

The Effects of Text and Leadership on the Choice of Question Types in Quality Talk



Li-Hsin Ning

Abstract This study explored the EFL students' choices of question types in Quality Talk (QT) when they were given different types of text, including an image, a scientific report, or a lifestyle article. QT was administered to 23 freshman students. The results show that the students tended to ask speculation questions when no written words but an image was provided. Connection questions were favored when the students were discussing a popular science article, suggesting that they tried to make a link to what they have heard or read before. However, affective questions related to personal feelings or experiences were favored when a lifestyle article with regard to stress was given. Additionally, leadership has an effect on the choice of question types. The students with leadership qualities tended to ask generalization questions to their peers. This high-level thinking ability of putting things together corresponds to the leadership trait of managing complexity.

1 Introduction

Quality Talk (QT hereafter for short) has been administered to the elementary school students of English-speaking countries. It has been shown that small-group discussion can facilitate students' reading comprehension and critical thinking skills (Li et al., 2016; Murphy et al., 2016, 2017). This was likely the first attempt for QT to be implemented in a foreign language classroom in Taiwan. I realize that students in Taiwan are too shy to raise questions in class in even the official language of Chinese, let alone in English. Throughout the QT instruction, I hoped to provide students with the group discussion skills they may need in the job market and to encourage students to think in depth about everything they read or see.

Li et al. (2014) argue that text genre can influence students' discussion questions. They claim that high-level comprehension is evidenced more in narrative texts than informational texts. Though the reading materials in our textbook, *Keynote Advanced* (Lansford et al., 2016), are mainly informational texts, it still remains interesting

L.-H. Ning (✉)
National Taiwan Normal University, Taipei, Taiwan

to explore whether students have preferred question types for different subjects of informational texts. During the past year, I tried various text types and warm-up activities to inspire students to ask questions and get involved in the group discussion. My research goal was to examine whether the text type would affect how students chose or made the QT question types for discussion. At the individual level, I also wonder if the preference of QT question type had any association with the leadership trait of a student. As students with leadership traits usually initiate or lead discussions, it would be interesting to see what kinds of QT questions were made by these students.

In Sect. 2, I will describe the text types and the procedures in the QT. Results will be presented in Sect. 3. Interestingly, there were two female students with leadership traits in the class, and their performance for QT will be discussed in Sect. 3, too. Section 4 concludes this paper.

2 Methods

2.1 Participants

QT was implemented in a General English course at a university in northern Taiwan. There were four levels of General English (basic, lower-intermediate, higher-intermediate, and advanced), and placement was based on the students' national university English entrance exam scores. Our students were advanced learners of English, which is the highest level for General English classes. The class consisted of 16 students from College of Liberal Arts, 3 students from International Studies and Social Sciences, 2 students from College of Sports and Recreation, 1 student from College of Technology and Engineering, and 1 student from the College of Fine Arts. We assumed that these advanced students would be able to initiate, participate in, or lead the discussion in English without too much difficulty.

2.2 Design

Because none of them had heard of the concept of QT before, a mini-lesson on QT was given in the second week of the semester (the course overview was presented in Week 1). In the mini-lesson, the question types (test, authentic, uptake, speculation, generalization, affective, connection, and analysis) were introduced. For each question type, a definition was given and a few sample questions were provided in the handout (see Table 1; the definitions and examples were offered by Dr. Karen Murphy). Students were asked to find out and underline the corresponding sentence fragments (as underlined here in the examples).

Then, they watched a TED talk, *Why 30 is not the new 20*, given by Meg Jay (2013). Meg Jay is a clinical psychologist. In this talk, she suggests that we should

Table 1 Definitions and examples for each question type used in the mini-lesson

Question type	Definition	Example
1. Test	<ul style="list-style-type: none"> • Answers can be found in the text • Generally there is only one correct answer • Can be answered in a few words or short sentences 	Where did you go on your trip?
2. Authentic	<ul style="list-style-type: none"> • Answers come from thinking about what we have read—not directly from the text • They can have more than one correct answer • Answers are supported by reasons and evidence from the text, other sources, or our own thinking 	<i>What was the best part of the trip?</i>
2.1 Uptake	<ul style="list-style-type: none"> • Uptake is when someone asks a question about what someone else said or asked • Listen carefully to what other group members say so you can ask for more information 	<p><i>A: Our trip to Washington, DC was fabulous. We visited the Museum of Natural History and the Lincoln Memorial</i></p> <p><i>B: Oh, I like the Museum of Natural History a lot. <u>Which is your favorite part of the museum?</u></i></p> <p><i>A: I watched a movie called Jurassic Park and always wanted to see models in person</i></p> <p><i>B: Helen, <u>do you think the dinosaur model you saw in the museum is different from the one in the movie?</u></i></p>
2.2 Speculation	<ul style="list-style-type: none"> • They are questions that require you to consider alternative possibilities 	<p><i><u>What if</u> Ryan’s mom scolded him immediately after he told the truth?</i></p> <p><i><u>If you wanted to make something for dinner, what would you cook?</u></i></p>
2.3 Generalization	<ul style="list-style-type: none"> • They are questions that require you to find the big idea by putting different parts together or getting a general rule/theme 	<p><i><u>What lesson is the author of Ryan and Jonah trying to teach us in this story?</u></i></p> <p><i><u>How would you describe Ryan’s personality?</u></i></p> <p><i><u>What is the big idea of the story?</u></i></p>
2.4 Affective	<ul style="list-style-type: none"> • Affective questions can have more than one answer • Affective questions are open to debate and discussion • Answers to affective questions should be supported by reasons and evidence from your personal feelings and experiences 	<p><i><u>If you were the shepherd boy who cried wolf, how would you feel if nobody came to save you the last time?</u></i></p> <p><i><u>Have you had a similar experience ... ?</u></i></p>

(continued)

Table 1 (continued)

Question type	Definition	Example
2.5 Connection	Connection questions are authentic questions that make connections: <ul style="list-style-type: none"> • between the story and things you have read, seen, or heard in the past • between the story and things that others in the group have experienced or shared with you 	<i>How is the story <u>The Frog Prince</u> similar to the movie <u>Frozen</u>? <u>Is Sleeping Beauty more like Anna or Elsa?</u> </i>
2.6 Analysis	Analysis questions require you to break down ideas by: <ul style="list-style-type: none"> • looking at different ideas in the text • understanding how ideas relate to each other 	<u>Why</u> did Ryan lie to his mother at first? <u>Why</u> did Ryan decide to tell the truth at the end?

start planning our lives before marriage, work, and kids come. The students used the TED talk content for practicing QT questions. They were encouraged to think of as many types of QT questions as possible. As this was the first-time discussion, the students were asked to throw out all the questions they have made without asking their peers to answer them. The group members had to justify whether the questions were suitable for the QT question types as were claimed. After the practice, the students reported that they had no problem in making QT questions.

In the semester, three types of materials were used for the QT sessions, including an image (*Necessities*), a popular science article (*Power of visualization*), and a lifestyle article (*Stress and relaxation*). The course schedule is presented in Table 2. The designs and procedures are as follows.

2.2.1 An Image

Unit 1 of our textbook, *Keynote Advanced* (Lansford et al., 2016), talks about necessities, i.e., things you cannot live without. Students were randomly assigned into 6 groups (a group of 4 people). They were asked to look at the photo shown on pages 8–9 of the textbook and then to generate QT questions immediately in class. The photo depicted a family’s possessions (TV, wok, bed, shelves, etc.) placed outside a traditional yurt in Mongolia. The students were given 20 minutes to write down the questions on the worksheet (see Appendix A) and to prepare for the 20-minute group discussion. Since the group discussion only lasted for 20 minutes, it might not be possible to discuss all the questions. Therefore, before the group discussion began, the students were told to choose the questions they were most interested in for discussion.

Table 2 Schedule of the QT instruction and discussio

Week	Content	Class activity
1	Course Overview	
2	QT mini-lesson	
3	Lesson 1 Necessities QT discussion	
4	Lesson 1 Necessities	Class activity 1: 2-minutes individual speech
5	Lesson 2 Teamwork	
	Make-up class	
6	<i>[No class] Spring break</i>	
7	Lesson 2 Teamwork	
8	World café	World café
9	Lesson 2 Teamwork	Class activity 2: Impromptu-like meeting
10	Lesson 3 Power of visualization QT discussion	
11	Lesson 3 Power of visualization	
12	Lesson 3 Power of visualization	Class activity 3: Word game
13	Lesson 4 Stress and relaxation QT discussion	
14	Lesson 4 Stress and relaxation	
15	Lesson 4 Stress and relaxation	Class activity 4: Writing a letter for yourself
16	Making Creative Stories	
17	Final Exam: Oral	
18	English Proficiency Test	

2.2.2 A Popular Science Article

The textbook, *Keynote Advanced*, contains many popular science articles, in which the authors discussed issues and used scientific evidence to support their arguments. One of the popular science articles was about the power of visualization, which argued that imagination is powerful for attaining success and curing disease. The students were asked to read this article, prepare all types of QT questions at home, and write them down on the worksheet (Appendix A).

As a warm-up activity in class, I used six board game posters, one poster per group. The board game was embedded in a car racing scenario. The track had been divided into several empty slots. The QT question types were handwritten in the empty slots and were randomly assigned by the instructor. Each student picked a vehicle (bus, car, bike, motorcycle, or helicopter) and took turns rolling a dice. The number shown on the dice determined how far the vehicle could go. Then, based on the question type displayed on the slot, they had to discuss that type of QT question. During the group discussion, they had to make a record of the discussion process, including the questions and answers, on the group discussion sheet (see Appendix B). They were

also asked to highlight on the group discussion sheet and worksheet the questions that resonated with them most. The group discussion lasted for 40 minutes.

2.2.3 A Lifestyle Article

One week before the last session of QT was run, one hour was spent teaching the language of taking part in a meeting. The materials from the article, “Can Stress Be Good For You?” were adopted from Unit 8 of the textbook, *Keynote Advanced*. The class read aloud each phrase or sentence of opening a discussion (e.g., *I’d like to start the discussion by...*), interrupting (e.g., *Before you continue, can I just say ...*), stopping interruption (e.g., *Could I just finish what I was saying?*), inviting participation (e.g., *Any thoughts on...?*), and wrapping up (e.g., *I guess we’ve covered everything*), thus giving the students some time to become familiarized with the language. Then, they were told to discuss the teamwork project called marshmallow challenge, which they did a few weeks prior. A sample flow chart of the discussion was provided, which included an opening, several turns of interruption, and an ending. The students did not have to strictly follow the flow chart, but had to use as many expressions as possible.

I gave the students 40 minutes to practice and rehearse. Each student chose his role (a host or a participant) in the mock meeting. In the second hour of the lecture, they performed their mock meetings to the whole class (notes were allowed). The non-presenters were asked to count how many expressions were uttered. The results show that every group used more than 10 expressions in the mock meeting. The students revealed both orally and by writing in the final teaching evaluation that they benefited considerably from this language practice.

There are several activities that certainly equipped us with practical abilities. For example, by means of demonstrating a meeting, I learned a lot about the proper way to hold a conference and to participate in a (QT) discussion. Besides, the World Cafe event helped us cultivate the value of globalization and mutual respect, and also led us to another way of discussing an issue. In addition, the Marshmallow Challenge was really impressive to me. I’m fond of this way of learning through practical operation. I also like the form of this course, that is, group discussion. It’s delightful to speak English in this course since I don’t have many opportunities to speak English in my daily life. Through group discussion and giving a speech onstage sometimes, I’ve improved my English speaking. Thank you for designing this course in such an interesting way, and thank you for always giving feedback and suggestions on our speaking or performances. I’ve definitely benefited a lot from this curriculum. I always enjoy this course!—written by a student in the final course evaluation

Returning to the topic of the last session of QT, the students read a lifestyle article about stress entitled “Can stress be good for you?” This article listed some positive effects of stress in our lives. The students were required to prepare all types of QT questions at home and to write them down on the worksheet (Appendix A). Before the group discussion, I encouraged them to use as many expressions they learned in the previous week as possible. They first chose their roles (a host or a participant) in the group discussion. During the discussion, they could ask any type of QT question. At the same time, they made a record of the discussion process,

including the questions and answers, on the group discussion sheet (Appendix B). The group discussion lasted for 40 minutes.

2.3 Data Collection and Analysis

The worksheets and group discussion sheets were all collected at the end of each discussion. The questions, the question types, and the answers were manually entered in Excel by the teaching assistant. In this study, I only analyzed the questions that have been discussed during the group discussion (that is, the questions recorded on the group discussion sheets). The total number of questions generated for each QT type during the discussion (i.e., from the group discussion sheets) was calculated respectively for each text type.

3 Findings and Discussion

3.1 Findings

The number of questions generated for each QT question type and each text type during the discussion is displayed in Table 3. As can be seen from Table 3, speculation question (83 out of 254; 33%), affective question (75 out of 254; 30%), and connection question (46 out of 254; 18%) were the most frequently used types regardless of text type. In the following subsections, I will discuss the effect of text type on the QT question type.

Table 3 The number of questions generated for each QT question type and each text type

Question type	Text type			Total
	Image	Popular science article	Lifestyle article	
Test	3 (3%)	4 (5%)	9 (11%)	16 (6%)
Uptake	5 (6%)	5 (6%)	9 (11%)	19 (7%)
Speculation	61 (69%)	10 (12%)	12 (14%)	83 (33%)
Generalization	2 (2%)	2 (2%)	2 (2%)	6 (2%)
Affective	12 (14%)	20 (24%)	43 (52%)	75 (30%)
Connection	0 (0%)	42 (51%)	4 (5%)	46 (18%)
Analysis	5 (8%)	0 (0%)	4 (5%)	9 (4%)
Total	88	83	83	254

3.1.1 An Image

It was found that for the image, more speculation questions (61 out of 88; 69%) were generated than any other type. A few examples of speculation questions are displayed in (1)–(4).

- (1) What if the dog was missing? What kind of reaction would you have?
- (2) If you were one of the couple, what would you do if you could move to a big city, a more convenient place?
- (3) What if it was raining, then how could they gather all their things?
- (4) What if your tent was blown away, what would you do?

As shown in (1)–(4), it seems the students could look at the image and easily imagine lifestyles and speculate on possible situations the couple may encounter. Since there is no text on the image, test questions (3 out of 88; 3%) that require correct answers and connection questions (0 out of 88; 0%) were not favored. Generalization questions (2 out of 88; 2%) and analysis questions (5 out of 88; 8%) that require high-level thinking were few. There are two possible explanations for this: (i) since this was the students' first attempt, the students, under time pressure, may have had difficulty in finding the key point or making a connection to what they had read before; and (ii) it is also likely that getting a key point from an image may be more challenging than doing so from a text, as Taiwan's high school education trains reading comprehension by mainly focusing on texts. Finally, affective questions (12 out of 88; 14%) were not quite common in the group discussion, probably because most students did not have experience of living in a yurt.

3.1.2 A Popular Science Article

For the popular science article, connection questions (42 out of 83; 51%) were favored and heavily discussed. A few examples are shown in (5)–(9).

- (5) Does this story remind you of a television commercial in which a character called “butter lion” said, “Visualization is your superpower”?
- (6) Has anyone in your life applied the method of “visualization”?
- (7) Does this article remind you of any movies you've seen?
- (8) Does the article remind you of the “memory toast” in Doraemon? And is it possible that visualization could become a form of “memory toast” in the future?
- (9) Do you know of any athlete who used the same method?

Since the students were prepared prior to the class, we can see that the questions they generated had higher quality. In the connection questions, the students could provide examples (such as Butter Lion or Doraemon) in addition to the questions themselves.

The next frequently made question type for the popular life science article was affective question (20 out of 83; 24%). The students tried to link the evidence with their personal experiences. A few examples are shown in (10)–(13).

- (10) How did you feel when you just imagined that you were reviewing the courses before the test?
- (11) In your experience, what would you do to overcome nervous feelings?
- (12) Have you ever done visualization before?
- (13) How would you think about the people who always use visualization?

As mentioned in Sect. 2.2.2, a board game poster showing the QT question type on each slot was used during the QT discussion. The reason why the board game was used as a warm-up activity was that the students had had difficulty in initiating a discussion. They did not know what kind of language they could use for opening, interrupting, or wrapping up the discussion. However, building the skeleton was essential before continuing QT instruction. This will be addressed in detail in the following section. This board game helped release their tension of engaging in group discussion and has received many students' positive feedback (see below).

The course is very much aligned with the textbook. There's a lot of group work and fun games where we have to participate actively.—written by a student in the final course evaluation

Thank you for preparing these wonderful and thoughtful classes for us, I enjoy learning English very much. After this semester, I think that my speaking and presenting skill has improved! Besides, I've learned more about creativity through the class/game activities, this is surely a meaningful course for me.—written by a student in the final course evaluation

I know my English is not good. But I started to gain interest in learning English. The instructor's use of game activities inspired me a lot.—written by a student in the final course evaluation

3.1.3 A Lifestyle Article

More affective questions (43 out of 83; 52%) were discussed than any other type. When the students were discussing the lifestyle article, they quickly linked their personal experiences to the topic. A few examples are shown in (14)–(18).

- (14) Have you ever felt overwhelmed by stress? How did you deal with it?
- (15) Has stress ever helped you perform better?
- (16) Did you take a long time to adjust yourself?
- (17) What do you do when you're stressed out?
- (18) Have you ever experienced a situation where stress was beneficial?

The next frequently made question types for the lifestyle article were speculation question (12 out of 83; 14%) test question (9 out of 83; 11%), and uptake question (9 out of 83; 14%). It suggests that the students created the questions that were directly linked to the keyword, *stress*. They were trying to find the answer from the article (test question) or looking for alternative possibilities (speculation question). Since the topic was highly related to their daily life, it would be relatively easy for them to

follow up previous questions (uptake question). A few examples are shown in (19) for test question, (20) for uptake question, and (21)–(22) for speculation question.

- (19) What are the advantages of experiencing moderate stress?
- (20) Q1: How would you feel if stress comes from your family? (affective question)
 Ans: I would feel sad.
 Q2: Do you have any tip to deal with that situation? (uptake question)
- (21) What would happen if a person lives without any stress?
- (22) What if we didn't walk through the "low-level" childhood anxiety?

Because the language training was given in the previous week, the flow of discussion became smoother. The students knew how to open a discussion, how to invite the peer to express the opinions, and how to wrap up the discussion. The language skeleton helped them to interact with the group members. This suggests that before we implement QT in a foreign language classroom, it is a good idea to ensure that students have the ability to hold a general meeting or discussion in English. They need to know how to be a host and how to be a participant. Without that language skill, even with interesting ideas in mind, they would probably not know how to break the ice. In other words, in addition to practicing the sentence fragments for each question type, the training of discussion skills should be prioritized in a foreign language classroom.

3.1.4 Leadership Traits

There were two female students with leadership traits who were always very active in class. Although personality traits were not officially examined in this study, an instructor could always identify the active participants in the class. According to personal observation, the two female students always initiated the group discussion, with a particularly loud and confident voice. They could quickly fill the gaps of silence in the discussion by expressing their own opinions. They were also good at inviting their group partners to join the discussion. Further examination of their QT questions show that they were able to ask generalization questions (see (23)–(28)), which was the least frequent type in general (see Table 3).

- (23) What kind of lifestyle do Mongolians have?
- (24) How would you describe their life?
- (25) How would you sum up the concept of 'stress' in one sentence?
- (26) What are the pros and cons of stress?
- (27) In which aspect can we use visualization to help us?
- (28) Which visualization experimental results do you believe in most?

The other students also had generalization questions written on the worksheets (assignment), but that these two students always made sure their generalization questions were fully discussed in every QT session. Compared to other students' generalization questions which were very similar (e.g., what is the main idea of this article?),

the two students' generalization questions varied in both form and meaning (see (23)–(28)). Generalization requires a student to identify the main idea by putting things together. It seems that this higher level thinking ability corresponds to the leadership trait of managing complexity.

The students' preferences for the QT question types seem to have a connection with their personalities. An ideal QT group may have to consist of students of different personalities. This diversity would allow students' discussion to flourish. It is worth investigating in future large-scale studies the relationship of different personalities and QT question types.

3.2 Discussion

Text type was found to be associated with the preference for QT question types. When the image was used for QT discussion, speculation question was preferred, meaning that the students were speculating the imagery that the photo intended to convey. As for the popular science article, the students attempted to make connection between the scientific evidence in the text and the articles or movies they have read or watched before. Finally, the lifestyle article evoked more affective questions than others, as the content in the article was highly related to personal life or experience. The association of text type and question type suggests that in QT training, teachers should use a variety of texts or even images for discussion. The variety of text types could ensure that each QT question type is sufficiently practiced.

One may argue that the text type effect found in this study was confounded by the teaching method. This is possible and should be taken into consideration for future research. As mentioned in Sect. 2.2, different methods were employed: the traditional teacher-oriented method in the image, the board game for the popular science article, and the mock meeting in the lifestyle article. The purpose of utilizing different teaching methods was to encourage the shy students (the majority) to express their opinions. While the students had no difficulty in making QT questions, they had a hard time in initiating and engaging in the discussion. Although the board game facilitated the discussion to a certain degree, it did not seem to be the most effective one for making a fluent discussion. From personal observation, it was clear that what the students needed was the English meeting and discussion skills (for example, how to initiate a discussion, how to invite participants to share their ideas, how to interrupt politely, how to close the discussion, etc.), which provides the skeleton for discussion. The discussion skills including sentence fragments or flowcharts were instructed in the written handouts. It is likely that some students may still not be able to grasp the essence of holding a discussion by simply reading the written information. In future study, researchers can investigate whether seeing a video of discussion (i.e., seeing how people are engaged in discussion) would be more beneficial to second language learners.

I suggest that English meeting and discussion skills should be trained prior to QT implementation. In this way, it would be possible to investigate the text type effect with the same teaching method, or explore the effect of teaching method on the same type of text.

4 Summary and Conclusion

This chapter has found that text type has an effect on the QT question types students can generate. It not only encourages language teachers to include different types of materials for QT discussion, but also shows that language skills, particularly for second language learners, should be enhanced prior to the implementation of QT. The main points of the chapter can be summarized as follows:

- There was an association between text type and the preferred QT question type.
- Speculation questions were preferred for an image. Connection questions were favored for the popular science article, while affective questions were favored for the lifestyle article.
- The students with leadership qualities tended to ask generalization questions to their peers. In other words, high-level thinking questions were evidenced in the students with leadership qualities.
- QT training requires using different types of materials so that each QT question type can be sufficiently practiced.
- Discussion skills should be trained prior to QT implementation, particularly for second language learners.
- Innovative enactment such as board games can be used together with QT for group discussion.

Appendix A: Worksheet

Group: _____

Name: _____

Reading source: _____

List all the questions you want to ask during the discussion. Fill in the question type that each question belongs to. Try to think of as many questions as possible.

No.	Question Type	Question
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Appendix B: Group Discussion Sheet

Group: _____

Name: _____

Summary of your discussion

Question 1 (Category _____):

Answer provided by _____:

Answer provided by _____:

Answer provided by _____:

Answer provided by _____:

Question 2 (Category _____):

Answer provided by _____:

Answer provided by _____:

Answer provided by _____:

Answer provided by _____:

References

- Jay, M. (2013, February). *Why 30 is not the new 20*. TED: Ideas worth spreading. https://www.ted.com/talks/meg_jay_why_30_is_not_the_new_20.
- Lansford, L., Dummett, P., & Stephenson, H. (2016). *Keynote: Advanced*. National Geographic Learning.
- Li, M., Murphy, P. K., & Firetto, C. M. (2014). Examining the effects of text genre and structure on fourth- and fifth-grade students' high-level comprehension as evidenced in smallgroup discussions. *International Journal of Educational Psychology, 3*(3), 205–234.
- Li, M., Murphy, P. K., Wang, J., Mason, L. H., Firetto, C. M., Wei, L., & Chung, K.-S. (2016). Promoting reading comprehension and critical-analytic thinking: A comparison of three approaches with fourth and fifth graders. *Contemporary Educational Psychology, 46*, 101–115.
- Murphy, P. K., Firetto, C. M., & Greene, J. A. (2017). Enriching students' scientific thinking through relational reasoning: Seeking evidence in texts, task, and talk. *Educational Psychology Review, 29*(1), 105–117.
- Murphy, P. K., Firetto, C. M., Wei, L., Li, M., & Croninger, R. M. V. (2016). What REALLY works: Optimizing classroom discussions to promote comprehension and critical-analytic thinking. *Policy Insights from the Behavioral and Brain Sciences, 3*, 27–35.