4. It's fun to try new foods that I have never had before.

strongly disagree	*disagree*	*neither agree nor disagree*	*agree*	*strongly agree*

5. If offered something new, I would eat it only after I had asked what it was.

strongly disagree	*disagree*	*neither agree nor disagree*	*agree*	*strongly agree*

6. I think I am an adventurous person.

strongly disagree	*disagree*	*neither agree nor disagree*	*agree*	*strongly agree*

Comments or explanations

_____

_____

TASK TWENTY-TWO

If you have some data that you have gathered from your own research, write a data commentary about it. Alternatively, gather some data from your classmates on some aspect of their university experience that you think would be of interest. You could focus on topics such as housing and transportation, free time activities, their use of Skype or other forms of computer-mediated communication to stay in touch with others, their awareness of support services on campus, or any other suitable topic. Put together a very short questionnaire that is easy to distribute, complete, and analyze. A Likert-type questionnaire (in which choices are *strongly disagree, disagree, neither agree nor disagree, agree,* or *strongly agree*) would be a good choice. Keep it simple. Here is an example of a questionnaire on food preferences put together in one of our writing courses. The questionnaire was designed after the students had read an article entitled "The Use of Food Attitudes and Behaviors in Determination of the Personality Characteristic of Openness: A Pilot Study," which examined whether individual food attitudes and preferences were related to the personality characteristic of "openness" and willingness to experience new things.

1. Are you a graduate or undergraduate student?

   _____

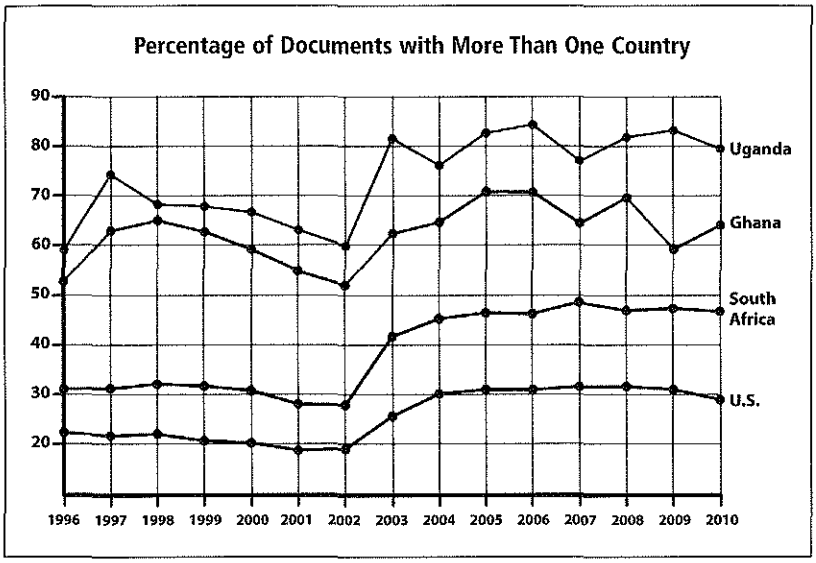
2. Which country did you grow up in? _____

What is your reaction to the following? Circle one response.

3. I mostly eat food from my own culture that I am familiar with.

strongly disagree	*disagree*	*neither agree nor disagree*	*agree*	*strongly agree*

FIGURE 13. Papers Published with Authors from More than One Country



SCImago. (2007). SJR — SCImago Journal & Country Rank. Retrieved from www.scimagojr.com.

TABLE 14. Country Rankings for Publications in *Elsevier Journals* 1996–2010

Country	Citable Documents	Citations	Self-Citations	Citations per Document	H Index
1 United States	4,530,542	87,296,701	40,680,446	19.08	1,139
2 China	1,508,308	5,614,294	2,948,990	5.17	279
3 United Kingdom	1,277,760	21,030,171	5,139,059	16.39	689
4 Japan	1,315,158	14,341,252	4,411,776	11.08	527
5 Germany	1,212,919	17,576,464	4,712,414	14.86	607
6 France	885,310	12,168,898	2,880,568	14.21	554
7 Canada	678,129	10,375,245	2,086,045	16.49	536
8 Italy	652,700	8,407,658	2,004,523	13.59	477
9 Spain	486,926	5,498,629	1,438,981	12.26	377
10 Australia	431,908	5,940,125	1,299,736	14.98	413
11 India	437,455	2,590,791	891,790	6.62	227
12 Russian Federation	439,232	2,121,202	649,236	4.86	262
13 Netherlands	371,845	6,628,024	1,157,260	18.78	465
14 South Korea	365,246	2,710,566	636,127	9.12	258
15 Brazil	273,053	1,970,704	636,353	8.91	239
16 Switzerland	265,772	5,123,829	736,533	20.49	466
17 Sweden	267,358	4,657,464	801,285	17.95	410
18 Taiwan	264,035	1,957,112	496,308	8.86	209
19 Poland	231,790	1,553,359	428,883	7.32	232
20 Belgium	203,276	3,064,642	479,902	16.04	360
21 Turkey	190,023	1,110,749	317,389	6.93	158
22 Israel	163,727	2,484,606	383,457	15.58	340
23 Austria	139,976	1,969,446	292,996	15.02	310
24 Denmark	140,234	2,563,344	392,209	19.14	338
25 Finland	148.239	2.277.054	392.301	16.64	318
26 Greece	134.246	1.227.591	234.462	10.55	216
27 Hong Kong	124.183	1.347.442	221.574	11.97	238
28 Mexico	120.830	926.074	206.334	8.92	193
29 Norway	116.118	1.618.371	275.923	15.63	277
30 Czech Republic	117.453	861.365	215.673	8.26	195
31 Iran	115.044	434.990	179.227	7.20	101
32 Singapore	104.747	988.263	146.276	11.02	209
33 New Zealand	94.462	1.209.745	203.690	13.91	238
34 Portugal	95.994	873.105	183.305	11.35	191
35 Argentina	90.135	814.586	185.945	9.85	183

The H index is a reflection of both the number of publications and the number of citations per publication.

SCImago. (2007). SJR — SCImago Journal & Country Rank. Retrieved from www.scimagojr.com.

Language Focus: Prepositions of Time

The commentary in Task Twenty made few references to specific points at a particular time. However, it would have been possible to do so by including one or two sentences like these.

> *From* the 10th to the 45th minute, hand temperature increased.
>
> *During* the first ten minutes, hand temperature dropped.
>
> Hand temperature fluctuated *throughout* the period.
>
> Hand temperature remained over 35°C *from* the 25th to the 50th minute for the PCM condition.
>
> Hand temperature remained under 34°C *until* the 20th minute for the PCM condition.
>
> The highest temperature occurred *in* the 45th minute for the PCM condition.
>
> *In* the last ten minutes, hand temperature decreased for both conditions.
>
> *After* 50 minutes had passed, hand temperature began to decrease.
>
> *At* time 0, hand temperature for both gloves was 33°C.

TASK TWENTY-ONE

Write a suitable data commentary for Table 14 (page 184) or Figure 13 (page 185). You do not need to use both data sets. Find current data to supplement the information if you can. Can you speculate about the future? If you are interested in countries or regions other than those given here, go to the source of this data (www.scimagojr.com/index.php) and make some other selections. Alternatively, if you are familiar with H factors, explain for a new scholar how they are calculated, using information from the table.

TASK TWENTY

The sentences in this commentary expand on the information given in Figure 12 on page 181. They are not in the correct order. Rearrange them in an appropriate order. Place 1 in front of the first sentence, 2 before the second, and so on. Work with a partner.

—— a. Hand temperatures for PCM were consistently higher during the 45-minute exercise period, reaching a maximum temperature of just under 36°.

—— b. As can be seen, after an initial decrease, hand temperature increased in each condition.

—— c. However, the increase in temperature was more pronounced for the PCM condition.

—— d. The PCM gloves were designed to maintain a steady and comfortable hand temperature.

—— e. Figure 12 displays the absolute skin temperature of the hand during exercise for both the PCM and NFM conditions.

—— f. When exercise stopped at 45 minutes, hand temperatures for the two conditions fell at approximately the same rate.

—— g. Thus, the PCM glove performance was inferior to that of traditional NFM and would not necessarily lead to enhanced goalkeeper performance.

—— h. An overall increase in temperature is inevitable since goalkeeping gloves of any kind prevent heat loss and evaporation, leading to discomfort and a negative effect on performance.

—— i. However, as can be seen, the PCM gloves did not perform as intended.

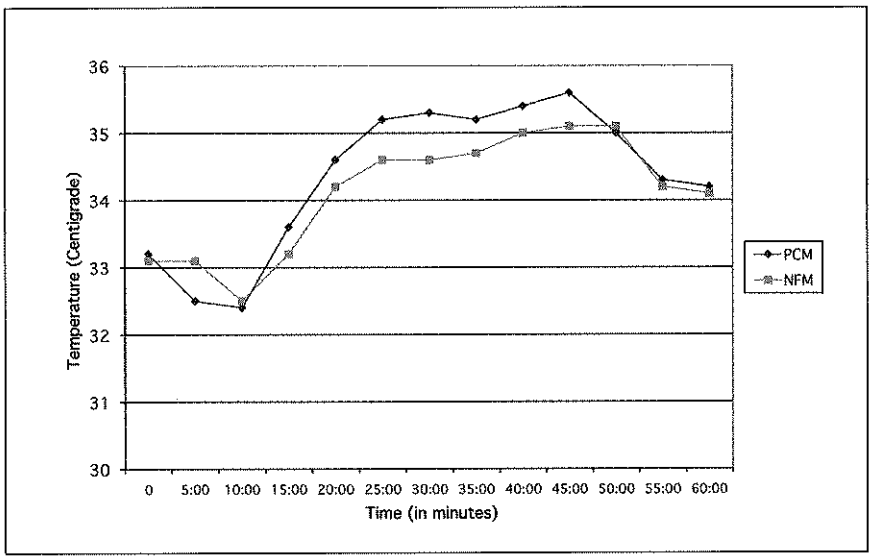
What can you conclude about how this data commentary is organized?

Dealing with Chronological Data

The graph in Figure 12 has a time dimension. Such data often presents writers of data commentary with an organizational problem. On the one hand, writers want to follow the general-specific rule. On the other, they may want to respect the chronological order, that is, start with the earliest and finish with the latest. Usually, it works best to try to combine both strategies.

Figure 12 provides data on hand temperature for two different kinds of soccer goalkeeping gloves, which are very important for goalkeepers. The two sets of gloves were made of normal foam material (NFM) and phase control material (PCM), the latter being designed to change its physical state from solid to liquid to gas over a range of temperatures.

FIGURE 12. Changes in Mean Hand Temperature for PCM and NFM Glove Conditions during Exercise



Based on data from Purvis and Cable, 2000.

downward trend	peak	low point	sharp rise
steep fall	rise	level off	fall off
remain steady	spike	increase	decline

1. Humor as character strength ages 61–65 for males:

   _____

2. Humor as character strength ages 26–45 for females:

   _____

3. Humor as character strength ages 65–70 for males:

   _____

4. Humor as character strength ages 60–65 for females:

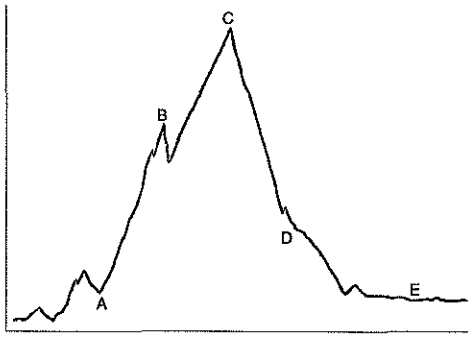
   _____

5. Humor as character strength ages 20–50 for males:

   _____

Now look at this graph from the physical sciences in Figure 11 and choose a term from the list that best describes each letter. Some terms may be used more than once.

FIGURE 11. Hard Sciences Graph



minimum	local dip/local minimum	local maximum
spike	maximum/peak	level off
kink	linear increase	

A. _____ D. _____

B. _____ E. _____

C. _____

In what way are the terms for the physical sciences different?

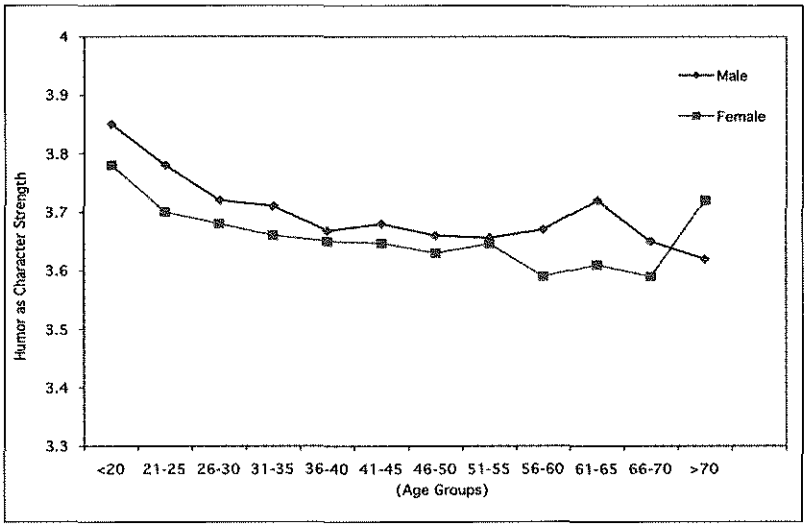
Jiyoung has produced an excellent draft of a data commentary. But, look at the last paragraph again. What changes would you suggest? Do you have any suggestions for changes in tense usage?

One feature of Jiyoung's data commentary in Task Eighteen is that she made little explicit reference to the lines on her graph, as many writers do when dealing with historical or technical data. As you know, graph lines have a special terminology. In fact, they have somewhat different terminologies depending on the discipline.

TASK NINETEEN

Choose a term from the list on page 180 that you think best describes the graph in Figure 10 at each of the given ages.

FIGURE 10. Sense of Humor as Character Strength for Different Ages



Based on Ruch et al., 2010.

The observed and predicted CO_2 levels for 24 hours in a commercial building ❶ _____ in Figure 9. The actual CO_2 concentrations were ❷ _____ directly from sites in the building by the CO_2 Trapping Method. The predicted concentrations were calculated by using one of the available indoor air quality models. In this case the "fully stirred and conservative reactor with internal source model" ❸ _____ since it was assumed that the air was completely replaced and mixed with fresh air every hour, and there was no degradation.

❹ _____ shows that the predicted CO_2 concentrations increase sharply after 8 AM and ❺ _____ steeply after 6 PM. This is because the CO_2 levels were ❻ _____ to be dependent on the number of people in the building since people produce CO_2 as a result of respiration. However, the model overestimates the CO_2 levels during the occupancy periods (8 AM–5 PM) and ❼ _____. The lower CO_2 levels found in the occupancy period ❽ _____ several factors such as the presence of plants, which generate oxygen, while using CO_2. ❾ _____, the predicted levels are lower than the ❿ _____ during the vacancy period because the model assumed that nobody was in the building after 6 PM and that the air was fully mixed. In fact, there might be overtime workers in the building after 6 PM or the ventilation rate ⓫ _____ during the vacant period. Although the "fully stirred and conservative reactor with internal source model" tends to overestimate or underestimate ⓬ _____ occupancy, overall, it performs well with a coefficient of 0.9 ($r = 0.9$).

Jiyoung Lee, minor editing

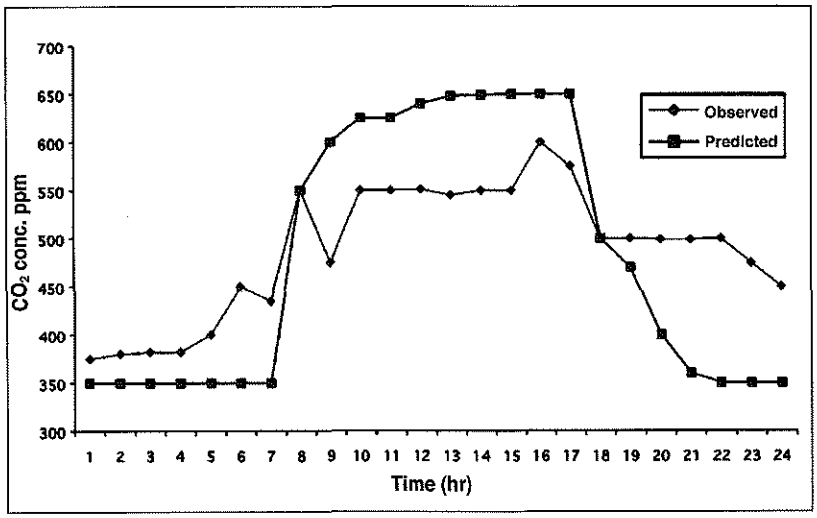
Dealing with Graphs

So far we have primarily focused on tables. Discussions of graphs essentially follow the same principles as those for tables, with one major difference. Much of the vocabulary used to comment on graphs is quite different.

TASK EIGHTEEN

Look at the graph in Figure 9 and the data commentary on page 178 that was written by one of our students. We have omitted certain words and phrases. Can you complete the passage? Work with a partner.

FIGURE 9. Comparison of the Actual CO_2 Levels with the Model Predictions



Now that you have analyzed a data commentary text in terms of the purpose of each sentence and the qualifying words or phrases, you are ready to write your own commentary of data that can be interpreted in several ways.

TASK SEVENTEEN

Imagine you are a teaching assistant for an introductory Biology course with a total enrollment of 150. Exams are usually given in the evening to avoid losing valuable class time. Because some students have evening commitments, a make-up (alternative) exam is always given. The professor has noticed a big discrepancy between the scores of the last regular exam and those of the make-up exam. Because you administered the last make-up exam, you have been asked to offer an explanation. You have prepared the data in Table 13. Write a data commentary either as a report or an email message to your professor.

TABLE 13. A Comparison of the Regular and the Make-Up Exam

	Regular Exam	Make-Up Exam
Average score (points out of 100)	86	72
Time administered	Wednesday, 7:00 PM	Friday, 4:00 PM
Difficulty of questions	average	average
Number of students	125	25
Proctor	professor	teaching assistant
Two sample questions and answers discussed right before the exam	yes	no, considered unnecessary
Room temperature	about 20°C	about 28°C

TASK SIXTEEN

Read an extended version of the commentary on the Japanese scientists from Task Seven. Label each sentence according to its function and list the qualifying words or phrases in the chart. The first one has been done for you.

❶ Slightly more than three-fourths of the scientists surveyed adopted writing strategies that involved the use of their first language. ❷ Moreover, less than a quarter appear capable of writing directly in English. ❸ Overall, the figures would appear to suggest that most Japanese scientists have difficulties and frustrations when preparing papers for English-medium journals. ❹ Given the well-known differences between scientific English and scientific Japanese (Okamura, 2002), the heavy reliance on Japanese is somewhat unexpected. ❺ This phenomenon probably reflects a lack of confidence in English. ❻ Nevertheless, all the findings need to be treated with some caution since they are based on what scientists said they did, rather than on direct observations of their writing. ❼ Case studies of actual writing practices would be one possible direction for further research.

Sentence	Purpose	Qualifying Words or Phrases
1.	highlighting statement	slightly
2.		
3.		
4.		
5.		
6.		
7.		

Language Focus: Dealing with Unexpected Outcomes or "Problems"

If your data is not quite what you expected, your first reaction might be to ignore the data that does not fit. Instead you should try to find a way to discuss the data. In fact, such a discussion can help you position yourself as knowledgeable, if you are able to offer a brief explanation and perhaps suggest what work could be done in the future to overcome problems with your data. The verb phrases in these example sentences may be helpful as you discuss imperfect data.

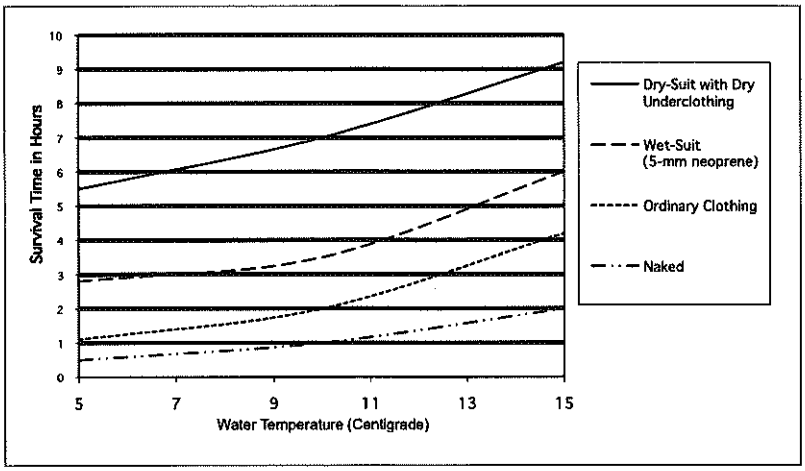
> The difference between expected and obtained results *may be due to* fluctuations in the power supply.
>
> This discrepancy *can be attributed to* the small sample size.
>
> The anomaly in the observations *can probably be accounted for by* a defect in the camera.
>
> The lack of statistical significance *is probably a consequence of* weaknesses in the experimental design.
>
> The problem with dating this archaeological site *would seem to stem from* the limited amount of organic material available.

Now notice how *due to* is used in these sentences. Only the first three uses are definitely correct.

1. The error may be due to improper installation of the program.
2. The error may be due to the fact that the program was not properly installed.
3. The error may be due to the program not being properly installed.
4. ⚐ The error may be due to the program was not properly installed.
5. ⚐ The error may be due to not properly installing the program.

Sentence 4 is not well formed, while Sentence 5 is doubtful. While *due to* can sometimes be followed by an *-ing* clause, Sentence 5 is problematic because of the lack of a clear agent. Notice that in the correct statements the verb phrase is followed by a noun phrase. If necessary, as in Sentence 2, a noun phrase like *the fact that* could be added, even though *due to the fact that* is considered awkward by some instructors. Nevertheless, sometimes this is the only solution.

FIGURE 8. Survival Time in Water of Different Temperatures When Wearing Different Types of Clothing



Based on Noakes, 2000.

The figure shows how long people can survive in water when they wear different kinds of clothing that have different levels of insulation. Clothing has an influence on how long a person can survive. The effect of clothing is greater at warmer temperatures. A person wearing no clothing in cold water can survive only less than one hour.

The data you are working with may not always be perfect. In other words, it could contain some anomalies, or there may be discrepancies between the actual findings and the expected ones. Additionally, there may be obvious limitations in the study for which the data was collected. If any of these problems or limitations exist, usually the best strategy is to make a comment about them. Try to explain why these unexpected results or errors occurred. Think back to Sam in Unit One. As you may recall, Sam was faced with a problem concerning the validity of his data. By bringing the problem out in the open, Sam was able to present himself as a perceptive and intelligent scholar.

Concluding a Commentary

Concluding a commentary requires some original thinking. In fact, you may recall that the conclusion of the commentary on internet misbehavior did not merely stop, but offered the author's view that misbehavior will persist.

> ⑩ This problem will likely continue until reasons that students engage in this behavior are clearly identified.

The discussion of time to degree also concluded with some speculation about the reasons for differences in time to PhD completion.

> ⑦ Expectations that are "unmet, unclear, or unarticulated" (Barnes, 2010) could influence the length of time it takes to earn a doctorate.

One of the challenges in writing the conclusion is believing that you have something that is worth saying and that it reasonably follows from the data. In this regard, research has shown that strong writers engage in some reasonable speculation about the meaning of their findings, while weak writers avoid doing so, often due to concerns about being wrong (Wolfe, 2011). Thus, to position yourself as knowledgeable and capable, you may want to consider including some of these elements in your conclusion.

- explanations and/or implications of the data (usually required)
- explanation of the reasoning process that led to the conclusions (if appropriate)
- unexpected results or unsatisfactory data (if necessary)
- possible further research or possible future predictions (if appropriate)

TASK FIFTEEN

Work with a small group and discuss how to revise the draft data commentary for Figure 8. Then re-write it. The grammar of the commentary is fine. However, you may want to think about the points discussed in the commentary, the reference to the figure, phrases that can link the discussion to the figure itself, and the strength of the conclusion.

Here are the instructor's comments on the commentary. The instructor is a professor in Comparative Higher Education. Mark the comments as reasonable (R) or unreasonable (U) and discuss your choices with a partner. How would you edit the passage to reflect your reactions? There are no absolutely right or wrong answers.

___ 1. *I am curious about your focus on the fact that international students take longer to finish their PhDs. This seems a bit negative. You could just as easily focus on the fact that there is not a lot of difference.*

___ 2. *What do you think about the data on education? The numbers for education look really different from the others. I think you should address this.*

___ 3. *It is strange that you do not mention the English language factor. At least at first sight, this would seem to suggest that this would matter a lot.*

___ 4. *The median of almost 8 years from entering a PhD program to completing the PhD seems really long. What factors could be contributing to this? This seems a lot longer than what is typical for our program. Most programs here say the PhD program is about 5 years.*

___ 5. *What are you suggesting with your point about advisors? Are you saying that international students have more difficulty than domestic students? Do you have any concrete evidence?*

TABLE 12. Median Years to Doctorate for Selected Doctoral Programs in the United States

Time to Degree and Demographic Characteristics	All Fields		Life Sciences[a]		Physical Sciences[b]		Social Sciences[c]		Engineering		Education		Humanities		Other Non-Science & Engineering Fields	
	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number
Years since entering graduate school	7.7	44,667	7.0	10,321	6.7	7,594	7.7	6,958	6.9	7,013	12.3	5,811	9.5	4,403	9.7	2,567
All doctorate recipients[d,e]																
Sex																
Male	7.6	23,810	7.0	4,668	6.7	5,345	7.9	2,907	6.9	5,510	12.6	1,932	9.6	2,121	9.7	1,327
Female	8.0	20,847	7.0	5,651	6.5	2,246	7.7	4,049	6.7	1,501	12.3	3,879	9.5	2,281	9.9	1,240
Citizenship																
U.S. citizen/ permanent resident	7.7	30,800	6.7	7,434	6.2	4,246	7.7	5,335	6.3	3,043	12.8	5,276	9.7	3,726	10.7	1,740
Temporary visa holder	7.7	13,689	7.7	2,847	7.3	3,309	8.2	1,598	7.3	3,941	9.0	515	9.3	660	8.7	819

[a] Includes agricultural sciences/natural resources, biological/biomedical sciences, and health sciences.
[b] Includes mathematics and computer and information sciences.
[c] Includes psychology.
[d] Includes those of unknown citizenship.
[e] Includes only cases with a valid year of entry into graduate school.

From NSF/NIH/USED/USDA/NEH/NASA, 2009 Survey of Earned Doctorates.

TASK THIRTEEN

Write a full data commentary for Table 10. Begin with a location element and summary. Create whatever highlighting statements you want. In Task Eleven, Students A, B, and C offered no cautious explanations of the results. When you write your commentary, be sure to do so. Review the two Language Focus sections on qualifications and strength of claim (pages 156–157 and 159–163).

TASK FOURTEEN

Examine Table 12 on page 170 and study the commentary. You should be able to analyze its organization by now.

❶ Table 12 shows the median number of years to complete a doctoral program for both U.S. and international students (indicated by temporary visa status). ❷ As can be seen, U.S. students in most fields on average complete doctoral programs in less time than international students. ❸ The difference in median years to completion ranges from a relatively low 0.4 years in the humanities to a high of one year in the life sciences. ❹ The consistent difference in time to degree is not fully understood at present. ❺ However, one key factor may be the students' relationships with their advisors. ❻ Advisors typically expect their advisees to work independently, an expectation that might run contrary to the expectations of international student advisees, who may expect their advisors to give explicit input with regard to how to navigate their way through the doctoral program. ❼ Expectations that are "unmet, unclear, or unarticulated" (Barnes, 2010) could influence the length of time it takes to earn a doctorate.

A series of such statements seems to imply that the reader is unable to read the numbers. Instead we might opt for comparative statements like the following.

> Fewer girls than boys reported that their parents decide matters of faith.
>
> More boys than girls reported that their parents decide matters of faith.
>
> Not as many boys reported that their parents decide matters of faith.

One problem here is the vagueness of *more* or *fewer*. How much, for example, is "more"—2%, 10%, or 50%? We could more exactly write this.

> Eight percent more boys than girls reported . . . .

Look at the information in Table 11 about cell phone use while riding a bicycle.

TABLE 11. Bicycle Commuters' Perception of Danger while Using Mobile Phones

	Men n = 1000	%	Women n = 1000	%	p value*
Not at all	51	5.1	18	1.8	<0.001
Slight	158	15.8	73	7.3	
Moderate	426	42.6	469	46.9	
Quite a bit	248	24.8	333	33.3	
Extreme	117	11.7	107	10.7	

Based on Ichikawa and Nakahara, 2008.

In a data commentary, it would be possible to make these observations.

a. Almost twice as many women as men reported . . . .
b. A smaller percentage of women reported . . . .
c. Nearly three times as many men reported . . . .
d. Nearly the same number of men and women . . . .

These observations are also possible.

e. The percentage of men who thought there was only a slight risk was over twice that of women
f. The percentage of men who thought there was only a slight risk was over two times higher than that of women
g. The percentage of women who thought there was quite a bit of risk exceeded that of men.

Student B

Table 10 shows the percentage of adolescents and parents who are solely responsible for important decisions in the lives of adolescents. As can be seen, decision-making patterns are very similar for both boys and girls for all types of decisions except one. Specifically, more boys than girls report parental involvement in clothing decisions. In this category, 45% of the boys reported sole parental decision making, but only 32% of girls did so.

Student C

Table 10 shows the decision-making patterns of parents and adolescents in relation to key aspects of adolescents' lives. As can be seen, overall, parents are similarly involved in decisions for both boys and girls, but the level of involvement differs depending on the type of decision. The percentage of sole parental decision making is highest for the amount of allowance, the time of curfew, and religion. The lowest percentages were reported for decisions regarding the child's friends and spending of money. Television viewing is the one area where similar percentages of children and their parents make decisions.

Language Focus: Comparisons

There is another kind of qualification that can be usefully employed in data commentary. We can illustrate this by looking again at the data on parental restrictions in Table 10. We have already said that it may not be a good idea to simply repeat the data in words. Therefore, it may not be a good strategy to make a series of statements like this example.

> Fifty-six percent of girls report that their parents decide matters of faith in contrast to 64% of boys.

TABLE 10. Decision-Making Patterns of U.S. Parents and Adolescents (N = 6327, roughly similar numbers of boys and girls)

Adolescent Child Is Sole Decision-Maker	Total Sample (%)	Girls (%)	Boys (%)
Amount of allowance	2	2	3
Clothes	28	29	27
Spending	50	50	51
Friends	53	52	54
Curfew	2	2	3
Television	42	44	41
Religion	23	22	26
Parents Are Sole Decision-Makers			
Amount of allowance	91	91	92
Clothes	39	32	45
Spending	27	25	29
Friends	30	28	31
Curfew	88	88	88
Television	43	41	45
Religion	60	56	64

Based on Lundberg et al., 2009.

Student A

Table 10 shows who makes important decisions in key aspects of adolescents' lives. As can be seen, parents alone are responsible for the amount of allowance for 91% of girls and 92% of boys. Another category where parents exert a lot of control is curfew, as revealed by 88% of all adolescents. Most decisions about religion are also made by parents. In this category, however, there is a difference between boys and girls. Fifty-six percent of girls report that their parents decide matters of faith in contrast to 64% of boys. However, nearly one-fourth of the adolescents make decisions about religion on their own.

Organization

Data commentaries are usually ordered from general to specific. We saw this pattern, for example, in the short commentary on the Japanese scientists in Task Seven. Decisions about organization, however, become more complex with comparative data. Consider the following case: You are taking a graduate course in the social sciences. You have been studying differences in parental behavior with regard to their adolescent children. Your instructor suggests that, contrary to popular belief, American parents may be stricter with their teenage sons than they are with their daughters. You are given Table 10 on page 166, which is based on a survey conducted among suburban families in a midsize midwestern U.S. city, and asked to prepare a short commentary on the main findings.

TASK TWELVE

The information in this task contributed to a published study of how children begin to make choices regarding the time spent on doing homework and watching television, as well as deciding how to spend their money. Read the incomplete data commentaries based on Table 10 written by three students. The commentaries (on pages 166–167) include only the location statements and some highlighting statements. What are the differences among the three? Which do you think makes the best highlighting statement? Why?

6. Several studies have (identified / alluded to) the importance of cultural sensitivity as a precursor to culturally appropriate medical care.
7. Changes in ambient temperature may have (influenced / distorted) the test results.
8. Previous studies (failed / forgot) to consider the change in the fiber interface during the cracking process.
9. As shown in Figure 3, trade liberalization has (stimulated / encouraged) economic growth in developing countries, leading to rising incomes.
10. Figure 12 (depicts / clarifies) the relationship between these two systems.

TASK ELEVEN

Now, try to soften the claims in any four of the items. Make the sentences academically respectable and defensible.

1. Tall people have higher incomes than short people.
2. Economic sanctions are ineffective.
3. Alcohol causes brain damage in teenagers.
4. Passive smoking causes cancer.
5. Recycling is the best solution to the waste disposal problem.
6. Physical exercise prevents depression.
7. Deep tunnels are safer and less vulnerable to earthquake shaking than are shallow tunnels.
8. Private schools provide a better education than do public schools.

This sentence is an example of the writer being "confidently uncertain," but perhaps it is overdone. One of the qualifying phrases could probably be omitted to avoid excessive qualification. Too much caution may result in your saying almost nothing, as in the following example from a journal in Anthropology.

> It could be concluded that some evidence seems to suggest that at least certain villagers might not have traded their pottery with others outside the community.

Examples of extremely, possibly overly cautious claims in the hard sciences can even be found.

> Studies have found that quantum entanglement may play a role in some types of magnetoreception with certain molecules, but more work is needed to explore this phenomenon.

In some cases, these overly hedged statements may be constructed in response to reviewer criticisms.

TASK TEN

Underline the verb that makes the weaker claim.

1. **The results (indicate / establish) that there is a link between smoking and lung cancer.**
2. **The survey results (suggest / show) that the reuse of sentences or sections from one's previously published papers is a questionable practice.**
3. **The latest series of studies (question / challenge) the value of including consumer expectations in the assessment of service quality.**
4. **The results given in Figure 4 (validate / support) the second conclusion that certain bacteria can reduce arsenic (As) levels in groundwater.**
5. **Baseline conditions have been (assumed / shown) to be accurate at the time of the surveys.**

A third alternative is to add exceptions.

With the exception of / Apart from / Except for } those enrolled in specialized programs, children living in poverty do poorly in school.

Weaker Verbs

Finally, claims can be reduced in strength by choosing a weaker verb. At the beginning of this unit, you compared these two claims.

> Many studies have concluded that excessive credit growth caused the global financial crisis. (stronger)
>
> Many studies have concluded that excessive credit growth contributed to the global financial crisis. (weaker)

As indicated at the beginning of the unit, your choice of verb can indicate your level of commitment to your claim.

Combined Qualifications

Sometimes several types of qualifications are combined in order to construct a defensible claim, as shown in this example. We start with a strong claim.

> When people have too many choices, they choose the safest one.

Now see what happens when the following qualifications are added.

+ *according to some recent research* (adding distance)
+ *in some cases* (weakening the generalization)
+ *tend to* (indicating likelihood)

So we now have this sentence.

> According to some recent research, in some cases when people have too many choices, they tend to choose the safest one.

Here are a few examples.

Based on the limited data available, . . .
According to this preliminary study, . . .
Based on previous surveys, . . .
According to some earlier studies, . . .
In the view of many scholars, . . .
} the African continent has relatively strong wind power potential in parts of the west, south, and east.

Softening Generalizations

Writers sometimes want to make generalizations. These can be effectively used either to start developing a point for which support is later provided or drawing a conclusion from different pieces of information. Importantly, generalizations should be grounded in some reasonable evidence and stated cautiously so that they will be accepted by readers.

Three classic verbs for carefully stating a generalization are the verbs *appear (to)*, *seem (to)*, and *tend (to)*.

Children living in poverty *appear to* do poorly in school.
Children living in poverty *seem to* do poorly in school.
Children living in poverty *tend to* do poorly in school.

If you remove *appear to*, *seem to*, or *tend to*, the result is a very strong claim that suggests all poor children will be unsuccessful.

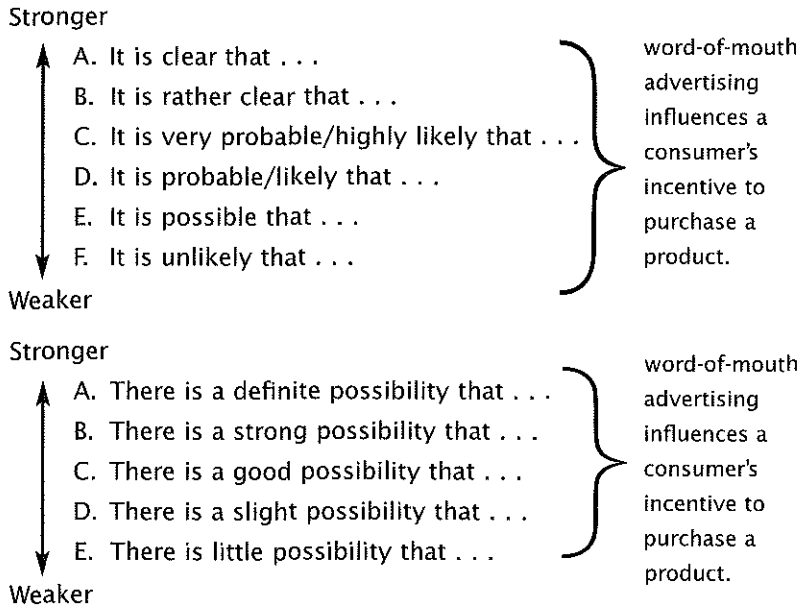
Children living in poverty do poorly in school.

By using *seem* or *tend*, you can avoid criticism from readers who may be aware of some poor children who are doing well.

Another way to make a generalization more acceptable is to qualify (limit) the subject.

Many children living in poverty do poorly in school.
A majority of children living in poverty do poorly in school.
Some children living in poverty do poorly in school.
In most parts of the world children living in poverty do poorly in school.

In these examples, the phrases weaken in strength.



Distance

Distance is another way of indicating your stance. This involves removing yourself from a strong—and possibly unjustified—claim. Notice how Sentence A leaves no room for doubt, which may be too strong.

A. Health education has a positive impact on a patient's quality of life.

B. Health education seems to have a positive impact on a patient's quality of life.

C. It seems that health education has a positive impact on a patient's quality of life.

D. It would appear that health education has a positive impact on a patient's quality of life.

An alternative strategy to distance yourself from the data is to attribute your point to someone else or to other studies, which can indicate that it is "soft."

the other speedometer in the set. ❺ Whether or not this small difference in average response time can be attributed to the location of the speedometers on the instrument display panel was not possible.

MICUSP File IOE.G0.02.1

Given the predominance of hedges in academic writing, in the next Language Focus we will examine some specific ways of moderating or qualifying a claim.

Language Focus: Specific Ways of Moderating or Qualifying a Claim

Likelihood

There are many ways of expressing your degree of commitment to your claims in written academic English. One simple way is to use a modal auxiliary (e.g., *may, might,* or *could*) as you saw in Task One of this unit. Notice how the claim changes in these sentences. Which one is the strongest? Which is the most cautious?

A. Word-of-mouth advertising influences a consumer's incentive to purchase a product.

B. Word-of-mouth advertising can influence a consumer's incentive to purchase a product.

C. Word-of-mouth advertising could influence a consumer's incentive to purchase a product.

D. Word-of-mouth advertising may influence a consumer's incentive to purchase a product.

E. Word-of-mouth advertising might influence a consumer's incentive to purchase a product.

TASK NINE

Read the data commentaries from MICUSP that were written by two different students, the first a doctoral student in Psychology and the second a graduate student in Operations Engineering. Underline the words or phrases that seem to express caution in making a claim. Circle language that boosts any claims.

A. ❶ There are a number of explanations for why musicians have superior cognitive abilities to non-musician controls. ❷ First, it is possible that only the more intellectually rigorous people continue with music training once they have been exposed to it. ❸ Practicing a musical instrument takes a tremendous amount of discipline. Individuals who are willing to work that hard may also work hard in academic settings, thus improving their cognitive abilities. ❹ Secondly, socio-economic class could be playing a role. ❺ In a study comparing scholastic aptitude among musicians and non-musicians, Phillips found a difference in the two groups, but once socio-economic class was taken into account the difference nearly disappeared (Phillips, 1976). ❻ It is possible that the differences between musicians and non-musicians is actually innate or caused by something not musically related in the environment.

MICUSP File PSY.G1.03.1

B. ❶ The overall size increase in many of the speedometer design parameters between speedometer set A to set B seems to have accounted for the overall lower average response times and lower average error and miss percentage rates. ❷ However, other design differences, such as location of the speedometer on the instrument display panel, did not have such influential effects on the data. ❸ Comparing speedometers 1 and 4 (speedometer on left side) to speedometers 2 and 3 (speedometer on right side) only one small pattern was seen. ❹ Speedometers 2 and 3 had, compared to their respective speedometer set, slightly lower average response times than

Although you might think that stance, and moderating your claims in particular, is important in only some fields, research shows that thoughtful, careful presentation of claims is characteristic of all fields—even those that are thought to deal with objective facts. Table 9 shows three types of stance markers identified in Hyland's corpus of 240 published research articles from eight disciplines.

TABLE 9. Stance Features by Discipline (per 1,000 words in journal articles)

Feature	Philosophy	Sociology	Applied Ling.	Marketing	Physics	Biology	Mech. Engin.	Elect. Engin.	Avg.
Hedges	18.5	14.7	18.0	20.0	9.6	13.6	8.2	9.6	14.5
Attitude Markers	8.9	7.0	8.6	6.9	3.9	2.9	5.6	5.5	6.4
Boosters	9.7	5.1	6.2	7.1	6.0	3.9	5.0	3.2	5.8
Stance	**37.1**	**26.8**	**32.8**	**34.0**	**19.5**	**20.4**	**18.8**	**18.3**	**26.7**

Adapted from Hyland, 2004.

TASK EIGHT

Discuss Table 9 with a partner. What is interesting or possibly relevant? List a few observations and be prepared to share these with your class.

Now let us look at Task Nine to see how two student writers attempted to present their claims in a manner that is suitable for a course paper.

Highlighting Statements

The central sections of data commentaries consist of highlighting statements. Highlighting statements are points that can be supported by the details of the data. We have already seen some examples in the text that accompanies Task Two. Highlighting statements need good judgment. They are an opportunity to show your intelligence. In particular, they are an opportunity for you to demonstrate that

- you can spot trends or regularities in the data.
- you can separate more important findings from less important ones.
- you can make claims of appropriate strength.

Try to avoid

- simply repeating all the details in words.
- attempting to cover all the information.
- claiming more than is reasonable or defensible.

Language Focus: An Introduction to Qualifications and Strength of Claim

We said earlier that highlighting statements need good judgment. They also need good presentation of judgment. Thus, they have two requirements. One is the need to be cautious—and sometimes critical—about the data. As Skelton (1988) neatly observed, "It is important for students to learn to be confidently uncertain." The other requirement is to have the linguistic resources to express this caution. In this section, therefore, we deal with ways of qualifying or moderating a claim and indicating your stance toward your claims. Your stance or perspective is important in academic writing because it allows you to reveal not only *what you know,* but also *what you think.*

The way in which you reveal your stance contributes to author positioning. To reveal your stance, you can, for instance, indicate your attitude (for example, *I think*); soften or hedge your claim as in *it is likely that;* or employ boosters to strengthen your points such as *clearly there is a need to.* These stance markers are part of your textual or disciplinary *voice* (Hyland, 2008). Control of this voice is "central to building a convincing discourse" and integral to "texts that plausibly represent an external reality" (Hyland, 2008) and anticipate readers' reactions to those texts.

Now that you have done a bit of analysis, in this next task we ask you to add to a data commentary on the strategies of Japanese researchers writing in English.

TASK SEVEN

The following data commentary, which is based on Dr. Akiko Okamura's (2000) research on how Japanese researchers learn to write in English in their chosen field, is missing references to the non-verbal data given in Table 8. Expand the commentary by first starting with a location + summary statement and then by adding a suitable linking *as* clause. Review the material presented up to this point before you begin.

TABLE 8. Strategies Used by Japanese Scientists When Writing in English

Writing Strategy	Percentage
Think mainly in Japanese but write in English	61%
Think in Japanese and English but write in English	16%
Think in English and write in English	23%

Okamura, 2000.

Slightly more than three-fourths of the scientists surveyed adopted writing strategies that involved the use of their first language. Moreover, less than a quarter appear capable of writing directly in English. Overall, the figures would appear to suggest that most Japanese scientists have difficulties and frustrations when preparing papers for English-medium journals.

TASK SIX

Look at two or three journal articles, preferably in your field of study and possibly those you used in Task Nine in Unit One, that present some data in visual form. How do the results in your tables compare with the information provided about data commentary so far? In which section or sections of the article did you find the commentary on the data? Complete the table.

Element	Yes or No?
Location Statements	
Full informative sentences	
Full indicative sentences	
As clauses	
Imperatives (e.g., *see Fig. 1*)	
Parenthetical phrases (*Fig. 1*)	
Present tense active	
Present tense passive	
Examples of possible useful language	
Verbs used in the location statements	
Language that softens or strengthens claims	

TASK FIVE

Fill in the blank with an appropriate preposition.

1. As can be seen _____ Figure 4, earnings have decreased.
2. As predicted _____ the model, there is a strong positive relationship between water loss and gas uptake (Fig. 1).
3. As described _____ the previous section, there are two common types of abstracts.
4. As defined _____ the introduction, fraud is a form of intentional deception resulting in injury.
5. As reported _____ the previous literature, factors that affect electrode adhesion during the chlorination process are the average grain size and the pore density in the AgCl thin film.
6. As can be seen _____ a comparison of the two tables, peak oxygen uptake and exercise capacity are reliable predictors of quality of life.
7. As has been demonstrated previously _____ materials _____ this type, small cracks pose a serious problem.
8. As has been demonstrated _____ previous studies, organic polymer materials have advantages over inorganic substrates.
9. As shown _____ the line of best fit, there is no clear statistical relationship between fiscal costs and crisis length.
10. As noted _____ our discussion, prolonged exposure to morphine also produces apoptosis in cell culture.

Language Focus: Linking *as* Clauses

So far, we have used sentences in which the reference to non-verbal data is either the subject or the agent in the main clause. However, another common way to introduce informative statements is the linking *as* clause. Here are some examples.

> *As shown in Fig. 1 and Fig. 2*, the companies used in this survey varied significantly in geographical location, size, and method of operation.
>
> *As can be seen in Table 6*, the overall rate of recall, while low, also showed considerable variation.
>
> Shallow junction GM APDs, peripheral area test structures, and gate-controlled diodes, *as shown in Figs. 1(a), 1(b), and 1(c)*, were manufactured in p-type epitaxially grown bulk silicon using a conventional 1.5 μm CMOS process reported previously.
>
> *As can be seen in Figure 1*, the fully charged Lithium-ion battery supplies 4.2 volts.

These linking clauses (where *as* does not mean the same thing as *since* or *because*) are exceptional in English grammar. In the passive, these linking clauses have no subjects. Compare the following sentences.

a. As it has been proved, the theory may have practical importance.
b. As has been proved, the theory may have practical importance.

In Sentence a there is a causal relationship between the *as* clause and the main clause. Because the theory has been proved, it may have practical importance. In Sentence b the *as* clause serves to suggest that the practical importance of the theory (not just the theory) has been established. Although you may find examples that run contrary to this advice, remember not to use subjects in passive linking *as* clauses.

Finally, using prepositions with this type of linking statement can be tricky. Here are some of the main standard uses.

in	As shown *in* Table 1 . . . .
by	As predicted *by* the model . . . .
on	As described *on* the previous page . . . .

which verbs are most frequently used in full sentences to refer to figures and tables (Hyland, 2004). Table 6 shows the results of our analysis. All the verbs were in the present tense.

TABLE 6. Active Verbs Following Reference to a Visual

	Reference to Figure	Reference to Table	Total
shows	31	15	46
presents	6	7	13
illustrates	7	3	10
summarizes	2	4	6
demonstrates	2	3	5
contains	0	5	5
provides	0	3	3
depicts	2	0	2
lists	0	2	2
reports	0	2	2
TOTAL			94

Hyland, 2004.

We then looked at verbs in the passive voice in references to figures and tables. The results are given in Table 7.

TABLE 7. Passive Verbs in Reference to a Visual

	Reference to Figure	Reference to Table	Total
shown in	21	23	44
illustrated in	29	5	34
presented in	2	10	12
given in	2	4	6
listed in	0	6	6
seen in	3	1	4
provided in	1	3	4
summarized in	1	3	4
seen from	3	0	3
TOTAL			117

Hyland, 2004.

TASK FOUR

Decide whether each verb in the table can be used for an indicative (general summary) location statement, an informative statement (highlighting a specific aspect of the data), or both. Use the two sentences that follow the table to help you make your decision. Mark each box in the table with a Y for yes if the usage is possible and an N for No if it is not possible. The first two have been done as examples.

	Indicative	Informative
show	Y	Y
provide	Y	N
give		
present		
summarize		
illustrate		
reveal		
indicate		
display		
demonstrate		
suggest		

The table _____ the effect of social networking use on the duration of students' study time.

The table _____ that social networking has little, if any, effect on the duration of students' study time.

We looked at Ken Hyland's (2004) corpus of 80,000 words from 80 research articles in Biology, Physics, Electrical Engineering, Mechanical Engineering, Marketing, Applied Linguistics, Sociology, and Philosophy to determine

These two ways of pointing the reader to the data are similar to a two-way classification often used to categorize journal article abstracts. *Indicative abstracts* merely indicate what kind of research has been done (i.e., they summarize); *informative abstracts* additionally give the main results and/or highlight something interesting about the data. The parallel, we believe, is close, and therefore we can describe location elements as either indicative or informative.

Language Focus: Verbs in Indicative and Informative Location Statements

There are appoximately a dozen verbs commonly used to make reference to non-verbal material. Some can be used with both types of location statement. *Show* is one such verb.

- *Indicative* statement that summarizes what kind of research was done

  Table 4 shows the types of internet misbehavior common among university students.

- *Informative* statement that highlights something interesting about the data

  Table 4 shows that illegal downloading of music or films is common among students.

Notice that the information after the *that* clause is given in a clause with a subject and a verb.

Some verbs can be used with only one type of location statement. *Provide*, for example, can only be used in an indicative location statement and cannot be used with a *that* clause. (The flag indicates incorrect usage.)

Table 5 *provides* demographic information for the study participants.

Table 5 provides that most study participants were fairly competent internet users.

present paper. Second, in English the active forms are just as appropriate as the passive versions. (However, in a number of languages it may not be natural to say that a graph or other inanimate object *reveals, gives,* or *suggests.*) Although switching between active and passive voice may seem to be a good stylistic strategy, a better strategy would be to choose active or passive on the basis of old-to-new information flow (see Unit One). Specifically, passive constructions can be used to place the old or familiar information in the subject position and the new information—that is, the location of the data at the end.

Notice that all the examples thus far provide general summaries of the data. We have been given no specific details or highlights. We do not know, for instance, what is significant in the SOFC design or at what age an individual might be the wealthiest or the poorest. Depending on what you are writing, you may want to focus more on some significant aspect of the data rather than merely generally pointing out what data is provided. This indication may be particularly important when you are using data to make a point. For instance, if you want to argue that students are likely to engage in misbehavior on the internet regardless of how they access it, you could write this sentence.

> Table 5 shows that students engage in misbehavior on the internet using both private and public computers.

If your point is that wealth increases slowly with age but decreases quickly after reaching a peak, you could write this sentence.

> Figure 1 reveals that wealth is accumulated slowly, but sharply declines after age 65.

Notice the use of *that* in the two sample sentences. Sentences containing *that* clauses do not easily go into the passive. (The flag indicates incorrect usage.)

> ⚑ That wealth sharply declines after age 65 is revealed in Figure 1.

While the passive version follows the rules of grammar, the sentence that results seems awkward in comparison to the version in the active voice. Thus, if you want to highlight some aspect of the data using a *that* clause, use the active.

Location Elements and Summaries

Many data commentary sections begin with a sentence containing a location element and a brief summary of what can be found in a visual display of information, as shown in these examples.

a. *Table 5 shows* the types of internet misbehavior common among university students.

b. *Table 6 provides* summary statistics for the variables used in the analysis.

c. *Figure 2 shows* a honeycomb solid oxide fuel cell (SOFC) unit with air cooling paths.

d. *Figure 1 plots* wealth as a function of age.

As you can see, location statements direct readers to view important information in a table, chart, graph, or other figure. Even though research indicates that readers often look at the visual information before reading, location statements are expected. They are considered to be a form of metadiscourse—sentences or phrases that help readers make their way through a text by revealing such things as organization, referring readers to relevant parts of a text, or establishing logical connections. Metadiscourse is a noticeable feature of academic writing, although its value and frequency of use varies from one writing culture to another.

While grammar checking tools may influence you to largely use active voice in your writing, the passive can also be used, as demonstrated here. In fact, in some published texts, the percentage of passive verbs has been found to be as high as 25 percent.

Summary + Location Element with Passive Voice

a. The types of internet misbehavior common among university students *are shown in Table 4.*

b. Summary statistics for the variables used in the analysis *are provided in Table 5.*

c. A honeycomb solid oxide fuel cell (SOFC) unit with air cooling paths *is shown in Figure 2.*

d. Wealth as a function of age *is plotted in Figure 1.*

We bring two points to your attention. First, note the consistent use of the present tense. This occurs because the author is talking about his or her

TASK THREE

Table 5 provides some additional data on internet misbehavior. Work with your partner and consider what data you might highlight in a written commentary and why. How can you account for some of the differences in the groups?

TABLE 5. Respondent's Self-Reported Instances of Online Misbehavior during the Past 12 Months according to Background (Data are percentages.)

		Misrepresentation of Self	Unauthorized Use of Another's Account	Plagiarism of an Essay or Assignment	Unauthorized Downloading of Music or Film	Pornography Use
Gender	Male	66	24	65	85	79
	Female	59	29	59	72	14
Age	18	63	26	65	79	38
	19	61	28	60	75	38
	20	69	31	61	84	55
	>21	61	24	64	74	54
Perceived internet competence	Expert	70	30	65	85	48
	Non-expert	54	24	58	65	28
Access to internet	Private personal computer	63	27	62	79	40
	Shared public computer	66	29	64	70	40

From Selwyn, Neil, 2008, A Safe Haven for Misbehaving? An Investigation of Online Misbehavior Among University Students, *Social Science Computer Review, 26,* 446–465. Copyright Sage Publications. Used with permission.

We will now look at location elements and summaries in more detail.

Here is the data commentary from Task Two again, with these elements marked.

Location statement + indicative summary

❶ Table 4 shows survey respondents' self-reported involvement in online misbehavior during the previous 12 months. ❷ According to the table, the most common online misbehavior is "unauthorized downloading of film and music." ❸ As can be seen, just over three out of four students in the study have downloaded music or film more than once a year. ❹ This very high percentage of misbehavior is especially alarming, since protection of intellectual property is a basic element for enriching the film and music industries. ❺ Another notable result is that viewing pornographic materials on the internet was reported by 40% of the respondents, although purchasing pornography was reported by only a small minority of these respondents. ❻ The least frequently reported misbehaviors were illegally using another person's email account or credit information, along with either completely copying homework from a website or buying an assignment from a source on the internet. ❼ It is worthwhile to note that these different forms of online misbehavior seem to be patterned according to the degree of the perceived seriousness of the bad behavior. ❽ Activities that are generally believed to be criminal (e.g., using someone's credit information) were less frequent than activities that, although unlawful, many do not view as criminal, such as downloading movies and music. ❾ Illegal downloading may have an economic cause, but other reasons might be important, as well. ❿ This problem will likely continue until reasons that students engage in this behavior are clearly identified.

Highlighting statement in terms of a linking *as* clause

Interpretations and implications

9. To what aspect of the data does the author pay most attention? Why? Do you think this is enough? If not, what else should be discussed?
10. Where, if at all, do we get a sense of what the author thinks about the data and how committed the author is to the interpretations? How important is it that we know this? How important is the comment in Sentence 4, for instance?
11. Illegal downloading of music, film, and video was reported by 76% of the students. In Sentence 3, this is expressed as *just over three out of four.* What do you think about that reformulation and about these alternatives?
    a. about 75%
    b. as much as 76% of all
    c. most
    d. slightly more than 75%
12. Sentence 7 begins with *It is worthwhile to note that. . . .* Go to Google Scholar and search for "It is * to note that" to find other adjectives that could be used. (Be sure to use the quotation marks.) If you do not have access to the internet, try to list some possibilities on your own.
13. Which is more common: *it is worthwhile to note that* or *it is worth noting that*? How common is *it is worthwhile noting that*? If you have internet access, go to Google Scholar to compare the frequencies of each of the three expressions.
14. What are some of the features of this text that make it an example of written academic English? Look back to Unit One if you need help.

Structure of Data Commentary

Data commentaries usually have these elements in the following order.

1. location elements and/or summary statements
2. highlighting statements
3. discussions of implications, problems, exceptions, recommendations, or other interesting aspects of the data

The commentary was written by a student enrolled in an academic writing course.

❶ Table 4 shows survey respondents' self-reported involvement in online misbehavior during the previous 12 months. ❷ According to the table, the most common online misbehavior is "unauthorized downloading of film and music." ❸ As can be seen, just over three out of four students in the study have downloaded music or film more than once a year. ❹ This very high percentage of misbehavior is especially alarming, since protection of intellectual property is a basic element for enriching the film and music industries. ❺ Another notable result is that viewing pornographic materials on the internet was reported by 40% of the respondents, although purchasing pornography was reported by only a small minority of these respondents. ❻ The least frequently reported misbehaviors were illegally using another person's email account or credit information, along with either completely copying homework from a website or buying an assignment from a source on the internet. ❼ It is worthwhile to note that these different forms of online misbehavior seem to be patterned according to the degree of the perceived seriousness of the bad behavior. ❽ Activities that are generally believed to be criminal (e.g., using someone's credit information) were less frequent than activities that, although unlawful, many do not view as criminal, such as downloading movies and music. ❾ Illegal downloading may have an economic cause, but other reasons might be important, as well. ❿ This problem will likely continue until reasons that students engage in this behavior are clearly identified.

5. **What are the purposes of Sentences 1–3?**
6. **How is the commentary organized overall?**
7. **Which sentence contains the author's key point?**
8. **On pages 140–141 we listed seven common purposes for data commentaries. In which category (or categories) does this one fall?**

TABLE 4. University Student Respondents' Self-Reported Instances of Online Misbehavior during the Previous 12 Months (Data are the percentage of all student respondents, N = 1,222.)

		Once or Twice	A Few Times	More Than a Few Times	Overall Percentage
Misrepresentation of self	• Given false information about yourself to another person on the internet	34.0	12.0	5.0	51.0
	• Provided false information about your personal details on an online form	33.0	13.0	5.0	51.0
Unauthorized use of another's account	• Accessed someone else's email account without his or her knowledge	18.0	6.0	2.0	26.0
	• Used someone's credit details online without his or her knowledge	4.0	1.0	1.0	6.0
Plagiarism of an essay or assignment	• Copied a few sentences from a website into an essay or assignment without citing the source	39.0	16.0	5.0	60.0
	• Copied a few paragraphs from a website into an essay or assignment without citing the source	21.0	7.0	2.0	20.0
	• Copied a few pages from a website into an essay or assignment without citing the source	8.0	3.0	1.0	11.0
	• Copied a whole essay or assignment from a website without citing the source	2.0	1.0	0.6	4.0
	• Paid for an essay or assignment from a website	2.0	0.7	0.7	3.0
Unauthorized downloading of music or film	• Unauthorized downloading of music from the internet	18.0	22.0	36.0	76.0
	• Unauthorized downloading of film or video from the internet	18.0	16.0	19.0	53.0
Pornography use	• Viewed online pornography or pornagraphic pictures or films	17.0	12.0	11.0	40.0
	• Paid for online pornography or pornographic pictures or films	3.0	1.0	1.0	5.0

From Selwyn, Neil, 2008, A Safe Haven for Misbehaving? An Investigation of Online Misbehavior Among University Students, *Social Science Computer Review, 26,* 446–465. Copyright Sage Publications. Used with permission.

- compare and evaluate different data sets
- assess the reliability of the data in terms of the methodology that produced it
- discuss the implications of the data
- make recommendations

Typically, of course, a data commentary will include several of these elements.

TASK TWO

For this task, discuss these questions about students' internet activities with a partner and then look at some data.

1. **What kinds of illegal or inappropriate activities do students engage in via the internet?**
2. **How common do you think these activities are among college students?**
3. **Which, if any, of the activities you identified should be tolerated or ignored?**
4. **Look at the data presented in Table 4 on page 142. What is your reaction? Is the data consistent with what you discussed in Questions 1 and 2? Does anything surprise you? After reviewing the data commentary on page 143, answer the questions on pages 143–144.**

TASK ONE

Work with a partner and decide whether the verb phrase choice results in a strong (S), weak (W), or neutral (N) statement. Some disagreement is reasonable. Can you think of other verbs or verb phrases that could complete the sentence? How would you evaluate the strength of claim for your alternatives?

Many studies have concluded that excessive credit growth _____ the global financial crisis.

_____ a. contributed to

_____ b. caused

_____ c. may have contributed to

_____ d. was probably a major cause of

_____ e. was one of the causes of

_____ f. might have been a factor in

As you can see, each of the options "fits" grammatically and each makes sense; however, only one may actually be the "right" choice in terms of what you know and think. Thus, your choice of verb can convey your stance or perspective and the extent to which you believe the explanation to be correct.

It is not easy to predict precisely what you might need to do in a data commentary, but some of the more common purposes are to

- highlight the results of research
- use the data to support a point or make an argument in your paper
- assess theory, common beliefs, or general practice in light of the given data

Unit Four
Data Commentary

In many academic writing tasks, there comes a place where you need to discuss data. In fact, research has shown that in some fields such as Engineering, the ability to make a point or build an argument based on data is essential to successful writing (Wolfe, 2011). In many disciplines, the data is displayed in a table, graph, figure, or some other kind of non-verbal illustration. The data may come from a source, or it may be the outcome of your own work—that is, your results. (For more on writing up your results, see Unit Seven.) This data is likely incorporated in the main text, although in some cases it may be provided in an appendix. We have called data-focused writing subtasks *data commentaries.* The amount and level of specificity of commentary provided for a data set can vary considerably depending on the type of text being written (the genre). For instance, in published journal articles, some data commentaries may be as short as a single sentence and be very general. In a technical report, the commentary may be much longer.

Strength of Claim

Like many other aspects of academic writing, data commentaries are exercises in positioning yourself. There are, as a result, both dangers and opportunities. One danger is to simply repeat in words what the data has expressed in non-verbal form—in other words, to offer description rather than actual commentary or interpretation. An opposite danger is to read too much into the data and draw conclusions that are not well supported. The art of the commentary is for you to find the right strength of claim in discussing the data and then to order your statements in some appropriate way (perhaps in order of interest or relevance). This may involve moving in a general-specific direction (see Unit Two). To illustrate what we mean by finding the right strength of claim, we offer Task One.