

Report Illustrations and Headings

INTRODUCTION

The purpose of this chapter is to introduce you to the use of illustrations and headings in business report writing. While the quality of your writing itself remains the paramount concern—both for grading in this course and for success in your professional life after college—tables, graphs, charts and other visuals such as headings also play important “supporting roles” in the creation of effective and attractive reports that appeal to the audience’s eyes and help you get your points across clearly.

Objectives

This chapter will culminate in your production of four illustrations typically used in business reports, a table, bar graph, pie chart, and line graph. You will support each illustration with a consistently formatted title and source line. Finally, you will learn to effectively integrate illustrations within the text. After completing this chapter’s assignment you will be able to:

- Use computer software such as Word or Excel to design accurate, attractive, easy-to-read tables and figures that report statistical data on your business topic;
- Integrate and discuss these visuals within the text they illustrate;
- Label and document your illustrations with consistently formatted titles and source lines.

Additionally, this chapter will help you use headings to organize your business reports. You will learn the strategy behind hierarchical headings, see examples, and use MS Word styles for attractive, consistent headings that enable you to create a table of contents at the click of a mouse.

DESIGNING AND INTEGRATING SIMPLE ILLUSTRATIONS

Because graphics play an integral part in business communication, you are not alone in your quest to become “computer graphics literate”. You may use some creativity as you customize your illustrations for your purposes and audience; however, the success or failure of your intended message depends on your audience’s understanding and reactions. A few “universal” ground rules can prevent confusion.

Tables and Figures: Important Distinctions

In traditional business usage, illustrations fall into two categories. Each illustration should be labeled as either a **table** or **figure**. What is the distinction between a table and a figure? According to *The Business Writer’s Companion*, tables “can present data, such as statistics, more concisely than text and more accurately than a graph.”¹ Thus, when you wish your reader to pay close attention to numbers—dollars or pennies, percentages or percentiles, pounds or populations—and to recall them exactly, a table is your better choice for displaying your information and for communicating your message clearly and precisely.

Tables align data in **cells** for vertical comparison in **columns** or horizontal comparison in **rows**. Grid lines can help your audience gain accurate understanding at a glance when the data is complex or closely spaced, or if the eye may have trouble following the correct row or column.

However, if your purpose is to show your audience some type of relationship among your data, a **figure** may be the way to go. Again, the *Business*

Suggested Reading

To get the most out of this chapter, you should first read Chapter 2, “Words, Images, and Graphics”, and “Chapters 11 and 12, “Design Basics” and “Illustrations, Tables, and Charts” in *The Penguin Handbook*. **Annotate** as you read, noting your responses, comments, and questions in the margins. Then, as you review, pay closer attention to the types of graphs or charts used for different kinds of data. Also notice the spacing, colors for contrast and clarity, and fonts. Compare these with the sample illustrations in this chapter and at the back of this book.

In *The Penguin Handbook* you will also find a useful summary of heading strategies (205-208). For examples of some variations found in heading formats, see the samples in *The Penguin Handbook* (figure 11.4) and in Appendix B in the back of this book.

¹Gerald J. Alred, Charles T. Brusaw, and Walter E. Oliu, *The Business Writer’s Companion*, 3rd ed. (Boston: Bedford/St. Martin’s Press, 2002), 203.

Writer's Companion clarifies the distinction between tables and figures: "Trends, movements, distributions, comparisons, and cycles are more readily apparent in graphs [one member of the figure family] than they are in tables. However, although graphs present data in a more comprehensible form than tables, they are less precise. For that reason, graphs are often accompanied by tables that give exact data."²

Throughout English 203, your text will introduce and label all illustrations as either tables or figures. Following your formal introduction and labeling of your illustration, your discussion of its meaning can call your figure a graph, chart, diagram, photograph, picture, map, histogram, Gantt chart, cutaway, etc., as appropriate. Just make certain your initial introduction and label use the term "table" or "figure" and that any subsequent term will not confuse your reader.

THE BASICS OF ILLUSTRATION DESIGN

Here are some accepted traditions and requirements to keep in mind as you design and integrate your illustrations.

- Ask yourself if an illustration helps communicate a specific, important and relevant point. Avoid "fluff" illustrations that just pad out or decorate your report. Only illustrate data or ideas that contribute significantly to your report's purpose.
- Follow the IDD—Introduce, Display and Discuss—organizational plan for integrating text and illustration.³
- Assign every illustration a label—Table or Figure—and an Arabic numeral (e.g., Table 1). Number tables and figures separately (a report with both tables and figures will have a Table 1 as well as a Figure 1, and so on).
- Compose a concise, precisely descriptive label that captures the visual's main point. (e.g., Leading Sires of 2006 by Progeny Earnings, not something vague like Leading Sires).
- Document the source of your data in a source line appearing beneath the illustration. Using the word Source, followed by a colon, is a common practice. Source lines should never contain URLs (web addresses); confine these to notes and the Bibliography (CMS), Works Cited (MLA), or References (APA) page.
- Make sure label, source line and other typeface format is consistent for all illustrations throughout the report.
- In tables use row and column headings to organize your data; in graphs and charts use axis labels, along with legends or data labels (callouts), to help clarify the data at a glance.

² Ibid., 189.

³ Shirley Kuiper and Gary F. Kohut, *Contemporary Business Report Writing*, 2nd ed. (n.p.: South-Western College Publishing, 1999), 89-90.

- Use contrasting colors to help your audience see foreground bars, pie slices, etc., against the background and to help them easily distinguish between data series.
- Place your illustrations in a balanced position on the page, and do not allow labels or source lines to fall on a different page from their illustration.
- Finally, always ask yourself if your illustration is clear, attractive and businesslike in appearance, and—of course—free of typos or other errors.

One of the best habits you can develop is to allow yourself time to create and tweak your illustrations, since they can present software problems that may take time to solve, and since an illustration that seems perfect on the screen may show problems when printed. Another is to ask a reliable friend to interpret your illustration and respond to its appearance. The data must be clear not only to you, but to an audience who does not share your understanding of the material.

Designing Tables

Tables employ a simple scaffold: horizontal rows present one category of information; vertical columns present another. We refer to the list of row labels along the left side of a table as the stub. The top of a table is called the boxhead, or column labels.

Tables may feature gridlines, or they may have only white space separating the cells of information. For tables that present plentiful information, gridlines may be needed for quick, clear understanding. Shading in alternating rows or columns can also promote easier reading. Software programs offer many bells and whistles to make tables more attractive and highlight specified data in the table, but simply formatted tables never go out of style, and even the software-challenged novice can create them.

Take a look at Table 3-1 on the next page. This table illustrates numerical data showing a simple breakdown of the the top five budget MP3 players on the market today. Also examine the table's parts, labeled in italics with arrows.

To create a table in Microsoft Word, click the Insert Table button on the standard toolbar, then drag to choose the desired number of rows and columns. Or, on the Table menu you can choose Insert, Table, and set the number of rows and columns in the dialog box. If you wish, you can add eye-catching format to your table, either by choosing Table AutoFormat on the Table menu, or manually by clicking the Format menu and choosing Borders and Shading. As you format, keep in mind that attractiveness is not the only criterion for tables in reports and presentations; it is essential to present the data clearly and guide the eye along the rows or

The label includes the table number and title.

Table 3-1. Top 5 Budget MP3 Players.

Boxhead. Shading the boxhead helps distinguish it from the data cells.

Brand	Storage Capacity	Suggested Retail Price
Apple iPod nano	2GB	\$129.00
Create Zen MicroPhoto	4GB	127.60
SanDisk Sansa e250	2GB	126.00
iriver elix	2GB	179.62
Apple iPod shuffle	1GB	67.00

Stub

Source: Nino Marchetti⁴

Source line. Note that the source line for this table ends with a Chicago (CMS) style footnote or endnote number. If you are using MLA or APA documentation style, your end reference should be parenthetical.

columns. Distinguishing the boxhead or stub from the data cells also enhances comprehension.

After you have created and formatted your table, use this checklist to ensure it includes:

- A label (e.g., Table 3-1. Top 5 Budget MP3 Players.)
- A boxhead, stub, or both, with clear, descriptive column/row headings
- A source line identifying where you got the data, ending with a superscripted note number (CMS) or parenthetical reference (MLA or APA). A web address should never appear in a source line.

Designing Figures

Graphs and charts enable readers to compare *quantitative* data visually, to detect patterns, to understand relationships and proportions, to trace changes over time or distance, to ascertain differences among groups, to comprehend the frequency of an occurrence, or to predict growth and decline. On the other hand, photographs and diagrams enable readers to identify objects, to understand spatial relationships, and to gain *qualitative* impressions of their subjects.

Like tables, figures can be simple or complex. But again, adherence to a few formal requirements, along with practice with your software, will result in complete and accurate illustrations that work with your text to get your information and message across to your audience.

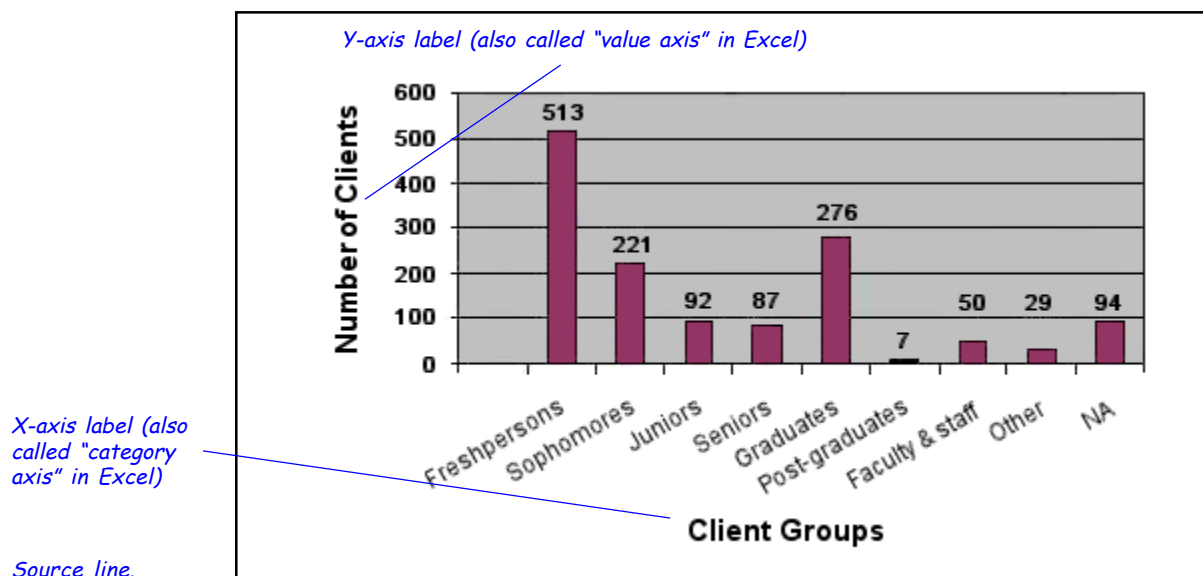
⁴ Nino Marchetti, "Top 8 Budget MP3 Players," <http://portables.about.com/od/mp3players/tp/budmp3play.htm>.

Bar Graphs

Bar graphs enable us to compare quantities by time, location or category. For example, the visual impact of Figure 3-1 might alert Writing Center administrators that tutors need training not only for helping first year students, but graduate students (this result might be unexpected, and in turn points out the next need: to identify what sort of help graduate students seek and train tutors to provide that help). Our simple bar graph compares ten variables (client categories). However, bar graphs are especially valuable for their ability to compare multiple data series. For example, ten client categories could be compared for three different semesters by clustering three bars in three colors (three semesters) for each client category. For a good example of a bar chart comparing multiple data series, see page 226 of the *Penguin Handbook*.

Label. Note that figures are numbered separately from tables.

Figure 3-1. The University of Kentucky Writing Center client base. Spring 2003 mid-term numbers and classifications.



Source: Created from data compiled by Judy Gatton Prats, University of Kentucky Writing Center, spring 2003.

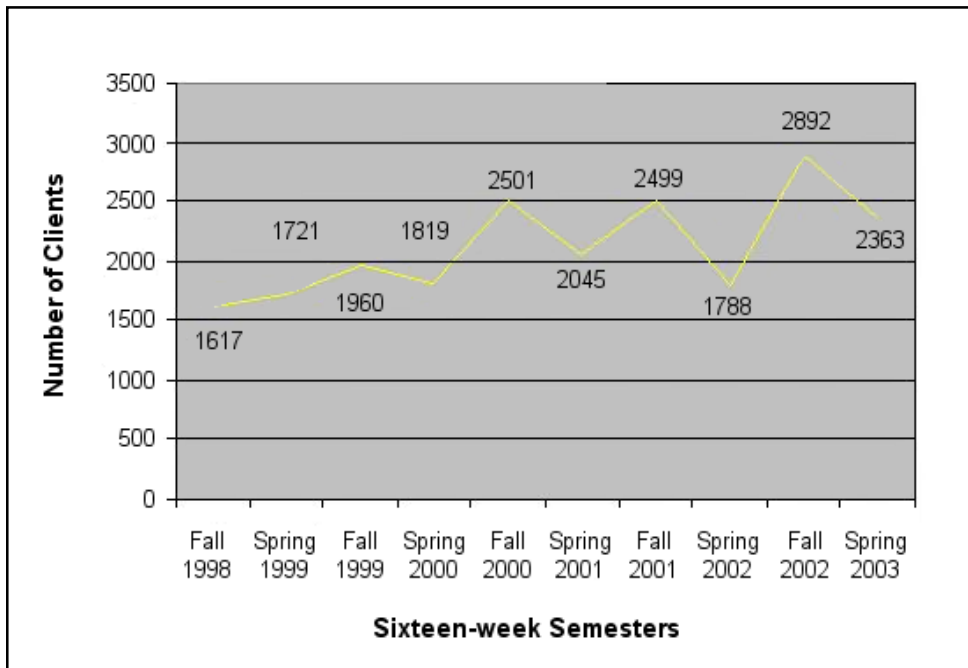
Bar graphs can also have horizontal, segmented, or bilateral bars. For examples of the ways these designs are used, check out the latest issue of your favorite business or money magazine, or study the first-rate visuals from any issue of *Consumer Reports*, considered by many graphics specialists as the "granddaddy" of informative, straightforward, and immensely useful illustration theory and design.

While bar graphs can compare *amounts* over time, sometimes it is the *changes*, the *trends* over time, that we want to emphasize in order to predict future trends. In that case, a line graph is the best choice.

Line Graphs

Line graphs show continuous sequences, usually trends through time. A line graph should not be used to compare non-sequential data (for that, use a bar graph). For our line graph, we will continue practicing with University of Kentucky Writing Center data, but since our last data was non-sequential, for our line graph we will display different data. The number of clients per semester over a four-and-one-half year period is sequential data. The simple line graph below shows a single data series: numbers of clients (quantitative variable) as they increase or decrease over nine semesters (time variable). Since its inception in 1983, the Writing Center has grown in facilities, staff, and client demand. Figure 3-2 below depicts the growth in client demand for the academic years 1998-2003.

Figure 3-2. University of Kentucky Writing Center client numbers. Fall and spring semesters, 1998 through spring 2003.



Source: Created from data supplied by Judy Gatton Prats, University of Kentucky Writing Center, 29 July 2003.

The line graph above illustrates enough information to suggest an overall trend in Writing Center numbers: they are, with the exception of one semester, moving steadily upward. Identifying this trend might help Writing Center administrators decide how many tutors to hire for the coming semester. Additionally, focusing on “oddball” variables (such as the drop in Spring 2002) might help administrators solve current problems (what caused the recovery in Fall 2002, and might that event suggest ways to boost client numbers next semester?). An even closer examination of Figure 3-2 reveals a further pattern that may prove important: fall

semester usage numbers tend to be higher than spring overall. We can then begin to *interpret* the trend: nervous first semester students may tend to use the Writing Center with decreasing frequency as they gain confidence in their second semester, or Greeks and other organizations may pressure new initiates to keep up grades, or we may need to research further to understand what is actually going on.

Figures 3-1 and 3-2 illustrate the required parts of a graph:

- A label, beginning with “Figure” followed by its number in the sequence of your figures, then a concise, descriptive title;
- An adequately titled **x-axis** (Excel calls it the category axis), also known as the independent variable axis or horizontal axis. This axis is also referred to as the time axis because this axis is usually the one depicting months, quarters, years, and so on. For their monthly reports to stockholders, stockbrokers depend on this axis to reveal a stock’s growth or decline over a certain number of days. Categories can also be represented along the x-axis, as in our Figure 3-1, where the x-axis is labeled *Client Groups* [revise if nec.]. Along the x-axis we can also insert labels for further identification of individual series;
- An adequately titled **y-axis** (Excel calls it the value axis), also known as the quantitative axis, and the dependent variable axis or vertical axis. The y-axis usually shows the units of measure;
- **Data series labels.** These afford more precision to back up our pictorial impression, informing the audience of exact numbers. Ask your instructor if he or she will always require data series labels. Get an opinion from your peer reviewer also. If labels create clutter by duplicating information, it is wise to leave them off;
- A source line; figure source lines follow the same rules as table source lines.

Optionally, a graph may also include a legend, or color key, a box within the illustration (usually to the right of the graph itself), identifying data series by color or pattern. However, if the series are already distinguished in the **x-axis**, a legend that only repeats this information is unnecessary.

Bar and line graphs compare and track separate quantities or events. When we want to compare percentages within a whole, the way to go is a **pie chart**.

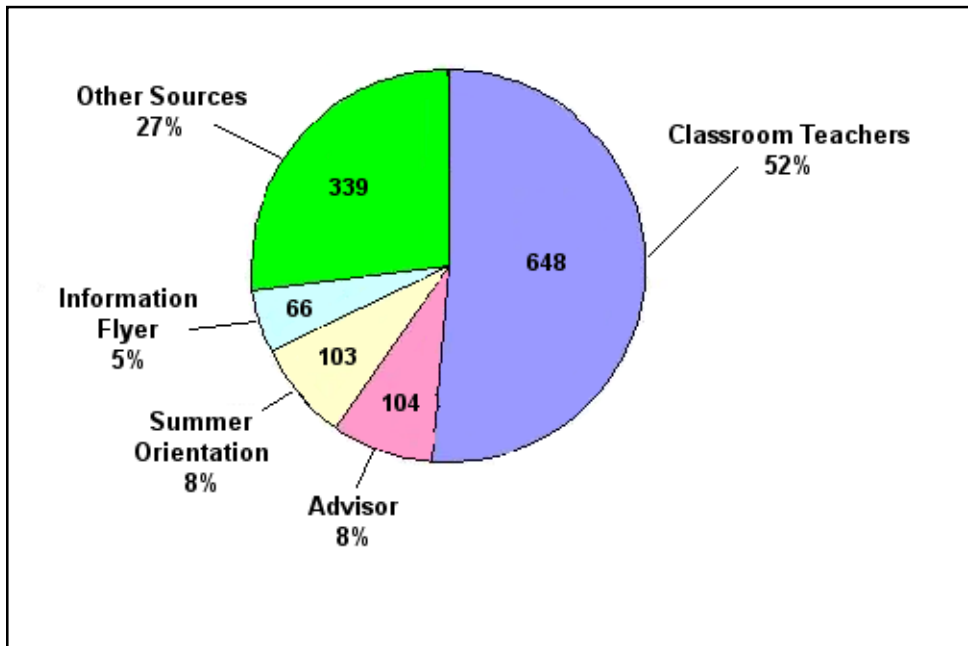
Pie Charts

Although we could translate our Writing Center client profile data into a pie chart, the point is not just to make charts and graphs, but to illustrate data effectively to communicate ideas. Since our focus is on bringing

more clients to the Writing Center, a meaningful question at this point is how people find out about the Writing Center. With a pie chart we can illustrate which methods of publicity attract the highest percentage of clients.

A pie chart is a circle divided into pie slice-shaped **wedges**. The circle or whole pie represents the whole amount of whatever we are discussing; each wedge represents a proportion of the whole. Thus, the percentages expressed on a pie chart must add up to 100%. When we want to emphasize relative percentages, rather than exact numbers or trends, pie charting does the job. Figure 3-3 below illustrates which publicity methods have brought in the highest percentages of Writing Center clients. In this case, 100% is *all* Writing Center clients.

Figure 3-3. The University of Kentucky Writing Center publicity. How clients learned about the Writing Center. Spring 2003 mid-term numbers.



Source: Adapted from Judy Gatton Prats, *University of Kentucky Writing Center, Spring 2003*.

Clearly, we can see from the pie chart above that more than half of all Writing Center clients learned about the Center's services from their teachers, but our *interpretations* of the chart may vary. Maybe teachers' encouragement is the best recruiting method and more teachers should encourage their students to try the Writing Center. However, another possible interpretation is that teachers are already informing their students about the Writing Center and we need to devise additional encouragements. To assess which interpretations are correct, we need to find out more. Often, we cannot expect a report illustration to answer a question;

instead it can help point out what else we need to learn before the question can be answered.

As with a graph, a pie chart should include a figure label and source line, and it should follow the same conventions for legibility and consistent format. Additional pie chart rules include the following.

- A pie chart should always break 100% of a whole into percentages to compare parts of a whole (e.g., of all people supporting government-funded medical care, what percent are under 30 years old, what percent are 30 to 60 years old, and what percent are over 60 years old?).
- Each pie chart should illustrate only one data series (e.g., all people supporting government-funded medical care). Two data series can not be compared in a single pie chart (e.g., opposers of government-funded medical care broken down by age can not be shown in the same pie); the result might look like a pie chart, but an attempt to interpret it would soon discover it had no meaning. To compare percentages of age groups supporting with percentages of age groups opposing, we need two pie charts placed near each other on the page.
- Keep the number of pie wedges manageable; twelve is the maximum number of wedges for a readable pie.
- Balance circle segments. Since most Westerners read left to right, and clock faces also move our eyes to the right, accommodate your audience's visual bias by placing the most important segment at the twelve o'clock position and opening it clockwise. Place your other segments around the pie in descending order of size unless you have a good reason for grouping them in some other way.
- Avoid distorting the data with 3-dimensional effects. The tilted perspective of a 3-D pie charts can give a misleading impression (also, when viewing others' 3-D pies, check the numerical labels to make sure your impressions are correct). If a 3-D pie is needed for a consistent look, tilt the perspective only slightly (In MS Word, you can control the angle by right-clicking the selected pie chart and choosing 3-D View). The more the tilt, the more misleading the impression.
- Always supply numerical labels for each wedge's percentage, preferably on the wedges themselves or in callouts (numerical labels sometimes occur in the legend only, but this method is not as clear at a glance).

Other Illustrations

Photographs, diagrams, flow charts, time lines and other visuals should also be presented as figures and given numbers in the figure sequence

(tables are the only illustrations not treated as figures). Provide a source line, as for all figures. When deciding whether to include a photograph or other picture, apply the same rules that you would for graphs and charts:

- Does the picture communicate a message? Pictures should never just decorate reports; they should always contribute significantly to your purpose.
- Are the important elements of the picture clearly visible? Often, photographs lose definition through pasting or printing, so be sure that pictures in your report print with clear focus and color contrast, and without distortion.

Specific guidelines for illustrating with pictures can be found in chapters 2 and 12 of the *Penguin Handbook*.

Integrating Illustrations and Text

Once you have created your illustrations, you must integrate them with your words, or text. Follow the **IDD** organizational plan:

- **Introduce** the table or figure by referring to it by its proper name of Table 1, Figure 1, and so on, and by summing up its contents in a thesis-like sentence or two.
- **Display** your illustration (insert it into the text).
- **Discuss** what your illustration shows about the data, particularly what is interesting or strange or unexpected. Why did you include this illustration? The answer to that question can help you frame your explanations and discussion for your audience's benefit. In other words, the final, necessary move you must make is to *interpret* the meaning of your illustration; do not expect your audience to perform this work for you. You must make sure they follow the idea you are illustrating and why that idea is important to your purpose.

Ethics and Illustrations

A final criterion we should all think about as we design and integrate illustrations is that of **ethics**. Although most of us would not intentionally use visuals to mislead audiences, we might unconsciously do so through carelessness or laziness. Therefore, we must pay careful attention to scale and proportion.

- If a graph is distorted, important anomalies may disappear or flatten out. For instance, unevenly divided, compressed or expanded numerical increments on the y-axis can distort bar and line graph information, making the significant seem insignificant, or vice versa.

- 3-dimensional pie charts tilt the circle, making the near wedges look bigger than they are and the far wedges look smaller. The more tilted the pie, the more the distortion.
- The numerical data used to create the illustration should always be included in clearly legible print on a graph or chart, and always double-checked for accuracy. Unless you generated the data yourself (in a survey you conducted, for example), it should always be credited in a source line with a reference, even if the source is also referred to in the text.

Final Words about Successful Illustrations

You can assist your audience's comprehension by making your illustrations simple and attractive. An illustration should communicate at a glance. Keys to attractive, orderly illustrations are contrast and balance, consistent format for all illustration's color schemes, type faces and placement in relation to the text, and freedom from GSPs and printing botches (beware—your spell checker may not catch typos within illustrations, but illustrations stand out on the page, making errors in them are especially embarrassing) Last but not least, following ethical practices with your illustrations, as with your text, helps your audience draw accurate conclusions and make valid decisions. Ethical practices are also pragmatic, since they demonstrate to your audience that you are a responsible and trustworthy professional.

REPORT HEADINGS

Organizing a business report involves some strategies familiar from your previous college writing. Once you have determined your purpose and collected your research, you should organize for a logical progression of ideas, using accepted conventions such as an introduction, body, conclusions, and source documentation. However, business reports include other conventions that are probably new to you—as a writer. As a reader, you have seen some of them, especially hierarchical headings that guide a reader through a progression of ideas and help the reader locate information in the report. The benefits of using headings effectively in business reports include your audience's better understanding of your message, and the likelihood that your audience will treat your ideas more seriously if they are organized and formatted according to professional conventions.

HEADING STRATEGY

Business reports are organized with *hierarchical* headings. "Hierarchic" may sound daunting, but it is a simple way to think about your headings that eliminates confusion about what kinds of headings to use and where to use them. Compare your headings with the hierarchy, or "pecking order," organizing people in a corporation. If you compare a report's title

Figure 3-4. Practical examples.

Use your textbooks themselves as examples of organizing with headings. The headings subdividing the chapters into parts in *Business Writing* and *The Penguin Handbook* are closely akin to those used in business reports. The colors in the *Penguin Handbook* headings are not usual in workplace reports, but note how big or bold headings divide major sections, and less important-looking headings subdivide parts within those sections. How do these headings help you follow, remember, and relocate the material in both textbooks? Would this be as easy to do if each chapter's material were presented in long unbroken blocks of text?

with a company's president or CEO, the hierarchy descends from there: at the *first level* stand a few vice presidents. Each vice president controls a separate division of the company. Beneath each is a *second level* of departmental directors who define the purposes and methods of the various departments. In turn, each department contains *third level* managers, each of whom supervise a staff. Business report headings are organized in exactly the same way.

This strategy has evolved in response to the ways businesspeople read, and respond to, reports. Many workplace environments present distractions and demand multitasking; therefore, organizing your report with hierarchic headings helps keep your audience on track by facilitating their understanding of your purpose and the progression of your ideas and evidence. Since business reports are not only read, but also discussed in meetings and implemented, frequent headings also help your audience quickly locate the exact information they need.

After the title, which appears on a title page, business report sections are organized by headings as follows.

Level 1 Headings

Level 1 headings signal the major sections of the report. Most simple reports have three level 1 headings: an introduction heading, a conclusions heading, and between them a heading for the body of the report. However, complex reports have more level 1 headings. For instance, the body of a proposal or feasibility study may divide naturally into two major (level 1 heading) sections: one for the problem and one for the recommendations. A very formal report includes additional "front matter" with level 1 headings, such as an executive summary, appendix, etc. (to learn what front matter your report needs, refer to chapter 3 in this book and your instructor's directions). All level 1 sections should be equal in rank (like vice presidents of a company); no level 1 heading should signal a subsection of another section.

Therefore, level 1 headings might be "Lexington's Water Controversy" and "Recommendations for Water Management," two separate sections

explaining a problem and proposing a solution. Level 1 headings should *not* be “Lexington’s Water Controversy and “The Case for Local Ownership.” This second organization is incorrect because the case for local ownership is one side of the water controversy; therefore it is a subcategory within the water controversy section—a level 2 heading).

Level 2 Headings

Level 2 headings provide a valuable tool for dividing major sections into their component ideas. Generally, business reports should include level 2 headings. Level 2 headings define subsections within a major (level 1) section. So, a major section headed “Lexington’s Water Controversy” (level 1) should describe the issues and establish that two contending positions exist. Then, still within this major section, two subsections (each with a level 2 heading) can explain the two sides in the controversy. For example, within the “Lexington’s Water Controversy” (level 1) major section might come a subsection headed “The Case for Local Water Ownership” (level 2), then another headed “The Rationale for Corporate Water Ownership” (also level 2). Each level 2 section is parallel to the other; both are part of the level 1 topic.

Level 3 Headings

Level 3 headings signal further subcategories within a level 2 section. Level 3 headings provide a valuable tool for breaking up a long level 2 section into easily digested pieces. Level 3 headings provide additional nuts and bolts to establish relationships between your ideas. Most long reports incorporate level 3 headings.

Level 4 Headings

Business reports often have no level 4 headings; however, if level 4 headings will help organize your material, you may use them in reports of any length. Level 4 headings signal further subcategories within a level 3 section.

Some additional general considerations for headings follow.

- No heading should directly follow another heading. Text should always follow a heading of any level. If you have a level 1 heading, describe the issue covered in the section before presenting the subsections.
- Another consideration in using business report headings is **parallelism**. Although you can add interest to your report by injecting variety into the phrasing of your headings, clarify and emphasize your report’s organization by making your headings harmonize in grammar, style and structure (for example, you might use descriptive fragments for first level headings, ques-

Figure 3-5. Sample document using 4 levels of heading.

LEVEL 1 HEADING

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Level 2 Heading

Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugait nulla facilisi. Nam liber tempor cum soluta nobis eleifend option congue nihil imperdiet doming id quod mazim placerat facer possim assum.

Level 3 Heading

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Level 4 Heading. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugait nulla facilisi.

Sans serif typefaces such as Arial and Helvetica work well for headings because they stay crisp and clear at large sizes.

Serif typefaces such as Times New Roman and Garamond work best in the body of the report because they are easy to read in long stretches of text.

tions for second level headings, and dependent clauses for your third level headings).

- **Parallelism** also covers the balance that should exist within a section. Any section that contains a subsection needs to contain at least two parallel subsections (e.g., if a level 2 section contains any level 3 subsections, it should contain at least two). In this way, report organization conventions resemble formal outline conventions.

HEADING FORMAT

The sample headings above demonstrate a standard way of formatting level 1, 2, 3 and 4 headings. This format's popularity derives from MS Word's default heading styles. Other heading formats can look just as professional, but using Word's heading styles has two advantages. First, it makes consistency easy; second and more importantly if your report has a table of contents, applying Word's heading styles enables you to auto-

matically (and easily!) create a table of contents to professional specifications, as will be explained below.

Whatever formats you use for your headings, observe these rules-of-thumb.

- For emphasis, headings can employ a different font from the report text, but their font should be businesslike (not flowery, playful or script). Ariel and Times Roman are always reliable fonts for a business report. Too many fonts will clutter a page, so stick with two fonts at most, your text font, and your heading font. (As in the level 4 heading example above, headings *within* the paragraph should be in the same font as the text.)
- You may choose font sizes that catch the eye and help break up the page, but avoid typeface larger than 18 point in a business report. In the examples above, the level 1 heading is 16 point. The level 2 heading is smaller at 14 point, and the level 3 heading is still smaller at 13 point. The text of the report should be 10 to 12 point. Notice that the sizes are graduated to emphasize the hierarchy; the level 1 heading looks more important than the level 2 heading, and so on. Headings *within* the paragraph (as is our level 4 heading) should be the same size as the paragraph text.
- Boldface and italics also adds interest to headings. As with the size, boldface can establish the importance of a heading, helping your audience distinguish the major sections from the subsections so they can understand relationships between the report sections.

Using Heading Styles to Build a Table of Contents

As mentioned above, using Word's pre-defined heading styles not only provides consistent, businesslike heading formatting, it allows you to create a table of contents with a few mouse clicks. To apply Word's heading styles, follow these instructions.

1. Type your heading, then press enter. Select the heading.
2. Click the dropdown arrow on the Style box. You will find the Style box on the toolbar (by default, it says "Normal").
3. When the dropdown menu appears, choose "Heading 1" for a level 1 heading, "Heading 2" for a level 2 headings, etc.

If you wish, you can then modify the appearance of your heading manually by changing the size, adding or subtracting boldface, and so on. Whatever the appearance, so long as the Style box shows that the correct style is applied, Word can work its table of contents magic.

To generate an automatic table of contents, follow these steps.

1. Make sure every heading carries the heading style corresponding to its level (to see what style is applied, click on the heading and check the Style box on the toolbar; it should say Heading 1, or Heading 2, and so on).
2. Place the cursor where you want to insert the table of contents (click to place the cursor, causing the cursor to blink).
3. From the Insert menu, choose Index and Tables. When the Index and Tables dialog displays, click the Table of Contents tab. Then click OK.
4. A table of contents will appear in your document. If you have accidentally placed it somewhere you did not intend to, choose Undo on the Edit menu, place the cursor correctly, and repeat steps 1-3.

Note: If your table of contents does not appear or contains errors, choose Undo on the Edit menu, then make sure the appropriate heading style is applied to each heading, and that no heading styles are applied to any of the regular report text.

Updating the Table of Contents

Revising your report may change your page numbering or headings, necessitating changes in your table of contents. To update your automatic table of contents:

1. Right-click on the table of contents. When the shortcut menu appears, choose Update Field.
2. In the dialog that appears, choose Update Entire Table. Your table of contents should now match your revised pagination and headings.

Headings in Other Media

This chapter's strategies for *organizing* with headings apply to report headings in all media. Whether your report takes the form of a web page, flyer or oral presentation, its headings should emphasize the organization of your report and the relationships between its parts. Their phrasing should be descriptive and concise (Synthetic Race Track Surfaces Reduce Fatalities, *not* Synthetic Tracks).

However, these guidelines for *formatting* apply to print reports of a formal or semi-formal nature. If you are formatting a report for a web site, a flyer, or a presentation with visuals, you have more latitude with heading fonts and colors. Chapters 2 and 11 of *The Penguin Handbook* provide a basic introduction to display design for online and color media. Whatever your medium, it remains a good idea to avoid the clutter of too

many fonts or too many colors, and to stick with fairly conservative fonts and colors unless your profession follows a different standard. In any case, be sure all fonts and colors remain clearly legible.

Exercises for Chapter 3

Exercise 3.1. Using a word processing program such as MS Word and the data provided below, create clearly, attractively formatted illustrations of the type indicated. Be sure that each of your illustrations has a figure number, descriptive title and source line.

A. Table.

This is the one-way travel itinerary for Ms. Carrie Adams, District Sales Manager, Emerald City Enterprises:

- Delta flight 393 leaves Cincinnati at 10:25 am on October 22 and arrives in New York at 2:02 pm.
- United Airlines flight 1462 leaves New York at 4:34 pm on October 22 and arrives in London at 5:47 am on October 23.
- British Midlands flight 608 leaves London at 7:30 am on October 23 and arrives in Paris at 9:32 am on October 23.

(Source: Delta Airlines, www.delta.com)

B. Bar Graph.

Four kinds of pizza were sold last summer at Rieti's. The quantities, broken down by month, are:

- June - 384 shrimp, 526 pepperoni, 473 mushroom, 201 anchovy
- July - 396 shrimp, 458 pepperoni, 502 mushroom, 209 anchovy
- August - 389 shrimp, 386 pepperoni, 515 mushroom, 198 anchovy

(Source: interview with Angelo Rieti, Oct. 31, 2004)

Exercise 3.2. Below are two sets of data about recent Kentucky Derby winners. For one set, a pie chart is the most effective presentation; for the other set, a line graph best conveys the data's meaning. Using a computer program such as Word or Excel, create 1 line graph and 1 pie chart, matching the data to its most effective graph or chart type:

A. Where are the Kentucky Derby winners of the last 5 years?

- Kentucky Derby winners from 1999 to 2004 retired in Kentucky as of 2004: Fusaichi Pegasus, Monarchos, Smarty Jones (3 of 6 horses)
- Kentucky Derby winners from 1999 to 2004 retired in Japan as of 2004: Charismatic, War Emblem (2 of 6 horses)
- Kentucky Derby winners from 1999 to 2004 that are still racing as of 2004: Funny Cide (1 of 6 horses)

(Source: This information qualifies as common knowledge.)

B. The Kentucky Derby winners from 1999 to 2004 and their winning race times (in minutes, seconds, and fractions of a second):

- 1999 - Charismatic - 2:03 1/4
- 2000 - Fusaichi Pegasus - 2:01
- 2001 - Monarchos - 1:59 4/5
- 2002 - War Emblem - 2:01
- 2003 - Funny Cide - 2:01 1/5
- 2004 - Smarty Jones - 2:04

(Source: "Kentucky Derby Winners," accessed on August 25, 2004 at <http://www.usatoday.com/sports/horses/triple/derby/derby-winners.htm>)

Exercise 3.3. Turn in drafts of your table, bar graph, line graph and pie chart. From these, your instructor will choose several of each type and to display for discussion. As you respond to each illustration, consider its effectiveness for its purpose. What is its purpose? In what ways does it succeed in fulfilling that purpose? Is there anything outstandingly successful about it? Second, what suggestions can you offer your classmate to make the illustration more effective? Questions to guide your evaluations include:

- Is the type of graph or chart appropriate for the data it illustrates?
- Is the data complete, accurate (as far as you can tell), and placed on the correct axis?
- Is the type clearly legible and not truncated or distorted?
- Are all bars, slices and lines clearly distinguishable from each other and from the background?
- Are the label and source line correctly handled?
- Is the illustration's appearance balanced, attractive and business-like (is its tone appropriate for its purpose)?
- Is the text free of GSP bloopers?

