

**Scenario:** Imagine that you're trying to determine the exercise habits of college students. Perhaps you're considering opening a fitness center or offering individual yoga classes.

For this example, let's also assume that you gathered only three pieces of information: a paraphrase from a newspaper article, a chart you developed from a recent study published in a journal article, and primary data from a questionnaire you distributed on campus.

### Step 1: Isolation

Look at each piece of data in isolation. If the newspaper article were the only piece of data you collected, what would that mean for your business idea? For example, if the article discussed students throughout the United States, what, if any, conclusions could you draw about your local campus? Follow the same process for the study and your questionnaire, examining each in isolation, without considering any other data.

### Step 2: Context

Look at each piece of data in combination with the other bits. For example, the newspaper article may lead you to believe that few students exercise regularly, but 67% of students who responded to your questionnaire reported belonging to a gym. What could this combination of data mean (e.g., perhaps students belong to a gym but rarely go)? If your data sources reinforce each other, you can use stronger, more conclusive language in your analysis. If not, you may want to use less certain language or perhaps not draw any conclusions at all.

### Step 3: Synthesis

Synthesize all the information you've collected. When you consider all the facts and their relationships together, what do they mean for your business idea? Do you have enough data to conclude whether the business has a good chance of success? If so, you're ready to begin the detailed analysis and presentation that will help the reader—perhaps a business investor—understand your findings. If not, you must backtrack and start the research process again.

Almost always, the most important finding is the overall response to a question (rather than the responses of the cross-tabulation subgroups). And almost always the category within the question that receives the largest response is the most important point. So discuss this question and this category first. Let's take another look at the Apex example (Figure 26).

Simplified Table

Figure 26

Table 4. Response to Statement, "Apex Company is an asset to our community."  
(N = 271; all figures in percent)

|            | Total | Marital Status |        | Sex  |        | Age      |       |         |
|------------|-------|----------------|--------|------|--------|----------|-------|---------|
|            |       | Married        | Single | Male | Female | Under 21 | 21–50 | Over 50 |
| Agree      | 80    | 82             | 77     | 83   | 57     | 69       | 77    | 90      |
| No opinion | 12    | 11             | 15     | 12   | 21     | 18       | 14    | 9       |
| Disagree   | 8     | 7              | 8      | 5    | 22     | 13       | 9     | 1       |
| Total      | 100   | 100            | 100    | 100  | 100    | 100      | 100   | 100     |

In Figure 26, the major finding is this: four-fifths of the respondents believe that Apex Company is an asset to their community. If you give the exact figure from the table (here, 80%), you can use less precise language in the narrative—"four-fifths" in this case, or in other cases "one in four," or "a slight majority." Doing so helps you avoid presenting facts and figures too quickly. Pace your analysis because the reader may struggle to understand data presented too quickly or too densely.

Once you've discussed the overall finding, discuss the cross-tabulation data as necessary. Look for trends, unexpected findings, data that reinforces or contradicts other data, extreme values, and data that raises questions. If these features are important, discuss them. In our example, there were no major differences in the responses by marital status, so you would probably not need to discuss them. However, you would need to discuss the big difference in responses between males and females. If possible, discuss the *reasons* for these differences.

Finally, point out the trend that is evident with regard to age: the older the respondent, the more positive the response. If it's important enough, you might display this trend in a graph for more visual effect.

Sometimes you will want to include descriptive statistics (such as the mean, median, mode, range, and standard deviation). At other times, your data will require inference (significance) testing to determine whether the differences found in your sample data are also likely to exist in the general population.

After all of your data collection and analysis, you'll likely know more about the topic than your reader does. Help the reader by pointing out the important implications, findings, and relationships of your data. With your guidance, the reader will draw the same conclusions you have.



#### Emotional INTELLIGENCE

When have you been involved in research that has tested your ethics? How has this experience affected you and your approach to future research?



#### Ethics in COMMUNICATION

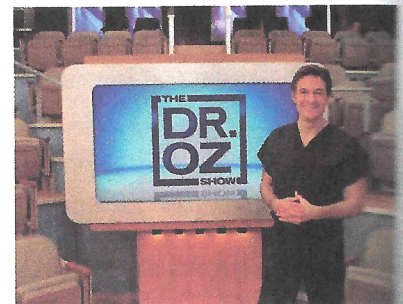
### 9-5b Considering the Ethical Dimension

In gathering, analyzing, and reporting data, everyone involved has both rights and obligations. The researcher has the right to expect that respondents will be truthful in their responses and has an obligation not to deceive respondents. The organization that is paying for the research has the right to expect that the researcher will provide valid and reliable information and has an obligation not to misuse that data. And consumers of information—readers of data analysis—have a right to expect an accurate portrayal of the research.

Unethical practices in managing data can have serious consequences. A pharmaceutical company that bribes drug trial participants to get positive results may bring an unsafe product to market. A credit card company that reveals only "teaser" interest payments—before rates increase—may force a family into bankruptcy.

Television personality Dr. Mehmet Oz has been criticized for promoting products that have little, if any, research supporting the advertised benefits. Dr. Oz's enthusiasm for garcinia extract for burning fat was challenged by Edzard Ernst, who studied the substance more than 15 years ago: "Dr. Oz's promotion of this and other unproven or disproven alternative treatments is irresponsible and borders on quackery." The so-called "Oz Effect"—people spending lots of money on products presented on his show—can be dangerous. As Ernst says, "Using bogus treatments for serious conditions may cost lives."<sup>23</sup>

If you want your research to solve problems and help in decision making, everyone involved must use common sense, good judgment, and an ethical mindset to make the project successful.



## SUMMARY

### **LO1** Find relevant sources for a report.

Search for data that will achieve your purpose, for example, to solve a problem or make a decision. By factoring the problem, you'll determine what primary and secondary data are needed to answer important questions. Where available, choose library databases over broad Internet searches to get the best sources.

### **LO2** Evaluate the quality of data.

The quality of information on the Internet varies widely. When evaluating web resources, consider authority, accuracy and reliability, purpose/objectivity, coverage, and currency. When using research studies as secondary sources, first consider the purpose of the study, how the data was collected and analyzed, how consistent the data is with other studies, and how old the data is.

### **LO3** Develop a questionnaire and cover letter.

Primary data is collected by various survey methods, mainly questionnaires, telephone inquiries, and interviews. Ensure that all survey questions are necessary, clearly worded, complete, and unbiased. Organize the questions and possible responses logically, provide clear directions, and choose an attractive format. The cover letter or email should be persuasive and explain why it is in the reader's interest to answer the survey.

### **LO4** Display quantitative information.

Data is converted into information by careful analysis and is interpreted in narrative form and by visual aids. Each table you construct from the data should be interpretable by itself, without reference to the text. Include only as much data in a table as is helpful, keeping the table as simple as possible. Use well-designed line, bar, and pie charts to increase reader comprehension, emphasize certain data, create interest, and save time and space. Avoid using too many, too large, too garish, or too complicated charts. Consider creating infographics to help readers quickly grasp large amounts of information.

### **LO5** Interpret data for the report reader.

Do not analyze every figure from the table in your narrative. Instead, interpret the important points from the table, pointing out the major findings, trends, and contradictions. Avoid misrepresenting your information. A competent reporter of business information is an ethical reporter of business information.

## EXERCISES

### **1. Find relevant sources to support a business decision.**

Choose one of the following small business situations—or another situation that interests you:

- You own a clothing store and want to know whether to offer hats.
- You own an ice cream store and want to know whether to offer products other than ice cream (e.g., other desserts or soda).
- You own a jewelry store and want to know which precious gems are most popular (and what quantities you should order).
- You own a stationery store and want to know how to stock greeting cards—which are most popular?

**LO1** Find relevant sources for a report.

## SUMMARY

### **LO1** Find relevant sources for a report.

Search for data that will achieve your purpose, for example, to solve a problem or make a decision. By factoring the problem, you'll determine what primary and secondary data are needed to answer important questions. Where available, choose library databases over broad Internet searches to get the best sources.

### **LO2** Evaluate the quality of data.

The quality of information on the Internet varies widely. When evaluating web resources, consider authority, accuracy and reliability, purpose/objectivity, coverage, and currency. When using research studies as secondary sources, first consider the purpose of the study, how the data was collected and analyzed, how consistent the data is with other studies, and how old the data is.

### **LO3** Develop a questionnaire and cover letter.

Primary data is collected by various survey methods, mainly questionnaires, telephone inquiries, and interviews. Ensure that all survey questions are necessary, clearly worded, complete, and unbiased. Organize the questions and possible responses logically, provide clear directions, and choose an attractive format. The cover letter or email should be persuasive and explain why it is in the reader's interest to answer the survey.

### **LO4** Display quantitative information.

Data is converted into information by careful analysis and is interpreted in narrative form and by visual aids. Each table you construct from the data should be interpretable by itself, without reference to the text. Include only as much data in a table as is helpful, keeping the table as simple as possible. Use well-designed line, bar, and pie charts to increase reader comprehension, emphasize certain data, create interest, and save time and space. Avoid using too many, too large, too garish, or too complicated charts. Consider creating infographics to help readers quickly grasp large amounts of information.

### **LO5** Interpret data for the report reader.

Do not analyze every figure from the table in your narrative. Instead, interpret the important points from the table, pointing out the major findings, trends, and contradictions. Avoid misrepresenting your information. A competent reporter of business information is an ethical reporter of business information.

## EXERCISES

### **1. Find relevant sources to support a business decision.**

Choose one of the following small business situations—or another situation that interests you:

- You own a clothing store and want to know whether to offer hats.
- You own an ice cream store and want to know whether to offer products other than ice cream (e.g., other desserts or soda).
- You own a jewelry store and want to know which precious gems are most popular (and what quantities you should order).
- You own a stationery store and want to know how to stock greeting cards—which are most popular?

**LO1** Find relevant sources for a report.