

UNIT

5

R U Txtting in Class?

In this unit, you will

- > analyze scientific writing and learn how it is used in a research paper.
- > use narrative, process, and analytical writing to report on your research.
- > increase your understanding of the target academic words for this unit.

WRITING SKILLS

- > Old-New Information Patterns
- > Summarizing Data
- > **GRAMMAR** Passive Voice



Self-Assessment

Think about how well you know each target word, and check (✓) the appropriate column. I have...

TARGET WORDS	never seen this word before.	heard or seen the word but am not sure what it means.	heard or seen the word and understand what it means.	used the word confidently in <i>either</i> speaking or writing.
AWL				
aggregate				
constrain				
empirical				
incentive				
inherent				
inhibit				
integral				
intrinsic				
norm				
phenomenon				
qualitative				
 sex				
underlie				
 whereas				

Building Knowledge

Read these questions. Discuss your answers in a small group.

1. Do you or your friends use cell phones in class? When and how do you use them?
2. Do you think it is possible to do two things well at the same time?
3. Have you ever done a research project? What did you find?

Writing Model

A research paper is an article in an academic journal that describes the results of an experiment. Read the excerpt from a paper from the *Journal of Marketing Education* about students who send text messages from their cell phones during class.

THE IMPACT OF TEXTING ON STUDENTS IN MARKETING CLASSES

Dennis E. Clayson and Debra A. Haley
Journal of Marketing Education, Vol. 35, Issue 1 (April 2013)

Introduction

The motivation for this study began with an incident in class that has become increasingly common. One of the authors noted that several students were looking intently down at their laps and texting during a lecture. The instructor stopped and made a number of comments about texting in class, explaining that it was a sign of disrespect for the instructor and the other students. Furthermore, business students should be aware that texting under these conditions would be considered unprofessional. The students appeared to accept the information, but within minutes several students had begun texting again.

Texting has become so **integral** to student life that they simply text even if it is against the

rules. Texting in class concerns many instructors, and a number of approaches have been attempted to control this behavior. Some instructors have appealed to good manners (Goodwin, 2012). Other professors have used the **incentive** of grades, **whereas** others have tried punishments. Evidently, these attempts to control texting in class have been largely ineffective (Williams et al., 2011).

The problem **inherent** with multitasking in class is that learning requires substantial cognitive¹ processing (Mayer & Moreno, 2003). However, when students are texting, their ability to learn is severely **inhibited**. This is because these students' brains are receiving information in two different ways: sound (the lecturer's voice) and vision (the words on their screens). However, when students are listening

¹ *cognitive*: connected with mental processes of understanding

35 and reading at the same time, a bottleneck²
can occur. This slows down learning like a
construction project on a busy highway.
Therefore, multitasking has a negative effect
on attention. In other words, students' brains
40 cannot concentrate on the content of the class
if they are also texting (Gorlick, 2009).

The purpose of this **empirical** study is to
investigate the texting **phenomenon** in
marketing classes, specifically by addressing two
45 basic questions:

Research Question 1: How much do
marketing students text?

Research Question 2: Does texting behavior
influence grades?

Methods

50 Data were collected during the spring and
summer terms of 2011 and 2012 at two
universities. Students in marketing classes
volunteered to fill out a questionnaire about
their texting habits. The total number of
55 students who completed the survey was 298,
with approximately equal numbers of both
sexes. The survey was designed to cover a wide
range of behaviors and attitudes about texting.
For each student, the grade received in the class
60 was also recorded.

Results

A summary of the results can be found in
Table 1. Only 2% of the students had not
texted anyone during the semester. The
aggregate number of texts received per day
65 was 37, and students sent slightly fewer than
16. Interestingly, as many as 94% of the
students received texts while in a class, and
86% texted while in class.

The majority of students denied being
70 compulsive³ about texting. More than two-
thirds thought that they could text and follow
a lecture at the same time, and only 29%
thought that texting would influence their
grades. However, almost half (42%) thought it
75 was reasonable to ban texting in class. As can
be seen in Figure 2, texting in classes resulted
in a significant decrease in class grade (80%
for texters versus 87% for non-texters). Non-
texters also had slightly higher overall GPAs.⁴

Discussion

80 These results have important implications
for teaching. The students strongly deny that
they are addicted to texting, yet almost all of
them texted someone while in class.
Furthermore, even though the majority of

Question	Yes	No
Did you send or receive texts during the semester?	98%	2%
Did you text someone in class?	86%	14%
Did you receive texts in class?	94%	6%
Did you have a professor who banned texting in class?	56%	46%
Can you text and follow a lecture at the same time?	47%	32%
Is it reasonable to ban texting?	42%	36%
Are you addicted to texting?	11%	75%
Do you think texting during class affects your grades?	29%	47%
Average number		
How many texts did you send every day?	15.5	
How many texts did you receive every day?	37.3	
How many texts do you receive in every class?	2.9	
How many texts do you send in every class?	2.6	

Figure 1: Survey results of texting behavior

² *bottleneck*: anything that delays development or progress

³ *compulsive*: not being able to control their behavior

⁴ *GPA*: grade point average (the average of a student's grades over a period of time)

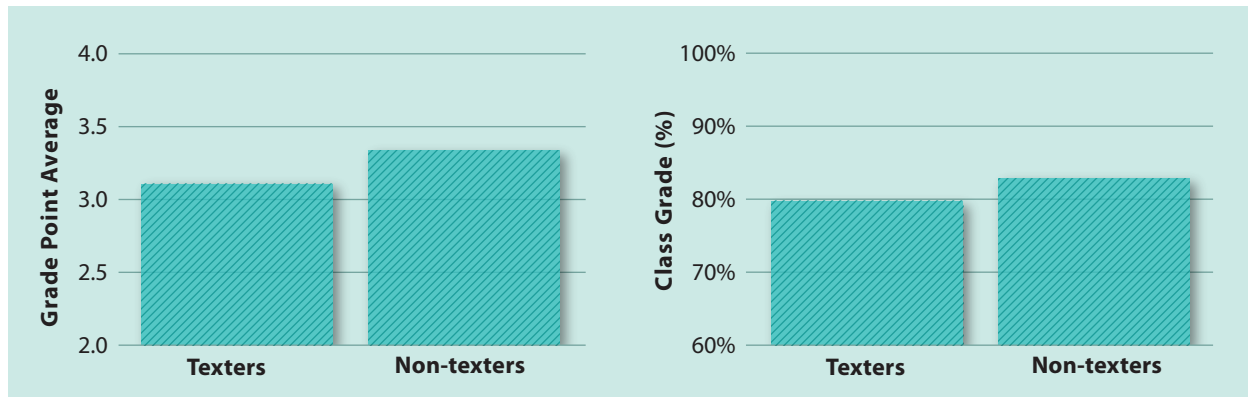


Figure 2: Overall GPA and class grade for texters and non-texters

85 students agreed that they should not text in class, about half did so anyway.

One likely interpretation is that classroom **norms** have changed as culture and technology have changed. The classroom has become more
90 informal. However, this change has an important disadvantage. Neuroscience research offers strong evidence that texting **inhibits** learning. Indeed, in this study, texters received lower grades in class. Yet our results and the literature
95 seem to suggest that texting in class cannot be stopped using traditional **constraints**.

This study does not reveal why students choose to text in class. Only further **qualitative** research will reveal these reasons. However,
100 research has shown that marketing students can and do choose their level of effort based on their **underlying** educational goals (Taylor, Hunter, Melton, & Goodwin, 2011). Students who are **intrinsically** motivated will think more deeply
105 than students with extrinsic motivation. Others can be given motivation through engaging classroom activities. Texting may be here to stay. However, educating students on when it is

appropriate to text and providing them with an
110 engaging classroom will be better for everyone.

References

- Goodwin, M. (2012, Nov 12). Manners in the syllabus. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/blogs/brainstorm/manners-in-the-syllabus/36409>
- Gorlick, A. (2009, Aug 24). Media multitaskers pay mental price. *Stanford Report*. Retrieved from <http://news.stanford.edu/news/2009/august24/multitask-research-study-082409.html>
- Mayer, R. E., & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist*, 38(1), 43–52.
- Taylor, S. A., Hunter, G. L., Melton, H., & Goodwin, S. A. (2011). Student engagement and marketing classes. *Journal of Marketing Education*, 33(1), 73–92.
- Williams, J. A., Berg, H., Gerber, H., Miller, M., Cox, D., Votteler, N., & McGuire, M. (2011). “I get distracted by their being distracted”: The etiquette of in-class texting. *Eastern Educational Journal*, 40(1), 48–56.

LEARN

An important method for creating cohesion when developing a paragraph is to use old-new information patterns. This means that the first (new) part of a sentence (usually the subject) is linked to the (old) information in the previous sentence. Look at the example below. The colors represent the same ideas.

Texting has become so integral to student life that **they simply text even if it is against the rules**. **Texting in class** concerns many instructors, and **a number of approaches have been attempted to control this behavior**. **Some instructors** have **appealed to good manners**. **Other professors** have used **the incentive of grades**, **whereas others have tried punishments**. Evidently, **these attempts** to control texting in class have been largely ineffective.

When you use old-new information patterns, follow these steps:

- Repeat keywords and ideas from previous sentences in the subject.
- Use words such as *some*, *another*, *other*, and *the first/second/third* to create lists.
- Use *this* or *these* as pronouns or determiners or the article *the* to refer back to previous ideas.

APPLY

A. Read this paragraph again from the research paper. Then answer the questions.

¹The problem inherent with multitasking in class is that learning requires substantial cognitive processing. ²However, when students are texting, their ability to learn is severely inhibited. ³This is because these students' brains are receiving information in two different ways: sound (the lecturer's voice) and vision (the words on their screens). ⁴However, when students are listening and reading at the same time, a bottleneck can occur. ⁵This slows down learning like a construction project on a busy highway. ⁶Therefore, multitasking has a negative effect on attention. ⁷In other words, students' brains cannot concentrate on the content of the class if they are also texting.

1. What does *this* mean in Sentence 3? _____
2. What is the old information in Sentence 4?

3. What does *this* mean in Sentence 5? _____
4. Which word in Sentence 6 repeats the idea "when students are listening and reading at the same time"?

5. What is the purpose of Sentence 7?

B. Put these sentences in the best order to form a complete paragraph using old-new information structure.

- 1. First, looking at a cell phone or radio button, even briefly, takes the driver's eyes off the road.
- 1 — 2. Many people believe they can do another task while driving.
- 3. If a driver loses concentration just for a short time, a serious accident can happen.
- 4. This can cause the driver to make a mistake.
- 5. This means that people who text or make phone calls cannot concentrate fully on their driving.
- 6. Because of the increase in accidents, new laws have been made that restrict the use of cell phones in cars.
- 7. The second reason is that the brain cannot process two sets of information at the same time.
- 8. However, multitasking behind the wheel is dangerous for two reasons.

Analyze

A. Where do you find this information in a research report? Write *I* for Introduction, *M* for Methods, *R* for Results, or *D* for Discussion.

- | | |
|--|---|
| <u>I</u> — 1. Research questions | — 5. Description of the survey and the participants |
| — 2. Answers to the research questions | — 6. Reasons for doing the research |
| — 3. Summary of previous research | — 7. Implications of the research |
| — 4. Summary of the data | — 8. Interpretations of the data |

B. Complete the chart. Write the verb tenses that are used in each section of the research paper. Give the reason that each verb tense is used.

Section	Verb form	Reason
Introduction	<i>Past simple</i>	<i>Tell a story about the professor's class</i>
	<i>Present simple</i>	<i>Describe the current situation of students texting in class</i>
	<i>Present perfect</i>	
Methods		
Results		
Discussion		

C. Discuss these questions with a small group.

1. Why didn't the authors use "we" in the first paragraph when they described an incident in class?
2. Why are there many citations near the end of the introduction section?
3. Why are there also citations in the discussion section?
4. Why are there so many passive verbs in the methods section?

Vocabulary Activities **STEP 1: Word Level**

A. Complete the paragraph using words from the box. Do not repeat any word. You will not use two of the words.

aggregates	inhibited	norms	qualitative	underlie
constraints	integral	phenomenon	sexes	whereas

According to a recent (1) _____ research study, there are differences between the (2) _____ in texting behavior. Although texting is (3) _____ to the social lives of both genders, women write messages with more expressive language than men, who are somewhat more (4) _____ in their texts. (5) _____ women wrote longer messages, they also used more abbreviations. This may be due to the (6) _____ of text messaging (the length of a message is limited), but other differences in communication style may (7) _____ these results. Overall, it seems that two separate (8) _____ are developing for the use of texting.

Inherent, integral, and intrinsic all have a similar meaning: “a basic, essential, or permanent part of something.” However, they collocate with different nouns.

intrinsic + motivation / value / nature / worth / interest / meaning

integral + part / component / role / element / aspect

inherent + problem / risk / danger / power / right / limitation / difficulty / conflict

Intrinsic is used with the meaning of “internal” and often has a positive sense.

Successful language learners have *intrinsic* motivation.

Integral is used with the meaning of “an essential part of a whole.”

Peer review is an *integral* part of the scientific method.

Inherent often means that “someone is born with quality or right.” However, it often also means that “a problem or difficulty naturally exists.”

There are *inherent* problems with survey research.



B. Complete the sentences with your own ideas. Compare your answers with a partner.

1. An inherent limitation to text messages is _____
2. An intrinsic value of texting is _____
3. An inherent risk of texting while driving is _____
4. An integral aspect of the popularity of texting is _____

Vocabulary Activities STEP II: Sentence Level

C. Write sentences about a research study with which you are familiar. Use the target phrases. Compare your sentences with a partner.

1. qualitative study *This paper reports on a qualitative study of laptop use in class.*
2. the phenomenon of _____
3. empirical evidence _____
4. incentive for participation _____
5. the aggregate number of _____
6. whereas _____

Constrain has the basic meaning of *limit*, but it is used in formal contexts.

1. To mean “limit something,” often in the passive voice:

Further research was constrained by a lack of resources.

2. To mean “prevent someone from doing something,” also often in the passive:

We are constrained from providing more details by privacy concerns.

3. To mean “force someone to do something in a particular way”:

Some professors feel constrained to restrict the use of technology even when it could be beneficial.

The noun *constraint* is usually plural, with meaning of “limits, difficulties, or restriction.”

*Due to financial **constraints**, class sizes will increase next year.*

A ban on laptops would impose serious constraints on students with learning difficulties.

An exception is the phrase *without constraint*, which means without restrictions.

You are free to write without constraint on the class discussion board.



D. Answer these questions using a form of the words *constrain* and *constraint*.

1. What limits should teachers put on cell phones in class?

2. Should teenagers be allowed to use cell phones without any restrictions?

3. As a child, what were you not allowed to do?

4. What do you not have enough time or money to do now?

5. What happens to students in your school who fail a class?

Grammar Passive Voice

The passive voice is common in scientific and other academic writing. It's especially used in the following situations.

1. to avoid agents (subjects) that are not known, are obvious, are not important, or are very general;

general subject

✗ People send billions of text messages every day.

✓ Billions of text messages are sent every day.

2. to make old information the subject of the sentence (This improves cohesion.);

✗ There are two channels of input to the brain. Texting and listening to a lecture use both channels.

✓ There are two channels of input to the brain. Both channels are used when texting and listening to a lecture.

3. to describe the methodology of a research study; and

The research was carried out at three universities.

4. to avoid using *I*, *you*, or *we*.

✗ You can see the results in Table 1.

✓ The results can be seen in Table 1.

A. Write sentences about a research study in the passive voice, using the words given. Choose the correct tense.

1. A recent study / conduct / laptop use in class

A recent study was conducted on laptop use in class.

2. Participants / show / 45-minute lecture

3. The students / ask / to take notes on their laptops

4. Half the students / tell / to multitask while listening

5. Lower comprehension grades / receive / the multitasking students

6. Students sitting behind the multitaskers / also / distracted

B. Choose the correct form of the verbs in parentheses.

Successful college students (1) (use) / are used) strategies that help them study better, not harder. Previous research (2) (studied / was studied) students' use of strategies such as self-testing and rereading. However, the effect of these strategies on students' grades (3) (did not investigate / was not investigated). Therefore, Hartwig and Dunlosky (2012) (4) (conducted / were conducted) a study to see whether strategic students earn better grades. Over 300 students (5) (surveyed / were surveyed) about their use of strategies such as making a schedule, rereading their notes, and testing themselves before quizzes. The students' grades (6) (collected / were collected). The researchers (7) (found / were found) that students who used some of the strategies (8) (received / were received) higher grades. However, studying all night (9) (linked / was linked) to lower grades. Therefore, if students (10) (teach / are taught) good study habits early, they should be more successful.

C. Read the following paragraph and change five of the verbs to the passive voice to make it more academic and cohesive. Write the new sentences below.

Multitasking is not actually possible. People cannot really do two tasks at the same time. Therefore, you should call multitasking "task switching." Task switching is inefficient because the brain needs time to switch between tasks. You can lose one-tenth of a second on each switch. When you add up all those short delays, there is a large effect on productivity. Task switching wastes up to 40% of productivity. Therefore, efficient workers learn to do one thing at a time instead of task switching.

1. *Two tasks cannot really be done at the same time.* _____
2. _____
3. _____
4. _____
5. _____

WRITING SKILL

Reporting Data

LEARN

The results and discussion sections of a research paper usually require you to report on and analyze data. The data might be numbers, calculations, observations, or interviews. The strategy for writing these sections is similar:

- Refer the reader to tables or charts, if applicable.
- Explain what the charts show.
- Highlight the most important data. Do not repeat every piece of data.
- Use words such as *a majority*, *only*, *nearly*, and *almost* to help the reader interpret the data.
- Describe patterns and trends in the data (*the number of students is rising; the cost of computers has fallen; sales of this product have remained stable*).
- Include your explanations and interpretations of the data in the discussion section, not the results.

APPLY

A. Look again at the results section of the research paper on pages 62–64. Are the following statements true or false? Why?

1. ☒ T / ☐ F The number of students who did not text during the semester was small.

Why? The writers say that “only” 2% had not texted, which means they think the number is small.

2. ☐ T / ☐ F A surprising number of students sent or received texts in class.

Why? _____

3. ☐ T / ☐ F A large number of students thought texting would affect their grades.

Why? _____

4. ☐ T / ☐ F A lot of students thought teachers could reasonably ban texting in class.

Why? _____

B. Look again at the two research questions on page 63. Which paragraph of the results section answers each question?

- Research Question 1: Results Paragraph: ____
- Research Question 2: Results Paragraph: ____

C. How is each paragraph in the results section organized? Discuss your answer with a small group.

Collaborative Writing

A. In a small group, choose a topic related to the use of technology. Survey people in your class, institution, or community. Use one of these topics or write your own.

- ☐ the use of cell phones (or another technology)
- ☐ attitudes toward technology in teaching and learning
- ☐ preferences for e-books compared with print books
- ☐ the impact of technology on daily life
- ☐ the amount of time spent using technology compared with other activities
- ☐ your idea: _____

B. With your group, write five questions for a survey on the topic you chose in activity A. You can use these questions as models or write your own.

How often do you use your cell phone?

Do you agree with this statement: "I can concentrate on a lecture and text at the same time"?

Strongly Agree – Agree – Neither Agree nor Disagree – Disagree – Strongly Disagree

How much do you think the Internet has improved your life on a scale of 1 (not at all) to 5 (very much)?

Which of these mobile devices do you use regularly?

- ☐ smartphone ☐ tablet
- ☐ laptop computer ☐ other: _____

1. _____
2. _____
3. _____
4. _____
5. _____

C. In your group, conduct your survey and collect data.

D. Analyze the data you collected. Complete at least three of these sentences using your data.

1. A majority of _____ thought _____.
2. Only _____% of students said _____.
3. Almost all participants reported _____.
4. Approximately half of the _____ believed _____.
5. More _____ than _____ said _____.
6. Almost no students thought _____.

- E.** Work together to write a results section. Write one or two paragraphs. Use the sentences from activity D to help you. If possible, divide your results into groups and organize them in order of importance or surprise.
- F.** Compare your results section with another group's. Discuss these questions together.
- Do you understand the results of the survey?
 - Which results are most important or surprising?
 - What other information would you like to know from this survey?
 - Are there any sentences or results you don't understand?

Independent Writing

- A.** You are going to write a research paper about the research you conducted in the Collaborative Writing activity or another survey you choose to do. Answer these questions about your research.

Introduction

- Why did you do the research? _____

- What were your research questions?
Research Question 1: _____
Research Question 2: _____

- What did you expect to find? _____

Methods

- How many people did you survey? _____
- What do you know about the participants? _____

- What questions did you ask? Which research question does each survey question answer?

- What are the most important data? _____

8. What are the most surprising data? _____

9. What trends did you observe? Did some groups of participants answer differently than other groups? _____

Discussion

10. How do the data answer your research questions?

Research Question 1: _____

Research Question 2: _____

Other Research Questions: _____

Results

11. How can you explain your results? What do they mean?

12. What are your conclusions about the topic? _____

B. Look at your data. Choose how you will report your data.

- | | |
|---|---------------------------------------|
| ☐ table of numbers | ☐ pie chart |
| ☐ bar chart | ☐ other: _____ |
| ☐ line graph | |

C. Look at the synonyms in the Vocabulary Tip box. Write down the ones you can use in a research paper about your survey. Add at least one more set of synonyms that is relevant to the topic of your research.

D. Write a research paper to report on your survey. Use the four standard subheadings (*Introduction, Methods, Results, and Discussion*). If you use additional sources, include a page of references (see page 64). Use the passive voice to describe your methods and avoid general subjects and personal pronouns. Use target vocabulary from page 61.

VOCABULARY TIP

Use synonyms to avoid repeating key words too frequently. For example:

- *research, study, project, survey, questionnaire*
- *participants, respondents, students, men, women*
- *cell phone, mobile phone, smartphone, mobile device*

REVISE AND EDIT

A. Read your research paper. Answer the questions below, and make revisions as needed.

1. Check (✓) the information you included in your paper.

- | | |
|---|--|
| ☐ reasons you did the research | ☐ research questions and/or expected findings |
| ☐ methods | ☐ highlights of key results |
| ☐ charts and tables | ☐ explanations and interpretations |
| ☐ conclusions | ☐ references |

2. Look at the information you did not include. Would adding that information make your research paper more complete?

Grammar for Editing Passive Voice and Active Voice

1. Intransitive verbs (verbs that cannot take a direct object) have no passive form.

Problems ~~were~~ happened in class.

2. Do not confuse the present perfect with the passive voice. Perfect tenses use *have* as the auxiliary verb. Passive verbs use *be*.

Research has^{been} conducted into texting in class.

3. If the subject performs the action (that is, if the subject is the agent), the verb must be in the active voice.

Scientists have ~~been~~ studied the effects of texting in class.

B. Check the language in your research paper. Revise and edit as needed.

Language Checklist

- | |
|---|
| ☐ I used target words in my research paper. |
| ☐ I used synonyms effectively. |
| ☐ I used passive voice to avoid general subjects and improve cohesion. |
| ☐ I edited for common errors with passive voice. |

C. Check your research paper again. Repeat activities A and B.

Self-Assessment Review: Go back to page 61 and reassess your knowledge of the target vocabulary. How has your understanding of the words changed? What words do you feel most comfortable using now?