this topic at this time (Adler & Clark, 2011, p. 81)? Is there a need for researchers to learn more about this topic? Can the research be applied in some real-world setting?

It's also important to take a **personal inventory to determine personal preparedness**. Beyond considering what your interests and resources are, think about your capabilities as a researcher. Although the specific skill sets you will need to carry out your research aren't determined until you have developed a specific research purpose and research questions and designed the project, there are psychological

and emotional dimensions to consider as well. Is the topic something you have personally experienced, and if so, how will that personal component impact the research? Is this a sensitive topic for you, and if so, do you feel emotionally capable of carrying out the research? It's important to get real with yourself and do an honest "gut check" about your relationship to the topic and the potential emotional aspects of delving deeper into it. Remember, even at the earliest stage of selecting a general research topic to begin to explore, it is important to consider the personal motivations that have brought you to the topic as well as any obvious emotional or psychological challenges. These considerations are a part of ethical practice.

Finally, consider the **existing research on the topic**. Being interested in and well suited to study a worthy topic is not enough. Research is intended to contribute to a shortage of research on a topic, fill a gap in the literature, or offer an alternative view to existing research.

To recap, here is a checklist to help you select an initial research topic:

- Select a general topic about which you are interested in learning more.
- Summarize your topic in no more than a few words.
- Consider the feasibility of researching your topic.
- Consider if it is a worthwhile project (how the research will benefit others).
- Consider your emotional connection to the topic.
- Determine if research on the topic is needed.

To further determine the value of studying the proposed topic, what direction to take, and how to move from a general research topic to a specific research purpose and research questions, you need to conduct a literature review.

Literature Reviews

A literature review is both a process and product. In other words, it is something you do and then it is something you create. A literature review is "the process of searching for, reading, summarizing, and synthesizing existing work on a topic or the resulting written summary of the search" (Adler & Clark, 2011, p. 89). It results in a "comprehensive overview of the previous research" on a topic as related to your research question (Wilder, Bertrand Jones, & Osborne-Lampkin, in press).

A literature review is relevant at various stages of the research project. In the beginning, you conduct a literature review in order to **learn more about your topic**. At this stage the literature review can help you determine if research on the topic is needed and worthwhile, narrow down the topic so that you are moving from a general idea to a researchable topic, and determine the direction for the research so that you are building on previous work or filling a gap in the literature. Ultimately, the literature review will help you determine your research purpose, hypotheses (if applicable), and research questions.

Later in the process the literature is used in your proposal and ultimately in the final representation of the research findings. There are numerous ways you might use the literature depending on the research topic and which of the five approaches you are using. I elaborate on this point after explaining the process of conducting a literature review.

When you are conducting your literature review, enter **keywords** into relevant databases to search for and filter through the existing literature on your topic (if you need help finding appropriate databases, consult with a research librarian in your university library). Keywords typically come from the phrase you have used to describe the topic. For illustrative purposes, consider the examples in Table 3.1. If your topic is “bullying between peers in the workplace,” then your keyword search will include the words *bullying*, *peers*, and *workplace*. If those search words don’t yield the results you’re hoping for, you could try changing one or more of the words. For example, replace the word *peers* with the word *coworkers* or *colleagues* and see what comes up. You may need to play around with the keywords, trying synonyms until you get the right combination of words.

It is important to locate **recent research** on the topic so that your literature review is up to date. However, a good literature review also considers **pioneering or landmark studies** on the topic. A *landmark study* is research that is considered pivotal in the field. To locate landmark studies, search for seminal or foundational authors, those who are most well known for writing on the topic. Search *Google Scholar Citations* to find those authors most frequently cited, or, if you run across authors mentioned in an abundance of your literature, search for their articles (Wilder et al., *in press*). After determining who the seminal authors are, see if they have developed any theories related to your topic that might help frame your thinking (Wilder et al., *in press*). When you locate a landmark study, don’t rely simply on others’ recounting of the study. Get your own copy to include in the literature review. Peer-reviewed articles and books may become a part of your literature review. To help frame your thinking about the topic, you can use newspaper articles, essays, blogs, or other forms of conceptual or popular literature, but they should *not* be the primary component of your literature review (Creswell, 2014). The majority of the literature review should consist of scholarly work.

Typically, there will be an abundance of literature on your topic. In the case of exploratory research on an underresearched topic, you can likely still find a wealth of literature on related topics that will be vital as you think through your project and then later situate the project within the larger research landscape. Here’s an example. Let’s say you’re interested in researching teen bullying on image-heavy forms of social media such as Instagram and Snapchat. You conduct a literature review using the keywords *teens*, *bullying*, *social media*, *Instagram*, and *Snapchat*, and you come up short. You can’t find any articles that deal specifically with bullying among teens on those forms of social media, or you find one or two articles, but not enough for a literature review. You may need to broaden your search. So, are there studies about teen bullying on Facebook or other social media forums? If so, do any of those focus on pictures/images? What about studies on the Internet and bullying among teens more broadly? Use the literature that is closest to your topic,

and if there aren't any studies or many studies specifically on your topic, you can make a case that your research will fill a gap in the literature. If you are studying a new topic, you are probably conducting exploratory research, which later can be used by other researchers aiming to build knowledge in this area.

As you search the literature, you will need to engage in a sorting process. You won't be able to use everything you find. For example, if you pick a widely studied topic such as *body image among athletes*, you will likely find thousands of possible sources. You will need to continue narrowing down your keyword search and the disciplinary repositories in which you search. Establish a set of priorities for the areas about which you want to find literature (Ling Pan, 2008), knowing that you may need to modify the areas based on what is available. You will need to quickly evaluate the relevance of articles/books for your project. To do so, read the **abstracts**. Good abstracts provide an overview of the research objectives, methodology, relevant theories or bodies of scholarship, and major findings. You can usually tell from the abstract how relevant the study is for your project. If it's unclear from the abstract, scan the article. As you evaluate possible sources, JeffriAnne Wilder and colleagues suggest asking:

- Is the source relevant to the project?
- Does the source add value to the project (does it add value to what you've already compiled)?

Once you have selected the literature you plan to use, **read and annotate each source** in full. This process involves careful notetaking. I recommend circling keywords, underlining or highlighting key passages or examples, and writing notes in the margins whether you are reading paper or e-copies. After reading the literature, **summarize** each source. A summary includes the full citation information and basic information about the source, including (as applicable):

- Main theory and its definition
- Primary concept and its definition
- Basics of the study (participants and method/s)
- Main findings
- How the source relates to your project

It is vital to keep a record of all citations with their full publication information so that later you are able to properly attribute credit (Ling Pan, 2008), which is referred to as **cataloguing the literature** (Wilder et al., in press). You could type the summaries in a Word or Excel document, use a citation management software program, or write them by hand in a notebook (in which case, I highly recommend scanning and backing them up electronically).

Finally, you will **synthesize and write up** the literature. Whereas *summarizing* involves documenting the major features of each individual source, *synthesizing*

involves connecting and integrating the different sources you have compiled. The following is an example from a (2010) study I worked on with Lisa Hastings, titled “Body Image and Sexual Identity: An Interview Study with Lesbian, Bisexual, and Heterosexual College-Age Women.”

Sample Summary

Citation information: Beren, S. E., Hayden, H. A., Wilfley, D. E., & Grilo, C. M. (1996). The influence of sexual orientation on body image in adult men and women. *International Journal of Eating Disorders*, 20(2), 135–141.

Purpose: To compare body dissatisfaction for heterosexual and homosexual men, and for heterosexual and homosexual women. The researchers hypothesized that homosexual men’s affiliation with gay subculture would increase their body dissatisfaction, whereas affiliation with lesbian subculture may protect against body dissatisfaction.

Method and participants: Beren, Hayden, Wilfley, and Grilo (1996) administered self-report tests to 257 participants: 72 heterosexual women, 69 homosexual women, 58 heterosexual men, and 58 homosexual men. The tests focused on these dimensions: Body Dissatisfaction, Psychosocial Factors, and Affiliation with the Gay/Lesbian Community.

Findings: The Body Dissatisfaction test scores were not significantly different between heterosexual and homosexual women, and the psychosocial factors, such as dieting and weight concern, also were similar. The Body Dissatisfaction test scores were significantly higher for homosexual men than for the heterosexual men. The homosexual men reported significantly more body dissatisfaction and more distress in many of the psychosocial areas related to body dissatisfaction. Homosexual men’s affiliation with gay subculture did increase their body dissatisfaction. Homosexual women’s affiliation with lesbian subculture was not related positively or negatively to body dissatisfaction.

Sample Synthesis

Beren, Hayden, Wilfley, and Grilo (1996) administered tests to 72 heterosexual and 69 homosexual women that explored Body Dissatisfaction, Psychosocial Factors, and Affiliation with the Gay/Lesbian Community. The Body Dissatisfaction test scores were not significantly different between heterosexual and homosexual women, and the psychosocial factors, such as dieting and weight concern, also were similar. These findings are replicated in other recent research (Cogan, 2001; Epel, Spanakos, Kasl-Godley, & Brownell, 1996; Pittman, 2000; Share & Mintz, 2002). Researchers have hypothesized that heterosexual and homosexual women may be prone to different types of eating disorders and for different reasons (Cogan, 2001; Lakkis, Ricciardelli, & Williams, 1999; Siever, 1994). This is because lesbians, moreso than heterosexual

women, are affected by and vulnerable to different relevant social factors that influence the development of eating disorders (French, Story, Remafedi, Resnick, & Blum, 1996; Lakkis et al, 1999; Lancelot & Kaslow, 1994; Pitman, 2000; Siever, 1994; Striegel-Moore, Tucker, & Hsu, 1990). A meta-analytic review of the literature on sexual orientation and body image suggests that, overall, lesbians have higher body satisfaction but comparable levels of awareness of societal standards, which lesbians do not reject outright (Morrison, Morrison, & Sager, 2004).

Think of a synthesis as creating an overview of the forest that is comprised of particular trees. What is the big picture and what are the details that create that big picture?

The process of synthesizing the literature involves providing an overview of the research on your topic and drawing connections between the different pieces of research. For example, group the studies that make a particular claim, noting similarities and differences. Look for synergies or dissonances across the literature. You may also look at the literature chronologically to narrate the historical development of perspectives on the topic over time (Wilder et al., *in press*). One method for fleshing out these connections between sources is to create a visual representation, such as a **literature map** (Creswell, 2014) or **concept map** (Hunter, Lusardi, Zucker, Jacion, & Chandler, 2002; Manders & Chilton, 2013; Wheeldon & Ahlberg, 2012). These visual mapping strategies illustrate how all of the literature is connected. You begin with your topic or a central term, concept, or idea from the study and you visually show how the different pieces of literature relate to the primary topic or concept. Different relationships can be denoted by linking words or with lines or arrows or by overlapping circles (Ahloranta & Ahlberg, 2004; Umoquit, Tso, Varga-Atkins, O'Brien, & Wheeldon, 2013). Figure 3.1 offers a brief example.

For a more concrete example at an advanced stage in the literature review process, consider Figure 3.2. In this figure, I returned to the same literature on heterosexual and homosexual women's body image discussed in the sample synthesis. Figure 3.2 illustrates how you can visually connect your literature.

Whether you begin with a visual representation or move straight from your written summaries to a synthesized write-up of the literature, think about the kind of literature review you intend to create when beginning your first draft. You might write a review designed to demonstrate how your research will fill a gap in the literature and thus why your research is warranted. Or, you may organize your review thematically or based around key terms, concepts, and/or theories (Creswell, 2014). Alternatively, you could write a review that is designed to present theoretical perspectives on your topic. Perhaps most commonly for beginning researchers, you will write a review that provides a general overview about the research and thinking related to your topic (Adler & Clark, 2011).

The literature review generally appears as one section within your proposal, at times with subheadings. In the final representation the review may appear as one section, or the literature may be referred to throughout the write-up. The focus

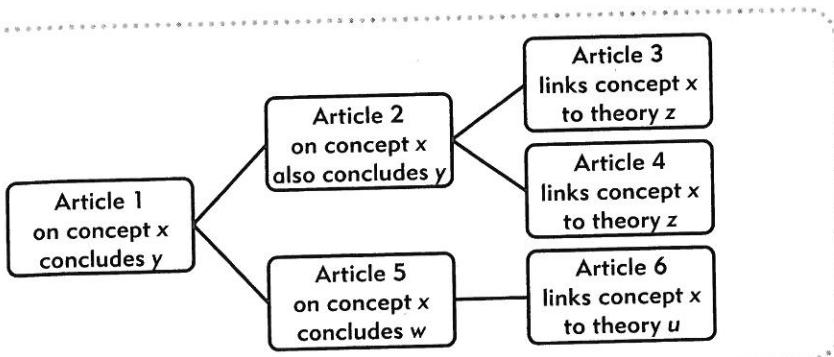


FIGURE 3.1. A literature map (in abstract). This figure depicts what your literature review says about concept *x*. Read the figure from left to right. Begin at article 1 (concept *x* concludes *y*). Start at the top trajectory. From article 1, move to the right top for a *similar* piece of literature and continue moving right for *elaboration*. Now look at the bottom trajectory. Begin again at article 1 (concept *x* concludes *y*) and move to the right for a *dissimilar* piece of literature and continue moving right for *elaboration*. The figure, as a whole, tells you what the literature says about concept *x*.

of your review and where it is placed in your research proposal, and eventually in the final write-up, depend partly on which of the five research approaches you are using. Specifics about how to structure your literature review with examples are given in Chapters 4–8.

To summarize, the process of conducting a literature review involves:

- Searching for literature on your topic using keywords, locating both recent research and landmark studies.
- Establishing priorities for reducing and focusing the review.
- Sorting through the literature by reading abstracts and scanning articles.

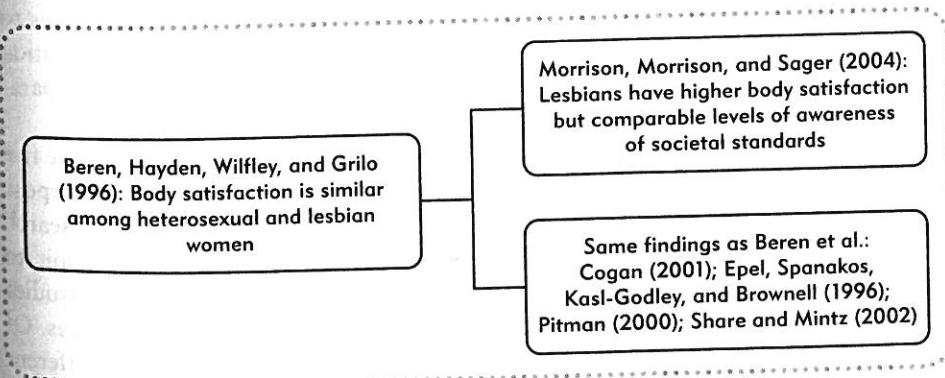


FIGURE 3.2. A concrete example of a literature map.

- Reading the literature and taking careful notes with citation information.
- Summarizing each piece of literature and producing a catalogue of these summaries.
- Synthesizing and structuring the literature.



REVIEW STOP 1

1. After identifying a topic of interest, researchers consider what factors when selecting a research topic?
2. When compiling a literature review, how does a researcher identify and locate landmark studies?
3. What is the difference between summarizing and synthesizing?

 Go to the end of the chapter to check your answers.

Once the literature review is complete, you are ready to determine the project objectives by constructing the research purpose and hypothesis statement(s) (if appropriate).

Research Purpose Statements, Hypotheses, and Research Questions

Research Purpose Statements

Now that you have refined the research topic, the next step is to construct a research purpose statement. A **research purpose statement** specifically states the purpose or objective of the research project. A strong research purpose statement generally includes information about the research topic or problem, the participants or data, the setting, and the methodology (may reference which of the five approaches to research design is being employed as well as methods of data collection/generation and/or guiding theories). These statements may range from a sentence to a paragraph in length.

There are variations in research purpose statements based on which of the five approaches is employed. The next sections present examples of research purpose statements from published studies using the five different approaches to research design. I have selected statements from studies all centered around one topic to highlight the differences in relation to the approach being used. I've chosen studies on bullying because it is a topic studied from a range of disciplinary perspectives. Of course, bullying is a very general topic, and so these studies all consider different dimensions of the subject.

Quantitative Research Purpose Statement

The following research purpose statement is taken from a study examining workplace bullying (WPB) among athletic trainers (ATs) in college environments.

Our overall objective for this research was to examine the prevalence of WPB among ATs working in the collegiate setting and to identify the personnel involved with the bullying acts. We also sought to investigate the influence of sex on the occurrence of WPB. (Weuve, Pitney, Martin, & Mazerolle, 2014, p. 697)

Let's break down this research purpose statement by underlining the key information and circling the central phenomenon:

Our overall objective for this research was to examine the prevalence of WPB among ATs working in the collegiate setting and to identify the personnel involved with the bullying acts. We also sought to investigate the influence of sex on the occurrence of WPB. (Weuve et al., 2014, p. 697)

The information conveyed in the purpose statement includes:

- Objectives and phenomenon: Examine the prevalence of WPB among ATs and to identify the personnel involved in the bullying acts
- The population of interest: ATs
- The setting: collegiate setting
- Variable relationship being tested: influence of sex on the occurrence of WPB

Qualitative Research Purpose Statement

The following research purpose statement is taken from a qualitative study about how gay-straight alliances (GSAs) do and do not impact school climates.

The focus of this study is on the benefits and shortcomings of GSAs in Progress County School District by exploring three key school practices—silence and passive resistance; safe spaces; and breaking the silence and barriers to breaking the silence. We argue that. . . . We also argue that. . . . (Mayberry, Chenneville, & Currie, 2013, p. 311)

Let's break down this research purpose statement:

The focus of this study is on the benefits and shortcomings of GSAs in Progress County School District by exploring three key school practices—silence and pas-
sive resistance; safe spaces; and breaking the silence and barriers to breaking the silence. We argue that. . . . We also argue that. . . . (Mayberry et al., 2013, p. 311)

The information conveyed in the purpose statement includes:

- Focus and phenomenon: The focus of this study is on the benefits and shortcomings of GSAs.
- The setting: Progress County School District
- Dimensions of the phenomenon explored: silence and passive resistance; safe spaces; and breaking the silence and barriers to breaking the silence
- Arguments based on research: the phenomenon under investigation

Mixed Methods Research Purpose Statement

The following research purpose statement is taken from a mixed methods study that combined survey research and semistructured interviews to evaluate a bullying prevention intervention in middle schools.

The primary objective of this article is to describe the strength-based program and to evaluate this program utilizing a mixed methods approach. The rationale for the program was to use a strength-based approach to address the complex needs of students within an inner-city school that had a high proportion of Aboriginal students. It was expected that. . . . (Rawana, Norwood, & Whitley, 2011, p. 287)

Let's break down this research purpose statement.:

The primary objective of this article is to describe the strength-based program and to evaluate this program utilizing a mixed methods approach. The rationale for the program was to use a strength-based approach to address the complex needs of students within an inner-city school that had a high proportion of Aboriginal students. It was expected that. . . . (Rawana et al., 2011, p. 287)

The information conveyed in the purpose statement includes:

- Objectives and phenomenon: The primary objective is to describe and evaluate the strength-based program.
- Rationale for program under investigation: address the complex needs of students (in target population)
- Research approach: mixed methods
- The population of interest: inner-city school that had a high proportion of Aboriginal students
- Expectations: It was expected that . . .

Arts-Based Research Purpose Statement

The following research purpose statement is taken from an arts-based project designed to explore the stigmatizing of school-age children by using techniques from “theatre of the oppressed” (TO).

One primary goal of the study was to explore how young people at the upper-elementary school levels responded to session content with Boal's Games, Image Theatre, and Forum Theatre—techniques often described in print for adult participants but rarely for youth. The most important goal of the project, however, was to provide children opportunities through TO to explore how their personal oppressions, such as victimization from bullying, could be recognized and dealt with in the classroom and on the playground. (Saldaña, 2010, p. 45)

Let's break down this research purpose statement:

One primary goal of the study was to explore how young people at the upper-elementary school levels responded to session content with Boal's Games, Image Theatre, and Forum Theatre—techniques often described in print for adult participants but rarely for youth. The most important goal of the project, however, was to provide children opportunities through TO to explore how their personal oppressions, such as victimization from bullying could be recognized and dealt with in the classroom and on the playground. (Saldaña, 2010, p. 45)

The information conveyed in the purpose statement includes:

- Objectives and phenomenon: Explore how young people responded to session content with TO. Provide children with opportunities to explore how their personal oppressions, such as victimization from bullying, could be recognized and dealt with in the classroom and on the playground.
- Reasons for study: gap in the literature for kids
- Research approach: arts-based, using tools from Theatre of the Oppressed, specifically Boal's Games, Image Theatre, and Forum Theatre
- Population of interest: kids in upper-elementary school levels

Community-Based Participatory Research Purpose Statement

The following research purpose statement is taken from a community-based participatory research (CBPR) project that developed, implemented, and evaluated an intervention to combat bullying in the workplace.

Our research projects started from a bottom-up perspective in which the objective was to develop and implement, in collaboration with the workplace personnel, an intervention program aimed at preventing and combating bullying; and to subsequently evaluate the implementation from the perspective of health-promoting work settings. To our knowledge, there is not much intervention-based research in collaboration with personnel, in the field of workplace bullying; therefore, the aim of our study was to describe and analyze the process of the intervention and the outcome of its implementation. (Strandmark & Rahm, 2014, p. 67)

Let's break down this research purpose statement:

Our research project started from a bottom-up perspective in which the objective was to develop and implement, in collaboration with the workplace personnel, an intervention program aimed at preventing and combating bullying; and to subsequently evaluate the implementation from the perspective of health-promoting work settings. To our knowledge, there is not much intervention-based research in collaboration with personnel, in the field of workplace bullying; therefore, the aim of our study was to describe and analyze the process of the intervention and the outcome of its implementation. (Strandmark & Rahm, 2014, p. 67)

The information conveyed in the purpose statement includes:

- Objectives and phenomenon: The objective was to develop and implement, in collaboration with the workplace personnel, an intervention program aimed at preventing and combating bullying; the aim of the study was to describe and analyze the process and the outcome.
- Reason for study: (gap in literature) not much intervention-based research in collaboration with personnel
- Research approach: bottom-up perspective in collaboration with the workplace personnel
- Setting: workplace
- Collaborators: the workplace personnel

Considering the preceding examples, we can start to see some variation in how purpose statements are constructed based on the approach used. There are often subtle differences in language as well choices about what information is shared. It's important to realize that there is some discretion about what is included in a research purpose statement. However, we can see from these examples that statements always include:

- The major objectives/goals/focus

Additionally, they generally include some combination of the following (as applicable):

- Phenomenon under investigation
- Variables that are being tested
- Population of interest
- Research participants or collaborators
- Setting
- Research approach

- Reason for research (e.g., identifies a gap in the literature)
- Arguments, predictions, or assumptions (sometimes a research purpose statement leads directly into hypotheses, as reviewed in the next section)

Additional information may be given, such as whether the research seeks to explore, describe, explain, evaluate, promote action, or evoke a response and/or which research methods are used in the study.

Measurement and Variables

Before explaining what hypotheses statements are, it is important to review variables, because hypotheses statements are constructed in terms of variables. In quantitative or mixed methods research, it is common to test or measure variables. A **variable** is a characteristic that can be different from one element to another, or can change over time. For example, sexuality is a variable that can differ across individuals.

From a *statistical perspective*, variables can be classified in two ways: categorical and continuous (Fallon, 2016). **Categorical variables** (also called *discrete variables*) are variables whose categories have names and distinguish among classes. Categorical variables include (Fallon, 2016, pp. 15–16):

- Binary distinctions (e.g., enrolled/not enrolled)
- Multiple options, with none being better or worse (e.g., religion, race, favorite *Star Wars* character)
- Rank-ordered (e.g., class year, Olympic medals)

Continuous variables are variables whose differences steadily progress and “preserve the magnitude of difference between values” (e.g., age, income, precise time running a race) (Fallon, 2016, p. 16).

Let’s take the example of income to show how, depending on your word choice and definition, you can create a categorical or continuous variable. If you use the term *socioeconomic status* and then use the following categories, you are working with a categorical variable: working class, middle class, upper class. However, if you use the term *income* and then use precise dollar/cents amounts (e.g., \$25,000 . . . \$25,437 . . .) income becomes a continuous variable. It is also possible to use the term *income* instead of *socioeconomic status* and still create a categorical variable with subcategories such as low income, middle-class income, upper-class income.

It is important to understand which kind of variables you are working with because it will influence how you’re able to analyze your data. At this stage, in order to explore the role of variables in hypotheses, let’s first define independent and dependent variables.

An **independent variable** is one that likely affects or influences another variable. Researchers manipulate independent variables (Gravetter & Wallnau, 2013).