2010

Explorations: A Guided Inquiry into Writing--Chapter 3

Beth L Brunk-Chavez
Helen Foster

To write it, it took three months; to conceive it --three minutes; to collect the data in it --all my life.
Unknown Source

Chapter 3: Inquiry-based Research Methods—Primary Research

- "Questions, curiosities, or puzzlements";
- Exploration and Investigation <research>;
- **Insight--some "new understanding, perspective, or knowledge"; and**
- Communication and testing of the insight (154).

As you have learned, inquiry-based research is about making choices and should not be a haphazard act but a well-thought out process of investigation. Up to this point, we've discussed locating a field of inquiry and a topic based on an exigence and dissonance, making a statement of purpose, and articulating appropriate direct and indirect questions of inquiry. The key to developing answers to these questions is to choose the best **research method** that will guide your investigations. In this chapter, we will introduce you to two types of research methods: primary and secondary. We will then focus on *primary research methods*—research in which you collect the data.

We want to take a moment to remind you about the recursive, or circular, nature of the inquiry-based research process. When you choose and plan your research methods, you may discover that one or more of your research questions needs to be revised. Do not be afraid to return to a previous step in the process and revisit what you have established.

Also, remember it's possible that your methods won't produce the data or results that you expected. Perhaps the answers will be contradictory to what you envisioned or perhaps the

results will be inconclusive. That's alright! A good researcher keeps an open mind throughout the entire process.

WHAT IS A RESEARCH METHOD?

In the dinner party example from Chapter 2, we created indirect research questions related to our direct research question: how can I give a good dinner party for my associates. Now what?

The next step is to plan effective methods for answering each of those questions. Take question 7c: How do you go about choosing pre-dinner and dinner menus for a business dinner party? Rather than guessing, how would you go about answering that? What sources would be appropriate? Who should you talk to? Should you talk to more than one person? How can you find the answers to these questions most efficiently and accurately? You might decide to poll some of your guests about their preferences, talk to someone who has thrown successful dinner parties, do some research on the internet, buy books or magazines by well-known entertainers such as Martha Stewart or Paula Dean. Because time is of the essence, you'll want to think carefully about the avenues you'll explore. It's time to think about your research methods.

Broadly defined, the term **research method** describes the orderly, systematic research plan used to search for answers to research questions. Often, in an academic or professional research article or report, a researcher will write a special section, called the **methods section**, to highlight and explain this overall plan.

One of the studies we will examine here, entitled "'Loud on the Inside': Working-Class Girls, Gender, and Literacy" seeks to answer two research questions: 1) How do gender and class influence the female subjects' uses of literacy in the classroom and 2) How do the girls use texts

from the English class to construct gender? In her methods section, the author, Pamela Hartman, describes her methods as such:

> Interviews
> I conducted semi-structured interviews with all 19 girls about their experiences with literacy, with a focus on gender and class. I then conducted a second, more in-depth interview with the six focal girls. I also interviewed the focal girls' mothers, asking them about their perceptions of their daughters and their daughters' literacy uses both at home and at school. Finally, I conducted three semi-structured interviews with the teacher and talked to her informally on a regular basis about her literacy goals for her classroom, the ways she approached issues of gender and class in her lessons, and her perceptions of the girls and their literacy uses. All interviews were recorded and transcribed. (91)
>
> Classroom Observations
> Drawing from methods of classroom ethnographic research and conversation analysis, I observed and audiotaped Heidi's class three to four times per week over the course of the semester. During these visits, I condensed ethnographic field notes, talked informally with the students about their reading discussions and classroom work, and collected written artifacts, including teacher-created assignment handout, and focal girls' reading journals, and copies of the focal girls' exploratory writing and essays. I selected excerpts from the audiotapes to be transcribed. Specifically, I chose only to transcribe the portions of the audiotapes when discussions took place about the texts they were reading or watching in class and about assignments the students were working on. (92)

[Research in the Teaching of English. 41.1 (2006) 82-117.]

Hartman had a very specific plan for collecting data that helped her answer research questions. We can safely assume that she made well thought-out choices regarding the kinds of information that would most effectively and efficiently answer those two questions. Without a research method in place, a researcher, such as Hartman or yourself, risks searching aimlessly and unproductively for answers. As you can see above, no single, all-purpose research method can be used for all research topics and questions. Some inquiry-based projects require **primary research methods** while others require **secondary research methods**, and many require a combination of primary and secondary methods. You will learn a variety of important research

methods and use these as you complete your projects for this class, throughout your college experience, and even into your professional, personal, and civic life.

Primary Research

As we mentioned in Chapter 1, vast amounts of information are available to us through books, newspapers, the internet, television, radio, and so on. In fact, did you know that half of what is known today was not known 10 years ago? The amount of knowledge in the world has doubled in the past 10 years and is doubling every 18 months according to the American Society of Training and Documentation. Imagine the research skills that will be required to navigate through this vast amount of information!

Yet, situations will still arise where your inquiries may not be easily satisfied by existing material. Perhaps the information you require has not been studied or discovered yet. Perhaps it's not easily found. Perhaps your questions are too context-specific or personal to have been researched by someone else. In these cases, you'll engage in **primary inquiry**. Primary research methods generate new data or information that has not been collected before. **Primary research instruments** generally include case studies, ethnographies, experiments, interviews, site observations, and surveys or questionnaires. Also called **empirical methods** because of their emphasis on first-hand experience and observation, primary research methods can be categorized into quantitative and qualitative methods.

Quantitative researchers seek to test a hypothesis or experimental research question about the world around us. Rather than focusing on a small, specific research sample, quantitative researchers collect data that can be generalized to a larger population. They often do this by collecting statistical data under controlled circumstances, often in a laboratory setting, where they compare an experimental group to a control group.

Medical research is a good example where scientists are careful to control the variables of the experiment as well as to create data that can be generalized to a wide population. Recall the sprained ankle example from the beginning of Chapter 1. The scientists who published their results in *The British Journal of Sports Medicine* studied 44 sportsmen and 45 members of the general public with mild/moderate acute ankle sprains. In order to test the effectiveness of various treatments, one group of 46 subjects was given standard ice application. Another group of 43 subjects was given intermittent ice application. Both sets of subjects were given the exact same materials and instructions for applying their ice packs, the only variable, or difference, in their application was the amount of time the ice pack was applied. The subjects were assessed for function, pain, and swelling six times.

As you can see, to reach reliable results that can be generalized across a population subject to ankle sprains, many variables must be taken into account and the research process must be carefully planned before the experiment starts.

Qualitative researchers, however, are less concerned with tightly controlling their experiments or creating knowledge that applies across many groups of people. Often called descriptive research, qualitative research is more interested in illuminating or describing the experiences of particular people in the sometimes messy situations of everyday life.

Hartman's literacy research described above is an example of qualitative primary research. In this case, she wanted to learn how this particular set of female students behaved, or learned, in their classroom environment. Although her methods of interviewing and observing were carefully planned and performed, Hartman did not need to be as concerned about creating data that could be easily reproduced or applied to other students in other classrooms. Instead, she sought to discover how gender, class and literacy intersect in this particular classroom with the

hope that these ideas might illuminate others' experiences elsewhere. Because Hartman's questions ask "how," we can easily see that in qualitative research, the goal is not to statistically prove or disprove a line of inquiry. Rather, the questions and data are more open-ended.

The kind of primary research you'll take up in most of the projects here is called **ethnographic research,** or **ethnography**. Ethnography is a research methodology used in the social sciences—mainly in anthropology and sociology—because enables researchers to examine the cultural knowledge, everyday behavior, and artifacts that members share and use to interpret their experiences as part of a cultural group. The assumption is that to understand the behavior that occurs in a particular environment, the researcher must view that behavior *as part* of the environment.

Ethnographic inquiry requires researchers to generate an hypothesis, test it with data collected through a variety of methods, and then produce what is called "thick description" or detailed, narrative-like accounts of the inquiry. Because researcher objectivity is impossible, an important value of this methodology is the self-reflexivity of the researcher and of the perspectives s/he brings to the environmental context to be studied. In other words, the researcher should be aware of any prior knowledge and attitudes—positive and negative—of the object of study. Whether we mean for them to or not, the knowledge and attitudes influence the observations we note.

A solution for this tendency as well as the unreliability and unpredictability of human behavior is called **triangulation.** This refers to the use of at least three different research methods by which to collect data. For example, instead of completing one 20-minute observation students' behavior in the library's coffee shop, you might also pass out a survey to 25 students, and interview 6. By using these three methods, you can collect multiple perspectives related to

your object of inquiry and then test interpretations across them. Remember that contexts and the humans that inhabit them are highly dynamic. Therefore, reliability is gained for the ethnographer by triangulating the research and then testing or comparing the results across the three methods.

While triangulating data goes a long way toward validating the results, the ethnographic researcher has to be careful not to generalize the results too broadly. In other words, if the researcher observes one group of students behaving a certain way at a college basketball game, she cannot argue that all students act like this at the basketball game, much less that all college students act like this at all college basketball games across the state or country. What the ethnographic researcher can claim is that within the specific context of this research, she collected "x, y, and z" data and that she interpreted this data to mean "such and such." The researcher may, depending on the strength of their research design and the quality of the data, suggest that the interpretation might be applicable to other, similar contexts and/or that the findings suggest other aspects need to be studied in greater depth. The point is that an ethnographic researcher cannot justifiably generalize results beyond the context studied.

Secondary Research

You probably have more experience with secondary research than you do with primary research. In contrast to primary methods, secondary research methods gather information that has been collected previously by other researchers and published in some form such as a research article, web page, book, government report, or conference proceeding. Secondary research involves investigating these published sources to gather information needed to answer the research questions. Secondary methods are not second or inferior to primary research methods.

Put simply, other researchers have already performed the difficult task of collecting new data, and the secondary researcher's task is to gather this information and synthesize it in ways that answer a new set of research questions. We will talk more about secondary research methods in Chapter 4.

Combination of Methods

As mentioned earlier, many research projects require a combination of both primary and secondary research. Many times, secondary research will help the researcher enter and analyze the discourse community, as through the lit review mentioned in Chapter 2. For example, Hartman's literacy project required that she first investigate what other literacy scholars had published related to gender, education, and class. Without a strong sense of previously published work, Hartman would risk either repeating research that had already been done or misunderstanding some important elements of her focus. The secondary research also contributed to her understanding of the best ways to design her primary research instruments. You should plan to engage in secondary research before and while you are conducting primary research.

Ethics of research

Both primary and secondary research bring up a host of ethical concerns and choices. Because primary research involves working directly with people, you'll always want to treat them with care and respect. Let them know how the information will be used. Let them review the information you record. Allow their names and identities to be concealed. Thank them for

their time. Remember that they are helping you with your inquiry. Treat them with the respect you would expect in their situation.

Many research institutions, including colleges and universities, have institutional review boards, or IRBs, that review proposed research projects involving people and work with researchers to determine if the proposed research protects these individuals from exploitation or abuse. Generally speaking, the IRB is interested not in class-related assignments but in professionally published research. Nonetheless, check with your instructor to determine if your primary research requires IRB approval.

Although secondary research does not directly involve people, you are obligated to treat the materials you use with respect and caring. This means not plagiarizing, or copying as your own, someone else's ideas or words. It also means treating the texts and their authors with respect. Don't take ideas or words out of context and respectfully disagree when necessary. We will talk more about ethics and secondary research concerns in Chapter X.

Finally, whether you are engaging in primary or secondary research, you have an ethical obligation to be aware of your biases. Each of us comes to a topic with and through various perspectives, and these perspectives change over time. Many times, the discourse, or language, we use to label and describe our field of inquiry will influence the kinds of research questions we ask. Kenneth Burke called this influence **terministic screens**. A terministic screen, he said, is a way of seeing, but it is also a way of not seeing. In his words, "Even if any given terminology is a *reflection* of reality, by its very nature as a terminology it must be a *selection* of reality; and to this extent it must function also as a *deflection* of reality" ("Terministic Screens," p. 45.) For example, consider the difference between asking questions about the Columbia space shuttle accident or the Columbia space shuttle disaster between inappropriate office talk or sexual

harassment between sweet treats or junk food. The words you choose will both encourage and discourage your research subjects from thinking about the field of inquiry in a particular way. Therefore, as you are creating your research instrument questions and interpreting the data you collect, be aware of your terministic screens.

THREE TYPES OF PRIMARY RESEARCH

As you can see, because each research project is different, creating a research plan and selecting the best instruments requires making a series of choices. Because different research methods generate different types of data and information, you must carefully decide which methods will provide the data best suited to your project. These choices will shape the knowledge you create.

For an example of research instruments, take another look at the Method section from "Loud on the Inside." The article's author, Hartman, states that in designing the research project, she uses two primary research instruments—interviews and observations—as the methods of collecting information. Three research instruments you might choose for your inquiry-based projects in this textbook—interviews, surveys, and site observations— are described in the remainder of Chapter 3. We want to be clear, however, that this discussion is the tip of the iceberg. There are a variety of methods for conducting primary research, and each of these research methods are complex in their own ways. We'll get you started here, but to continue serious inquiry in the future, you'll want to reference guides that discuss these research instruments more fully.

The process for research presented here first asks you to decide if the research tool is appropriate, plan how it will be used, create the tool, do the research, and then interpret the results.

Interviews

What are interviews and why are they useful?

One primary research method you might choose for inquiry-based research projects is the **interview.** You have probably been interviewed for a job where the manager attempts to ascertain your skills or abilities to work at a particular place. You might interview several doctors to find out who is the best match for you and your healthcare needs. We watch, read, and listen to interviews with celebrities, sports stars, politicians, and every-day people on the news, in magazines, on radio talk shows, on the internet, and on tv shows such as *The Daily Show*. In each case, the purpose of the interview is to answer a set a questions about what happened, what someone plans to do, how someone feels about an issue, and so on.

For an example of research that makes use of interviews, take a look again at Pamela Hartman's research on working-class girls' literacy practices. Remember her two research questions: 1) How do gender and class influence the female subjects' uses of literacy in the classroom and 2) How do the girls use texts from the English class to construct gender?

> I conducted semi-structured interviews with all 19 girls about their experiences with literacy, with a focus on gender and class. I then conducted a second, more in-depth interview with the six focal girls. I also interviewed the focal girls' mothers, asking them about their perceptions of their daughters and their daughters' literacy uses both at home and at school. Finally, I conducted three semi-structured interviews with the teacher and talked to her informally on a regular basis about her literacy goals for her classroom, the ways she approached issues of gender and class in her lessons, and her perceptions of the girls and their literacy uses. All interviews were recorded and transcribed.

Here Hartman describes whom she interviewed as well as the nature of the interviews. Notice that she interviewed all 19 girls in the class, six focal girls, the focal girls' mothers, and the girls' teacher. Asking similar questions of more than one group allowed Hartman to **triangulate** her data. In other words, rather than trusting one person alone, she verified the interview results by speaking to others about the same research questions.

Hartman probably chose to interview these research participants because her questions required data with a depth and detail that would be lost by other research methods such as surveys. Because interviews allow researchers to interact closely with the person interviewed, answers to interview questions tend to be long, detailed, and individualistic. These kind of answers are particularly valuable if your research project requires specialized information from one person or a small group of people rather than generalized responses from a large group of people such as those answers you would get in a survey.

There are other benefits to using interviews as a research method. When an initial set of interview questions is presented to an interviewee, these often lead to follow-up questions that provide unexpected and valuable information. In addition, interviewers have the opportunity to explore immediately any interesting or incomplete answers. Notice that Hartman said she conducted "semi-structured" interviews with the 19 female class members. This means that while she had a list of interview questions in mind, she left the structure open enough to let the conversation move in unexpected directions and to ask questions she hadn't originally foreseen. Again, this kind of unexpected data can only be collected from an interview.

Although interviews are useful, they do present several obstacles and disadvantages. Because of their highly personal nature, interviews can take a great deal of time to arrange, conduct, and interpret. In addition, because interviews provide personal and idiosyncratic

information that might resist being placed into discrete and simple categories, the data collected by one can be more challenging to work with than data collected by other methods. Of course, researchers might find that this information is much more exciting to work with than other forms of data. Detailed, open-ended responses could enhance the research project and lead a thoughtful researcher into avenues not considered before the interview.

How Can a Researcher Plan and Conduct an Interview?

Decide

Now that you know a little bit about interviews, you can consider whether or not they will be a part of your inquiry-based research process. Because interviews can require extensive time and planning, be sure that your research project will benefit from the detailed and specialized responses of the interviewee.

Start by listing again your indirect research questions. Then ask:

1. Is an interview necessary for answering one or more of these questions? Explain the answer. If no, then consider another research method. If yes, continue.
2. What data do I hope to collect through the interview? How will it be useful to the research project?
3. What person or group of people can provide this information?
4. What will be the best place and the best medium for conducting this interview?

Plan

At this point, you are ready to contact your potential interviewee and request an interview. Establish good will by informing them of the purpose of the interview and how the data will be used. Also ask permission to take notes and/or bring an audio or video recorder as well as to quote them directly. Finally, discuss how their statements will be presented. Will their names be used? Will you create a pseudonym for them? If the interviewee agrees, arrange the time and place of the interview that is convenient for them. Always thank them. After all, they are spending their time to help you with your research. Below is a sample “permission for

research" form. Use this to acquire permission for the interview, to determine how to use the data, and to keep a record of the research.

Permission for Research Form

Permission for Research

School Name: _____
Course Name: _____

Date: _____

I, _____, give my permission to _____ to use my written and spoken words in her/his research project for (course name), at (school name). I understand that I may, if I wish, read and approve the final draft of the material used about me in the project.

Signature: _____

Address: _____

Phone Number: _____

Please check one of the following to indicate your preference for being cited in the project:

_____ I prefer that you not use my real name but that you use this pseudonym:

_____.

_____ I prefer that you use my real name.

Create

Once the interview has been arranged, compose a list of interview questions. These questions require care on your part to ensure that they will gather the type of data that you want. Construct questions that will elicit the type of information you need for your project. However, avoid writing biased or leading questions. The way you phrase a question might force the

interviewee to provide answers that agree with your own biases but that the interviewee otherwise would not have given. One example of a biased question asked to a writing professor is: how do you think students' writing has improved since you have started using wikis in your classroom? Why is this question biased? It seems innocent enough, but perhaps the interviewee does not believe that student writing has improved. Maybe their learning in other areas has, but the phrasing of the question leads them answer positively. To phrase this question more objectively, first ask if the professor believes students' writing has improved since using wikis in the classroom. If the professor responds positively, then ask her what evidence leads her to that conclusion.

Your interview questions might be comprised of **close-ended questions** that require a simple response such as a yes/no answer, **open-ended questions** that invite more detailed responses, or a combination of both types of questions. We suggest asking more open-ended questions because this will provide the researcher with the individualistic, even idiosyncratic responses that will help you answer your research questions. Finally, when constructing your questions, be aware that most interviews require follow-up questions in which you ask for clarification or more information. Leave time during the interview for these useful follow-up questions.

As you are generating your interview questions, remind yourself of your indirect research questions. Then ask:

1. What questions can I ask to help me acquire the information I need?
2. Then look at each of these interview questions individually. Are any of them leading or biased? Would any of them make the participant uncomfortable?
3. Am I asking enough open-ended questions to illicit the individual responses I need?

Guide for Formulating Effective Interview Questions

Your Name:				
Write your direct research question here.				
Write your interview questions below. Then, check the indirect research question(s) for which you believe the interview question will provide data. Interview Questions:	Write a indirect question here	Write a indirect question here	Write a indirect question here	Write a indirect question here
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Do

Now it's time to meet with your interviewee, or **research participant**. Although you should have cleared these issues before the interview, ask once again if you can take notes, record, or videotape the interview. Explain the purpose of the interview and how the data, the participant's responses, will be used. As you ask your questions and the interviewee replies, be sure to listen attentively, jot down notes or check your recording equipment if necessary, but do not allow these to interfere with your listening. If any answers are unclear, feel free to ask for clarification or to read back your interviewee's responses to check your understanding. Be prepared to guide the interview back to your topic if the conversation wanders, but be open to new issues and discussions that might arise during the interview. Avoid being combative, taking answers personally, or engaging in debate with the interviewee. During the interview, you should always treat your interviewee ethically and with respect.

At the conclusion of the interview, take a few minutes to review your notes and add additional comments to them. Doing this shortly afterwards ensures that the details and ideas are fresh in your memory. You may even want to offer the interviewee a chance to review their responses before the data is used. This allows them to fill in information you might have missed and/or correct your notes to avoid misinformation.

This advice assumes that you will interview one person at a time, either face to face or over the telephone. If you interview a group of people or choose another medium for your interview (email, Instant Messaging), realize that the presence of more than one person and the use of different media will change the interview process. Think carefully about how you can give each interviewee the same level of respect and attention when more than one person is present or when you and the interviewee are not conversing in real time or in person.

Interpret

Now that the interview is complete, the next task is to determine how to read and use the data. If you recorded the interview but did not take notes, you will want to **transcribe** what was said. This involves playing the tape repeatedly and typing the information so that you can read it. Chances are that while the whole of the interview was a valuable experience, not all of the conversation will be directly useful to your research.

Therefore, to help you make sense of the data, you might want to create categories related to your indirect research questions. Read through your notes or the transcript several times to find the points that relate to these inquiries. Annotate these in some way—by highlighting, circling, underlining—and create a chart that groups together related information. When you are ready to write up the research, which we will discuss later, you can summarize, paraphrase, and quote ideas that came from the interview.

Here is one way that Hartman used the interview results in her argument. Here she talks to two students about why they are uncomfortable speaking in class.

> JACKIE: [I am] like quiet. I'm not really like that outgoing or anything until I get to know people . . . . And I don't like really speaking in front of large groups or anything like that . . . . [looking down at the table[I guess that is why I don't like to talk much in class.
> LISA: If I know the answer, if I can participate, I do. I mean, if I'm not sure about myself, then yeah, I'm quiet. Because I'd rather sit there and gather what the teacher is telling me rather than say something I'm not too sure of.
>
> In all of these example, the girls talked about not feeling comfortable with voicing their opinions in the class context. From the girls perspectives, public literacy is comprised of the following key features: (a) it is competitive, serving to exhibit what students do and do not know, and (b) the teacher holds the authority in the classroom, defining what is knowledge and what is the meaning of texts—which, as Lisa puts it, she must "sit there and gather." (98)

Notice how Hartman quotes from Jackie and Lisa's interview responses and then synthesizes what they said in a way that will answer her research questions.

Surveys

What Are Surveys and why are they useful?

When was the last time that you completed a survey? Probably not too long ago. Surveys are now so common that we hardly notice this research instrument. Thus, most of us do not even know that when we fill out a teacher evaluation form at the end of each semester, answer a couple of questions while shopping at our favorite online store, or take part in a political organization's telephone poll, we are completing a survey.

Just like an interview, a **survey** is a primary research method designed to collect data needed for a research project. A survey may be administered orally or in writing, on the telephone, online, through the mail, or face-to-face. The most common tool for survey data collection is the *questionnaire*, a carefully designed series of questions. Typically, the researcher distributes these questions to a sample of the target population, the specific group of people that the researcher wants to survey.

Surveys are useful in collecting data that provides an overview, or generalization, of the attitudes, behaviors, and beliefs shared by people who belong to the same group, whether this group is made up of 25 students in a class or 200,000 people responding to a news poll. Surveys do not examine the individual's response but seek to find patterns across larger groups of people.

To answer his direct research question of how do college students feel about their writing, David Wallace developed a survey for his students and provides it in his article "Nobody Laps me Twice: Attitude Surveys as Tools for Reflection." Because Wallace is not interested in individual student responses, but those of students as a whole, a survey is the best research method to satisfy his inquiry. Here is a small portion of the 27-question "writing attitude

survey." This survey was administered twice: once at the beginning of the semester and once at the end.

> Respond to the following statements about writing by circling the appropriate letter(s) to indicate how strongly you agree that the statement applies to you.
> SA=strongly agree A=agree D=disagree SD=strongly disagree
>
> 1. SA A D SD I avoid writing.
> 2. SA A D SD When I have a writing assignment, I like to talk to someone about it before I write.
> 3. SA A D SD Discussing writing with others is an enjoyable experience.

When the students have completed the survey, Wallace tallies up, or codes, the data by determining the number of students who responded "strongly agree," "agree," "disagree," and "strongly disagree," and then runs statistical analysis tools to learn more about what these answers can reveal. These answers, along with other research instruments, help him to understand how students generally feel about their writing.

Surveys have many advantages listed above, but there are a few drawbacks to note. Probably the biggest drawback is that survey data does not allow a great deal of flexibility. Once the survey has been created and delivered, it's nearly impossible to change or revise the direction of the research. Another drawback is that a survey does not provide opportunities for follow-up questions or for interactive research. Finally the researcher needs to be especially careful to construct the survey in a way that is easy to tabulate and to choose the best sample of participants.

How Can a Researcher Plan and Conduct a Survey?

Decide

Perhaps because they are so common, surveys can seem like a quick, easy way to collect data for your research project. However, surveys and their questionnaires require careful thought

and planning if they are to collect data that best serve your needs as a researcher. So be sure that your research project will benefit from the generalized information that can be acquired from a survey.

Start by listing again your indirect research questions. Then ask:

1. Is a survey necessary for answering one or more of these questions? Explain the answer. If no, then consider another research method. If yes, continue.
2. What data do I hope to collect through the survey? How will it be useful to the research project?
3. What group of people can provide this information?
4. What will be the best place and the best medium for distributing this survey?

Plan

Once you have chosen the survey as your research method, you will need to think carefully about the sample or audience you will survey, the delivery method, and the questionnaire you will use to collect the data.

The Sample

Just as selecting an interview research participant is an important consideration, you must also consider the sample of research participants who will complete your survey. The people who make up your sample will determine the types of questions you ask, the language you use, and the method of delivery. For example, even if you are seeking data on the same topic, say music preferences, the questions designed for teenagers just entering high school will be very different from questions designed for forty-something homeowners. Therefore, be sure to understand well your sample population before you write the questions.

In addition, because surveys seek to understand larger groups of people, researchers strive to design their survey for a sample or *sample population* of this larger target group that is

representative as well as *random*. A *representative sample* is a smaller portion of the larger group that, although small, includes the full spectrum of the type of people included in the larger, target population. Ironically, a *random sample* is not a group of people chosen at random, but a sample in which all members of the target population had an equal chance of being selected to be part of the sample.

Ensuring that a sample is representative and random can be difficult. However, when researchers select a representative and random sample, survey results can illuminate important characteristics shared by the larger target population. These data can be invaluable in helping researchers to understand that population as they complete their research project.

Delivery Method

Another factor that you must consider as you design your survey is the **delivery method** you will use to administer the survey to your sample population. Will you call these people on the phone, meet them in person, ask them to complete the survey online or through email, or approach them through the mail? How will you, if at all, protect the anonymity of your sample, given that many people prefer to remain anonymous rather than provide their names or any other identifying information on a questionnaire?

Each delivery method will require a different level of commitment from you, including time and economic resources. Your choice of delivery method could also influence the type of survey questions that you ask, the sample population that you can reach, and the data you are able to collect. In other words, the choice of delivery method must be an integral part of designing the survey since this delivery method has the power to shape all other aspects of the survey.

If you are interested in conducting an online survey, there are several websites that will assist you in creating and administering the survey on the Internet. While some charge a fee, others offer free services for a limited time. Remember, however, that even though many websites claim that it's fast and easy to create a survey, you must still do the work of crafting well-thought out questions and ensuring that the right people take the survey.

Two such websites include: CreateSurvey at http://www.createsurvey.com/index.htm and Free-Online-Surveys at http://free-online-surveys.co.uk/

Create

After you have considered the sample population to be surveyed and the methods by which you'll administer the survey, it's time to draft your questions. In an interview, you can change the nature or course of your questions when appropriate. However, in a survey where the participants are not actively engaged with you, you do not have that opportunity. For this reason, it's important to create and test your questionnaire very thoughtfully.

The Questionnaire

As we mentioned above, a questionnaire is a carefully designed series of questions used to gather data from a potentially large number of people. Because it's quite simple for a research participant to answer a questionnaire, most people who complete surveys never realize how much thought went into creating the questions that might take five minutes or even less to answer. In other words, don't assume that because surveys are completed so quickly, survey questions can be thrown together in as brief a time.

To be effective, survey questions should be written so that they collect the type of data that the researcher needs to answer the research questions. A critical step in designing survey

questions is to decide what type of data or information you hope to collect and then design clear, straightforward questions that will gather this information.

For example, one decision that you will have to make is whether to use *close-ended questions*, *open-ended questions*, or both in your survey questionnaire. *Close-ended questions* require the person taking the survey to choose an answer from a list, such as the "strongly agree" through "strongly disagree" choices illustrated in Wallace's writing attitudes survey above. Close-ended questions on a course evaluation form might require the student to identify their nationality or gender, or circle yes or no to a question that asks if they were challenged by the course material. Another type of close-ended question might require that a student select from among four or five choices to rank the course in relation to other courses that the student has taken.

Open-ended questions allow the person taking the survey more freedom in answering the survey questions and more space in which to provide details. Close-ended questions are much easier to tabulate or calculate, often requiring that the researcher simply add the number of responses and compare the numbers. However, open-ended questions can provide much more depth than close-ended questions, offering insights into your research project that closed questions simply cannot provide.

As you are generating your questionnaire questions, remind yourself of your indirect research questions. Then ask:

1. What questions can I ask to help me acquire the information I need?
2. Do I want to ask open-ended questions or close-ended questions?
3. Then look at each of these questionnaire questions individually. Are any of them leading or biased? Will any of these questions make my participant uncomfortable?
4. Am I asking enough questions? Am I asking too many questions?

Guidelines for designing a survey:

1. Include a title and a brief introduction of yourself, the purpose of the survey, and an assurance of confidentiality to the respondent. You might also consider the option of sharing your results with respondents, in which case you will need to make arrangements for the transmittal of data, e.g., email.
2. Decide what question types you will use: close-ended or open-ended. If you include open-ended questions (usually, no more than two), provide 3-5 lines for the responses. If the questions are close-ended, decide how many alternatives you need to provide: true/false; strongly agree, agree, neutral, disagree, strongly disagree, and so on. Decide in advance what the meaning of the middle choice will mean for your data analysis. If, for example, that option would be meaningless, then it would be better to offer only four choices. In any case, be sure that the questions accept all likely, possible answers.
3. Determine the most appropriate order for questions. Generally, the first questions should be non-threatening and easy to answer, while difficult or sensitive questions should be saved for the end of the survey. Otherwise, your participants may become discouraged or frustrated and not complete the survey. Also, when possible, group questions on the same topic together.

4. Consider your language. Avoid using technical terms and acronyms, unless you know with certainty that respondents know what they mean. Avoid emotionally charged words or leading questions that point towards a certain answer.
5. Decide how many questions to include. Shorter is better than longer, since people are more likely to complete the survey if it doesn't require much time. (No less than 6 questions and no more than 10 is our recommendation.) But also be sure to avoid combining two questions into one in order to save time. This could cause confusion and inaccurate data.
6. Consider the document design of your questionnaire. It should be attractive, easy to understand, and easy to complete. For example, keep answer spaces in a straight line, either horizontally or vertically; provide a line for each answer choice, if possible; and position answer spaces in the right hand part of the page. Present agree/disagree, positive/negative, excellent/poor, and numeric rating answer choices in the order of positive/highest to negative/lowest.

Below is a Survey Question Grid. Use this to help generate the questions you will ask your subjects. Start by identifying the objectives of your survey—what you hope to find out in general terms. Then begin writing questions. Identifying which objectives these questions meet. If the question doesn't meet an objective, consider whether or not you really need to ask it.

Survey Question Grid
Your Name:

Survey Objectives:

1.
2.
3.
4.

(In the right column below, indicate the appropriate objective[s] that each survey

question addresses.)

Survey Question	Objective #(s)
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Do

Now it's time to administer, or deliver, your survey to the research participants. In the planning stage, you made choices about how your participants would receive, take, and return the questionnaire. Depending on your choice, this might take twenty minutes during a class session or three weeks by mail. Whatever the situation, all the work to be done with a survey happens before and after it is delivered. While the participants are taking the survey, there is not much for the researcher to do but wait.

1. Interpret

   Once you have collected the completed surveys, you'll need to tabulate and interpret the data. Professional and academic researchers use statistical packages to help them understand the data, but for our purposes, you can most likely use some simple math to understand the results. For your close-ended questions, keep a running tab of how

many participants responded to each choice. A very easy way to do this is to take one blank survey and tabulate onto it the results of your collected surveys, survey by survey and question by question. For your open-ended questions, you'll want to read through them carefully and highlight the answers that are of interest. Speculate, then, how the data *could* be sorted and classified. That is, determine your sorting and classifying options; you could, for example, sort according to question or you could classify questions by groups (sophomores, juniors, and seniors). Look for patterns across responses. Are there similarities, vast differences?

Then you'll want to consider how that data will help you answer your research questions. The data the Wallace collected from his survey is included in his article.

> When I examined the pre-and postsurvey results for this group, several interesting patterns emerged. There was a consistent …increase for Student Involvement factor across all five sections, as well as a statistically significant decrease in writing apprehension. These results pleased the other two teachers and me . . . because we had designed our courses to try and get students more actively involved in their own learning and because we hoped our courses would help our students become more comfortable with writing.

As you can see, Wallace used the survey results to make general statements about the writing students' attitude changes over the course of the semester. Through this he is able to reach a conclusion about the students' attitudes as well as the effectiveness of particular classroom practices.

Site Observations

What are Site Observations and why are they useful?

One of the most useful and, for many researchers, most engaging primary research methods is the **site observation**. When conducting a site observation, the researcher enters a specific environment with the purpose of systematically recording, interpreting, and describing

that environment and people's ordinary behaviors within it. Researchers often elect to conduct site observations because, rather than generalized data, they seek to understand a particular group of people and their actions in a very specific context. They also know that the data from an observation cannot be acquired in a less natural setting such as a laboratory or through a less immediate research instrument such as the survey questionnaire.

You may have already witnessed or participated in a site observation. Perhaps a group of people from a local university once visited your elementary classroom and took notes about the interactions within the classroom. Or, perhaps you have passed a busy intersection being considered for a new traffic light and witnessed several people standing on the sidewalk counting the cars, including your own, that sped by. More than likely, the people visiting your classroom and the intersection were performing site observations. Almost any environment, familiar or new, can be an appropriate site for observation: classrooms, libraries, courthouses, airports, or ice cream shops. What sets this research method apart from casual observation is the controlled way in which this observation takes place. The researcher enters the site with research questions in mind and seeks to find evidence that will help to answer those questions. **Site observation data**, then, consist of the researcher's recorded observations of peoples' behaviors in their environment.

As an example of the site observation, recall again, Pamela Hartman's research on the literacy practices of working-class girls. Her two research questions are: 1) How do gender and class influence the female subjects' uses of literacy in the classroom and 2) How do the girls use texts from the English class to construct gender? In the method section, Hartman explains how she used site observations of a classroom to collect data related to her research questions. Notice

that she visited the class numerous times and recorded her observations on an audiotape. In addition to her observations, she also talked with, or interviewed, the students about their work.

> Drawing from methods of classroom ethnographic research and conversation analysis, I observed and audiotaped Heidi's class three to four times per week over the course of the semester. During these visits, I condensed ethnographic field notes, talked informally with the students about their reading discussions and classroom work, and collected written artifacts, including teacher-created assignment handout, and focal girls' reading journals, and copies of the focal girls' exploratory writing and essays. I selected excerpts from the audiotapes to be transcribed. Specifically, I chose only to transcribe the portions of the audiotapes when discussions took place about the texts they were reading or watching in class and about assignments the students were working on.

Through a series of site observations, Hartman was able to see and record the events of this particular classroom. Through this and the collection of artifacts—handouts, the girls' writing—she was able to focus her attention to the details that helped her answer her research questions.

The rich data that a site observation provides can be both an advantage and a drawback. How does the researcher make sense of it all? Also be aware that even though so much data can be collected, the observer will not be able to catch everything. Inevitably there will be missed details. Also, a site observation alone will not allow the researcher to get specific information from the participants being observed.

How Can a Researcher Plan and Conduct a Site Observation?

Decide

Now that you know a little bit about site observations, you can consider whether or not they will be a part of your inquiry-based research process. Again, as with any research method, site observations require careful planning if they are to provide you with data useful to your research project. Most people only see the site observation as it is taking place, when the

researcher visits the site. However, the best site observations begin long before the researcher visits the field site and continue well after the researcher leaves the site.

So be sure that your research project will benefit from the specific, first-hand information that can be acquired from a site observation.

Start by listing again your indirect research questions. Then ask:

1. Is a site observation necessary for answering one or more of these questions? Explain the answer. If no, then consider another research method. If yes, continue.
2. What data do I hope to collect through the site observation? How will it be useful to the research project?
3. What site is most appropriate for gathering this information?
4. What time (of year, month, day) is most appropriate for gathering this information?

Plan

Because site observations take place in real time, it can be overwhelming to catch and record all the data you think you'll need to answer your research question. Careful planning with your research questions in mind will focus your observation on the reasons for your visit and the type of data that you want to collect.

As you begin to plan for the site visit, consider the behaviors you wish to record and the types of records you want to keep of the observation. Do you want to record one aspect of people's behavior or a broad spectrum of actions? Will you visit the field site to record these behaviors once or multiple times? How long will your visit or visits last? Will you combine your site observation with another primary research method such as an interview or survey questionnaire? During the visit, will you record these behaviors by writing field notes in a notebook or on a laptop? Will you videotape the observation? Audiotape your comments? Or, will you use some combination of these recording techniques?

Once you decide on your purpose, goals, site, and recording methods, you should next decide if you must ask permission to visit the site and conduct your observation. Certain public sites will be open to you, but controlled sites such as schools and workplaces may require that you obtain permission before entering the site. If you have never been to the site, you might want to visit it before hand in order to familiarize yourself with it. Remember the focus of your observation is people, and they have a right to know that they are being observed and how your observations will be used, including whether you plan to protect their anonymity.

Create

Similar to interview and surveys where you need to create well thought-out questions to collect the research data, site observations also require that you draft questions or observation points before you begin the research. It will be overwhelming to try to record everything you see and hear, so having a set of questions to answer will help you stay focused. However, you don't want to be so narrowly focused that you miss important observations that don't initially seem to speak directly to your questions.

As you are generating your site observation questions, remind yourself of your indirect research questions. Then ask:

1. What questions can I ask to help me acquire the information I need?
2. What behaviors do I need to keep an eye out for?
3. Am I asking enough questions? Am I asking too many questions?

Do

Once you have secured permission, if required, and created a set of questions or observation points, you are ready to visit your field site and collect data or records of your observations of people's behaviors. At the site, record your observations in as complete and unobtrusive a way as possible. Note the date, time, place, and other conditions of the visit and

site. After noting these items, record your observations in a field notebook or on a laptop by dividing each page (or screen) into three columns, one for observations (what you literally experience), the second for your immediate reflections on what you observe, and a third for post-observation reflections. (See the example below.) You might supplement these notes with a videotape made at the scene. You could also use a tape recorder to record your observations and reflections. Whatever method you have chosen, aim to make your records as complete and accurate as possible.

Observation Form

Location: Date: Time:	Other information about the site:	
Observations	Reflections	Post-observation Reflections

Because you are recording people's ordinary behaviors, avoid altering these behaviors by making your observations overly noticeable. Depending upon the location, the make-up and number of people, your presence in the environment will in some way shape and change behavior there. Experienced researchers accept this limitation as part of the method and make every attempt to be as discrete as possible with their recording and avoid interrupting the course of events.

Shortly after you complete the observation, you should review the notes and add any additional observations to the third column of the chart. It's best to take the time to reflect right away. The longer you are away from the observation, the harder it will be to remember specific details.

Interpret

Once you have recorded your observations, the next step is to process that data into a form that relates to or answers your research questions. In other words, you will interpret your data to produce a meaningful description of the environment and its people. To do this, you will want to return to the chart you created. Read carefully through all the columns and highlight or otherwise mark the passages that are significant. Then decide how you will use this data.

The data that Hartman collected from her classroom observations are integrated into her article's argument:

> The few times that I heard Stacy speak in the classroom, she usually confined her answers to the questions that required specific, concrete answers. For example, when [the teacher] asked in a class discussion, "What are some things all human beings must experience or endure in this life as part of being a human being?" Stacy responded confidently, "Death." . . . However, when the conversation took a more critical turn, requiring more personal views and insights, Stacy ceased to talk….Stacy began to bite her nails and stared at her paper. …
>
> Staying silent in the class seemed to correspond with the working-class girls' images of themselves as Good Students who strategically construct that image in a way they think the teacher will both recognize and reward. (98)

Here we can see how Hartman uses her direct observation of this particular student, Stacy, (along with other data she collects) in order to reach a conclusion about the behaviors of the students she studies.

Interpreting site observations records may seem like a subjective, non-scientific way to conduct research. However, experienced site researchers know that their goal is not absolute

objectivity, which may be impossible to reach, but a rich, layered account of people's actions in a particular context, an account that takes for granted that all experience is inevitably interpreted by the people observing the experience.

EXERCISES

Examine these interview and survey questions, decide why they are problematic and rewrite them.

1. Why do you think the Technology Program is so innovative?

2. What is your academic classification?

   - ☐ Sophomore
   - ☐ Junior
   - ☐ Senior

3. Have you ever broken the law? What did you do?

4. How often a week do you write?

   - ☐ 15 minutes
   - ☐ 1 hour
   - ☐ 6 hours

5. Tell me about your childhood.

Examine the following contexts for inquiry. First decide what these researchers' questions of inquiry might be. Then choose an appropriate research method for these research projects. Finally, describe how they might set up the research. More than one research method may apply.

1. A Rhetoric and Writing Studies professor wants to write an article on students' writing progress from their first-year until they graduate from their university. She wants to gather data from students in several universities.

2. A undergraduate student wants to research the ways that fellow students make use of the computer labs on his campus.

3. A graduate student wants to understand how discourse communities are formed online. Specifically, he wants to study discussions related to NASA programs.

4. A high school student wants to report to his senior writing class on what kind of course work they can expect to do in a college-level writing class.