A Study on the Application of the Task-Based Language Teaching Approach in an English Reading Comprehension Classroom in a Chinese Senior High School

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Abstract: Along with the development and maturity of theories on the task-based language teaching approach, a growing interest among domestic education scholars has emerged in exploring its practical use in high school English classrooms. The application of this cutting-edge teaching approach in senior English reading comprehension teaching has also been one of the research interests in the study of pedagogics. Through a detailed analysis of a demonstration lesson in a Chinese senior high school, the author explores the implementation of the task-based language teaching approach in an English reading teaching classroom. This article examines the completion of tasks, analyses the ability of the teaching approach to accomplish the assigned teaching objectives, describes the application of tasks to the classroom process, and discusses the transfer and application of this approach to other classes and other grades. The findings of this study can provide insights into the application of the task-based language teaching approach and give some inspiration to English reading comprehension teaching in Chinese senior high schools.

1. Introduction

1.1. Introduction

Reading has always been a very important part of English language instruction in the modern Chinese classroom. The senior high school English test in China also emphasizes reading comprehension. Therefore, it is worth paying attention to ways to improve students’ interests and skills in English reading. However, traditionally teachers mostly have adopted a teaching method in which “teachers speak” and “students listen,” which suppresses both teachers’ and students’ creativity and reduces students’ interest in reading articles.

The National English Curriculum Standards for General Senior High Schools (2017) pointed out that the specific goal of English courses in senior high schools is to develop students’ key competencies, including language ability, cultural awareness, thinking quality, and learning ability. The task-based language teaching approach, which was proposed in the 1980s and is currently
regarded as one of the most effective ways to develop language competence, is helpful for implementing the advanced teaching concepts of the new English curriculum standards and improving students’ comprehensive ability to use language. It overcomes many of the disadvantages of the traditional teaching methods, and avoids disconnection between language knowledge and life.

Task-based teaching and reading teaching have been studied theoretically at different levels and from angles by education scholars both in China and abroad. However, there have been relatively few empirical studies on the application of task-based teaching to senior high school English reading comprehension. Therefore, this study focused on the application of this teaching approach in an English reading classroom in a senior high school through an analysis of a public demonstration lesson.

1.2. Aims and Objectives

The aim of this project was to investigate the specific application of the task-based language teaching approach in a certain classroom, so as to provide some theoretical and practical enlightenment for senior English reading teaching. The study was guided by the following general research questions: In a senior high school English reading class,

a) What kinds of tasks should teachers design?

b) What effect do the tasks have on the progress of the reading class?

c) Can the task-based language teaching approach used in an English reading classroom be applied to other grades or other classes?

2. Literature Review

2.1. Introduction

In order to present a clear picture of the background for this research, this section reviews theories and studies that are concerned with reading, tasks, and the task-based language teaching approach.

2.2. Definition of Reading

Reading is a complicated process. Readers not only apply knowledge of linguistics, lexicology, and semantics to interpret texts, but also use background knowledge to understand them. It is also a process of psychological language activity within readers themselves, and a two-way written communication between readers and reading materials [1]. As mentioned above, reading comprehension is one of the most vital parts of the senior English test in China. The main purpose is to understand the style and structure of an article, get familiar with language knowledge, and lay a solid foundation for deeper understanding and the reading of more difficult articles, so as to improve students’ reading skills, reading ability, and capacity for the comprehensive use of language [2].

2.3. Definition of Task

Skehan considered a task to be an activity where meaning is primary and a communication problem needs to be solved; furthermore, a task is assessed in terms of outcome [3]. According to Richards, “task” talks about the relationships within activities, so it is also called an activity structure [4]. Specific to language learning, Nunan pointed out that a communicative task is a classroom activity that involves learners in comprehending, manipulating, producing, or interacting in the target language while their attention is principally focused on meaning rather than on form. The task should also have a sense of completeness and be able to stand alone as a communicative act in its own right.
In terms of domestic studies on tasks, Han [4] summarized that a task is a learning content and method designed by teachers to achieve specific teaching objectives, such as practice, reading, dictation, fast reading, reciting, dialogue, and so on. It involves not only teachers’ arrangement of teaching themes and content, estimation of learning ability, and selection of and thinking about task knowledge and skills, but also teachers’ teaching methods and personal teaching ideas. Task factors include factors related to the learning process, such as the purpose, content, process, method, and result of classroom learning activities. Among these, the task is the most critical factor, determining the basic process of learning, that is, what students do and how they do it.

Zhang [6] claimed that, in senior high school English reading teaching, task designers must provide learners with clear and real linguistic information, so that learners can experience language and master the application of language in either a natural or a simulated way. Task design should be combined with students’ social lives. Wang [7] suggested that, in the task-based language teaching approach, “task” does not mean only one task. It can refer to multiple different tasks or a big task that is divided into smaller tasks, step by step, to achieve the final teaching goal. In all the pre-task, in-task, and post-task stages, teachers should give correct guidance to students. Moreover, the difficulty of tasks should be moderate, so as to push students beyond their level of language knowledge.

2.4. Definition of the Task-Based Language Teaching Approach

In recent years, theories about the task-based language teaching approach have been developed both at home and abroad. Task-based language teaching, also called task-based instruction, is regarded as a way to realize the communicative language teaching approach [8]. In task-based language teaching, language teachers give tasks to students so that students can learn language by doing tasks [9]. Nunan summarized seven principles guiding the instructional sequence of task-based language teaching, including scaffolding, task dependency, recycling, active learning, integration, reproduction to creation, and reflection [3]. As for the patterns of instructional design, Willis put forward three steps of task-based language teaching, including pre-task, the task cycle (task, planning, and reporting), and post-task (analysis and practice) [10].

Moreover, many scholars in China have researched the task-based language teaching approach. Wei [5] pointed out that the theoretical basis for task-based language teaching is the Input and Interactionist Hypothesis, which is based on Krashen’s Acquisition/Learning Hypothesis, the Output Hypothesis, and Long’s Variable Interaction Theory. Zheng [11] suggested that the theories of task-based language teaching mainly come from activity theory, communicative competence theory, autonomous learning theory, and cooperative learning theory. According to Zhang [6], the task-based teaching approach represents a further development of the communicative teaching approach. In these approaches, teacher–student interaction reflects the student-centered teaching mode, emphasizes the students’ subjectivity, and enhances the students’ practical ability, creative ability, and comprehensive use of language, making them one of the effective ways to achieve the goal of curriculum reform.

Guo and Guo [12] claimed that task-based language teaching emphasizes student-centered teaching, takes students’ life experience and interests as its starting point, is mainly based on “learning through doing,” and focuses on the task of using language. Classroom activity forms of task-based situational teaching are flexible and diverse. The principle of “form serves content” should be considered when choosing the most appropriate, practical, and easy methods to implement this teaching approach, such as interviews, debating, making, planning for a trip, story-telling, picture shows, collecting, reporting, discussion, pair work, group work, and problem solving. Shen [2] held that, in the task-based language teaching classroom, some tasks should include interaction between students and teachers, so that foreign language learners can learn the language naturally, expand their
communicative vocabulary, and promote their language learning progress.

2.5. Summary

This section has briefly reviewed the theories and previous studies related to reading, tasks, and the task-based language teaching approach. This review has shown that many studies have been carried out from different perspectives to investigate the definition and use of this teaching approach. However, few studies have discussed the application of this approach in senior high school English reading teaching in China. Due to this reason, research on the application of the task-based language teaching approach to an English reading class in a senior high school through an analysis of a public demonstration lesson is worthwhile and valuable.

3. Research Method and Data Collection

3.1. Introduction

In order to provide a detailed statement of the research methodology, the method of data analysis and data collection are elaborated in turn in this section.

3.2. Research Method

This research was a case study. The research paradigm was explanatory and exploratory, using a non-experimental method to yield qualitative data and results. Thus, the analysis was an interpretive one. The reason for choosing this research method was that, in this study, research data was obtained from a specific classroom case; in-depth and holistic exploration was needed, so that conclusions and theories could be formed from the original data. Through the observation of the research object, an interpretative understanding of its behavior and meaning construction could be obtained.

3.3. Data Collection

The method of data collection in this study was “classroom observation.” The observation used in this study was a demonstration lesson (Tracy’s English reading class) obtained online from the Third National English Classroom Teaching Reform Forum. The participants in this class were about 25 senior high school students. The article they read in the observed class was *Tu Youyou Awarded Nobel Prize* from *PEP High School English Elective 1* (2019). The observation allowed the researcher to study instances of the task-based language teaching approach such as teaching discourses, teaching methods, and classroom tasks.

4. Data Analysis

4.1. Introduction

This lesson used an article entitled *Tu Youyou Awarded Nobel Prize* as its reading material. The article introduced the life of the famous scientist Tu Youyou and her experience of winning prizes. It was a news story with clear structure and rich wording. The content was attractive to students and the language was relatively simple, conforming to students’ English reading level. At the same time, the teacher could use it as a medium to guide students to learn writing skills related to exposition.

According to the new requirements for students put forward in the new curriculum reform, students should not only learn language knowledge in class but also learn how to better plan their future path. This reading material broadened students’ horizons and focused on their dreams for the future. The
teacher added a lot of tasks in this class, asking students to speak actively and express their views on the article. This improved on the traditional teaching mode of simply allowing students to read and having the teacher explain the article in class, and also implemented principles of the task-based language teaching approach, which is close to real life and able to stimulate students’ interest in learning English.

The task-based teaching model proposed by Willis [10] is the teaching model most widely used and accepted by Chinese teachers. It divides reading teaching into three parts: pre-reading, mid-reading, and post-reading. The classroom case studied in this article used this model for reading comprehension.

4.2. Pre-reading

Step 1: Lead-in

This is the first stage of the task-based language teaching approach—preparation. In the lead-in part of the lesson, the teacher should carry out a content prediction activity based on the reading materials to draw the attention of the students. In this lesson, the teacher, Tracy, first showed a loquat leaf to the class. This leaf is a special botanical treatment for some diseases. This activity was aimed to introduce the medicinal extraction function of plants mentioned in the article, and also instantly stimulated students’ interest, aroused their curiosity, and improved their acceptance of the text.

Utterance of the teacher and students were transcribed as follows in Figure 1.

| T : Hello, everyone. I’m Tracy. Welcome to my class. Are you ready? |
| Ss : Yes. |
| T : Now, look. What’s in my hand? Can you see it? What’s in my hand? What’s this? |
| S1 : I suggest it’s sweet wormwood. |
| T : Is it sweet wormwood? Really? |
| S1 : Can I use the Chinese? |
| T : Of course. |
| S1 : *Pipa.* |
| T : Exactly. This is the loquat leaf. Okay, so, what can it be used for? |
| Ss : (answer in a low voice) |
| T : Exactly. So, when you catch a cold and you cough, you can use this, right? And actually, this is a crucial botanical treatment for cough. Then, how do you usually use it? Can I just eat it? |
| Ss : No. |
| T : We usually…? Exactly, we usually boil it and drink the liquid obtained. It is because it is evaluated that the extract obtained has vital medical practice. |

Figure 1: Lead-in

Step 2: Explanation of new words

It is necessary for the teacher to explain new words before students read. If there are too many new words or difficult words in the reading material, it will cause great confusion to the students’ understanding, and even affect the execution of subsequent tasks. After the lead-in, Tracy first explained some important words that would appear in the passage. This helped students clear away vocabulary barriers, so that they could complete the reading process quickly. Figure 2 showed the sample.
Tracy also set up a paragraph and asked the students to fill in the blanks with the new words they had just learned. This could further help them review these new words and show them the context in which these words are used. The exercise was shown in Figure 3.

Exercise: The Loquat leaf is a ____ botanical treatment for cough. After ____ it, drink the liquid. It is the ____ that the extract ____ has vital medical properties.

Step 3: Background introduction

A background introduction is an important part of the pre-task stage. Students can discuss in groups, appreciate audio or video materials, or do other activities to activate their relevant background knowledge and arouse their interest in a reading. They can also collect relevant materials in the library or search for information on the Internet in advance, which they can then share with their classmates at the beginning of the class.

After introducing some new words, Tracy showed the students a picture of the sweet wormwood from which Tu Youyou had extracted artemisinin. Then she asked them to share what they knew about Tu Youyou, the main subject of this article. Figure 4 showed the utterance of background introduction.

T : What about these plants?
Ss : (answer in a low voice)
T : This is called the sweet wormwood and the extract obtained is called artemisinin. So, who discovered artemisinin?
Ss : Tu Youyou.
T : What else do you know about her?
S2 : She is a scientist and she won the Nobel prize.
T : Exactly. Thank you very much. So, you can see this is what’s actually happening. Tu Youyou was being awarded a Nobel prize, and that was actually on October 5th, 2015.

Step 4: Show the students the tasks of today’s lesson

In task-based language teaching, it is vital for students to be clear about the teaching objectives of a lesson. Different objectives determine different reading methods and reading speed. Throughout this lesson, the main objectives were as follows:

a) After the study of the reading material, students have an overall understanding of the main subject and her achievements.

b) Learn the reading skill of using a flow chart: With the help of a flow chart, students are able to organize the structure of the whole passage.

c) Train oral expression ability: Students are encouraged to discuss and report in class.
4.3. Mid-reading

In the process of reading, students are required to clarify the author’s writing intention and the structure of the article. In this stage, students are the executors of tasks, while the teacher plays the role of instructor, coordinator, and supervisor. Reading activities should have a time limit, and the teacher should prescribe different reading speeds to students during different tasks. In this process, questions are frequently used to test students’ understanding of the content input and their passion for the text. Students can discuss the intention of the writing, the hidden meaning of the article, or their own opinions based on their reading experience. In the observed class, Tracy assigned a number of tasks to the students to facilitate this stage of reading.

Task 1: Skimming for general ideas and scanning for specific points

To achieve the first teaching objective, that is, having an overall understanding of the article, students were required to read the whole passage and answer the following four questions:

a) What Nobel prize did Tu Youyou win?
b) Why was she awarded the Nobel prize?
c) How was artemisinin discovered?
d) What did she think of the award?

In order to finish the task, the students were given three and a half minutes to read and underline the answers. Then the teacher helped them check their answers together. The first two questions were relatively simple. Therefore, Tracy asked the students to answer orally, which could not only save time during classroom practice, but also corrected students’ oral errors and helped them pronounce words correctly. Figure 5 showed the discourse.

| T : Time’s up. Let’s share your answers. How about the first one? Who would like to answer the question? Raise your hand. What Nobel prize did Tu Youyou win? If you know, you raise your hands. You please? |
| S3 : The Nobel prize for physiology or medicine. |
| T : Exactly. Sit down, please. So, everybody follows me. Physiology. |
| Ss : Physiology. |
| T : Good. How about the second one? Why was she awarded the Nobel prize? Who’d like to? You please? |
| S4 : She discovered an artemisinin, a crucial new treatment for malaria. |
| T : Okay, very good. |

Figure 5: Checking the answers to the first two questions

Task 2: Learning to use a flow chart

To answer the third question, how artemisinin was discovered, Tracy introduced a reading skill that used a flow chart—a graphic way to show how a process works with necessary steps—to organize events in sequence. The sample was shown in Figure 6.
In this part, students were given six and a half minutes to review this passage and draw their own flow chart. After reading, two students were invited to the platform to share their answers orally. At the same time, the rest of the students needed to check their own answers and make comments on the two, so as to help them correct their errors. After the two students showed their flow charts, the teacher gave some suggestions on the two samples. She pointed out that some steps that the first student mentioned were unnecessary. It would be better to make the chart briefer and include only the most necessary information. On the other hand, Tracy praised the second student for using a timeline to connect the events, which made his answer more organized. Finally, she provided a reference answer for the students in the form of a picture presentation on the projector.

Throughout the whole process of reading, the teacher paid great attention to cultivate the students’ viewing skill, which refers to the skill of understanding meaning by making use of graphics, charts, animations, symbols, and videos in multimodal texts. In order to understand multimodal texts, students not only need to use traditional text reading skills, but also need to obtain information from charts and tables and understand the meaning of symbols and animations. By viewing, students can visualize information in oral or written texts and understand the texts in a more vivid and intuitive way. Given the increasing importance of viewing skill in the new media era, viewing was incorporated into the original “four language skills”—listening, speaking, reading and writing—in the New National English Curriculum Standard in 2017.

Task 3: Discussion and speaking

In the section of discussing and speaking, a teacher’s job is to supervise students and motivate them to learn and cooperate with each other. Students are encouraged to work individually or in groups to present their work to the class through the forms of performance, presentation, description, etc. In the process of presentation, teacher can help students to overcome difficulties in oral expression, so as to develop their confidence and courage when speaking in public.

In this class, Tracy adopted the form of oral report to check the results of students’ discussion. The students were divided into groups of four and had a discussion for about two minutes. One representative from each group reported the results of the task to the whole class. After the report stage, Tracy summarized the students’ answers and made an evaluation of their presentation. The utterance was shown in Figure 7.
As the students answered, Tracy wrote some key words in a graphic on the blackboard, which organized the answers better and helped to review the reading skill of using the multimodal text mentioned in the previous part to improve students’ understanding. Graphics can take many forms. The one used in this case was shown in Figure 8.
4.4. Post-reading

This is the third stage of task-based language teaching, aimed to help students consolidate what they have learned. The teacher can evaluate their performance through written homework, oral answers, classroom presentations, learning attitudes, participation, and cooperative spirit, and check the input and output of knowledge in the lesson. In this class, an assignment was given to write a passage entitled *My Science Icon*. Students were encouraged to use the adjectives on the blackboard to describe a person or a person’s achievement, and use the steps to describe the research process. This was a kind of open assignment, which helped students to review the words and expository structure learned in class and convert them into language output on the basis of processing the good words and writing skills they had learned.

5. Results and Discussion

5.1. Results of the Analysis

In the lesson, the teacher designed three kinds of tasks for the students:

- **Firstly**, students *read the whole passage, skimming for general ideas and scanning for specific points to answer four given questions.*
- **Secondly**, students *learned to use a flow chart to organize the structure of this article and the process of the events.*
- **Thirdly**, students *were encouraged to discuss in groups and exchange their ideas after reading the passage. After discussion, one representative from each group shared the answer with the whole class.*

These three tasks were designed to be connected and interlocking, with the completion of one task preparing for the next one. In this case, students actively completed the tasks in class under the guidance of the teacher. At the same time, with the execution of the tasks, students’ reading comprehension progressed from speed reading to intensive reading. Finally, they were able to understand the whole article and grasp the main idea deeply and comprehensively.

Therefore, after analyzing the case, it can be concluded that tasks designed for the English reading comprehension classroom should be committed to following the teaching objectives and achieving the goal of improving students’ comprehensive ability. Moreover, tasks should also follow the order of difficulty progression, that is, task design must move from easy to difficult and from simple to complex. Only then can the tasks really play a role in promoting classroom teaching.

5.2. Discussion

It can be concluded from the research that the task-based language teaching approach still has vitality and significance in Chinese English teaching. Therefore, this teaching approach could be applied to other grades and other classes by adjusting the difficulty and type of task design. However,
some principles for applying the task-based language teaching approach should be followed regardless of ages or class types.

Wu [13] pointed out that there are four important principles for task-based teaching. Firstly, meaning comes first. Secondly, tasks in class need to have a clear goal. Thirdly, the results of activities can be tested. Fourthly, tasks should relate to the real world and life experiences. These four basic principles are also the standards for measuring whether a classroom activity is a task-type activity.

Many international scholars have summarized the implementation principles of the task-based language teaching approach, among which the principles proposed by Nunan have been widely accepted by scholars [7].

- **Firstly, the authenticity principle.** This principle states that tasks should meet two types of requirements. On the one hand, language materials should be selected from daily life. On the other hand, task design should be authentic and tasks should be carried out by students in a real and natural environment. However, not all materials in real life can be designed as tasks. As long as the tasks can promote students’ communication, develop their comprehensive language use ability, and improve their emotional attitude and operational ability, these kinds of tasks can be used in teaching.

- **Secondly, the form-function principle.** For language learning, both language form and language function are indispensable. Although the task-based language teaching approach advocates attaching importance to language meaning, this does not mean that language form should be neglected. Students need to integrate language form and language function together to improve their language ability. Therefore, in the process of language teaching and learning, teachers and students should pay attention to not only meaning but also form. When both language meaning and language form are advocated, fluency and accuracy can be integrated and developed.

- **Thirdly, the task dependency and the task-chain principle.** The cognition of students is commonly at different levels. When tasks are designed, they should be connected step by step and from simple to complex. During the whole process of pre-task, in-task, and post-task, a series of tasks can be metaphorized into a task chain, so that later tasks become an extension and development of previous ones, and the former can be the foundation of the latter. In terms of training students’ language skills, teachers should follow the principle of “input before output,” which indicates that teachers should help students to input language materials first. Then, through construction and processing, students can output independently. In this way, students’ thinking can be clear and organized.

- **Finally, learning by doing.** This refers to using methods in which students not only acquire knowledge from teachers’ explanations but also assimilate new knowledge into their original knowledge system through their own understanding of the task and their internalization of the knowledge. This can improve students’ interests in learning and the joy of success.

Based on the theories summarized by previous scholars, the author believes that there are three more principles that should be incorporated into the task-based language teaching approach.

- **Firstly, students’ subjectivity.** In the demonstration lesson, the teaching tasks were closely linked and assigned according to the characteristics of the reading article, so as to lead the students to achieve the teaching objectives. Students first grasped the main idea of the article by skimming and scanning, then used a flow chart to help organize the structure of the passage, and finally deepened their understanding through discussion and presentation. By executing tasks, the students can learn knowledge by doing. Therefore, students’ subjective function should be brought into full play in order to improve their practicality and creativity, stimulate their thirst for knowledge, and arouse their interest in learning.
Secondly, teacher’s leadership. In the task-based language teaching approach, teachers should act as facilitators, coordinators, and instructors. In a reading comprehension class, they need to change their ideas that the development of students’ reading ability and comprehensive language use ability are the primary tasks of reading teaching. They should also guide students to use appropriate reading strategies and improve their independent reading ability. In the demonstration class, the teacher attached great importance to guiding students to think actively and find answers by themselves through careful reading and group discussion rather than directly providing answers.

Thirdly, student’s self-exploration and cooperation. In the task-based language teaching approach, students are encouraged to work in groups to find answers to questions, which trains both their communicative skills and ability to use language. In each task assigned in this classroom case, the students found the correct answers through self-exploration, cooperation, and mutual assistance, and sometimes they came up with creative and unexpected answers. Through active learning, they could flexibly apply the language learned in the text to a specific language environment or to daily life.

5.3. Summary

In conclusion, task design should be conducive to the achievement of teaching objectives and complement the process of classroom teaching. Furthermore, this study also provided scientific research results and principles for the application of task-based language teaching approach, which proved that this cutting-edge teaching approach can be widely used in other grades and other classes.

6. Conclusion

6.1. Summary

Through the analysis of the case, the author answered the research questions posed at the beginning of the study.

a) What kinds of tasks should teachers design?

b) What effect do the tasks have on the progress of the reading class?

c) Can the task-based language teaching approach used in an English reading classroom be applied to other grades or other classes?

From the scientific and detailed research, the following conclusions can be drawn.

- Firstly, task design should be gradual and consistent with students’ cognitive level of learning.
- Secondly, tasks should be conducive to the realization of teaching objectives and the process of classroom teaching.
- In addition, this study provides scientific research results and principles for the application of the task-based language teaching approach, proving that the teaching approach can be widely used in other grades and other classes.

However, it should be noted that the application of the approach also needs to follow the principles of student’s subjectivity, teacher’s leadership, and student’s self-exploration and cooperation.

In general, it has been shown that the task-based language teaching approach does have significant effects on senior English reading teaching. Moreover, the teaching model proposed by Willis, which divides teaching into pre-reading, mid-reading and post-reading, is still applicable today.

6.2. Pedagogical implications

Based on the above findings, it is suggested that English teachers should be aware of the fact that
the assignment and completion of tasks is a better choice for strengthening students’ verbal communication skills and arousing their reading enthusiasm. Nevertheless, teachers should not pay attention to the execution of tasks only while ignoring the learning of systematic knowledge. According to the New English Curriculum Standard, the study of language skills will remain the main objective of English teaching in Chinese senior high schools. Therefore, teachers need to keep a balance between tasks and knowledge in their teaching design.

6.3. Limitations and Suggestions

Like other studies, this study still has some limitations and suggestions that future studies should take into consideration. First of all, because of time limitations, the case selected in this study came from the Internet. However, future studies targeting a large number of offline classroom cases are necessary. Furthermore, in this study, only one case was analyzed. Therefore, future studies targeting different grades, different subjects, and a larger number of cases are highly recommended.

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References

Appendix

T : Hello, everyone. I’m Tracy. Welcome to my class. Are you ready?
Ss : Yes
T : Now, look, what’s in my hand? Can you see it? What’s in my hand? What’s this?
S1 : I suggest it’s sweet wormwood.
T : Is it sweet wormwood? Really?
S1 : Can I use the Chinese?
T : Of course.
S1 : Pipa.
T : Exactly. This is the loquat leaf. Okay, so, what can it be used for?
Ss : (answer in a low voice)
T : Exactly. So, when you catch a cold and you cough, you can use this, right? And actually, this is a crucial botanical treatment for cough. Then, how do you usually use it? Can I just eat it?
Ss : No.
T : We usually…? Exactly, we usually boil it and drink the liquid obtained. It is because it is evaluated that the extract obtained has vital medical practice. You got it? Now, read after me, crucial, botanical, boil, liquid, obtain, evaluate, extract, medical properties.
[Ss read after the teacher]
T : So, shall we say together? The loquat leaf is a crucial botanical treatment for cough. After boiling it, drink the liquid. It is the evaluated that the extract obtained has vital medical properties. Then, what about these plants? This is called the sweet wormwood and the extract obtained is called artemisinin. So, who discovered artemisinin? Use your microphone. Who discovered?
Ss : Tu Youyou.
T : Tu Youyou, right? What else do you know about her? Raise your hands, if you know. You please. Use the microphone.
S2 : She is a scientist and she won the Nobel prize.
T : Exactly. Thank you very much. So, you can see this is what’s actually happening. Tu Youyou was being awarded a Nobel prize, and that was actually on October 5th, 2015. And this is our topic today. Now please take out this handout. Can you tell me when was the article published? Come on. Can you find the date? Here.
[The teacher points at the paper]
T : Anyone? How about you? If you know, just raise your hands and use the microphone. You please?
S3 : Sixth in October, 2015.
T : Yes, October 6 2015. Exactly. Sit down, please. Now, compare the date…according to the
date, can you tell me where the passage possibly come from? Together? I think you know that. Where? How about you? Say something. Where? Can you guess?

S4 : From newspaper.

T : Do you agree? Good. So, we can see this is actually a news story. Now, would you please read the title together? What’s the title? Tu Youyou Awarded Nobel Price. Now let’s see, according to the title, what do you want to know about the passage? It’s the question time. So, who’d like be the first one? Come on. What do you want to know? Yes, you please.

S5 : I want to know how did Tu Youyou won the Nobel prize?

T : How was she awarded… you mean? Maybe you want to go to the president, right? Sit down, please. Thank you. How about you?

S6 : I want to know why do why did Tu Youyou was awarded Nobel prize?

T : Very good. Sit down, please. Thank you. Why was she awarded the Nobel prize? Okay. Next one. Who? How about your group? Yes, you please.

S7 : I want to know what did she feel when she was awarded Nobel prize.

T : How did she feel? What did she think of the award, right? Very good question. Sit down, please. So, let’s say, what did she think of the award, of the honor? Quite good. Anyone? You please?

S8 : I want to know what obstacles she met.

T : Okay, the obstacles, the difficulties. Right? So that means you also want to know the process of the research.

S8 : Yes.

T : Very good. Sit down, please. Anyone? How about this group? Do you have any question? Yes?

S9 : I want to know how she obtained the artesiminin.

T : Yes, also about the research process. So, we can say, how was artesiminin discovered? Do you mean that? Quite good. Sit down, please, thank you. Anyone? How about your group again? How about you?

S1 : I wonder how much we can get from our ancient people.

T : So that means you want to know something also related to the research process. Right? Good. So, everybody, there are a lot of Nobel prize. Right? So, maybe we also want to know what Nobel prize, right? What exactly the Nobel prize did she win? Do you think so? And how about this one, artesiminin? You may also want to know? You please. Have a try.

S7 : I want to know the meaning of the discovery of artesiminin.

T : The meaning of the discovery, right? Quite good. Sit down, please. So, you’ve raised so many great questions, and let’s focus on four of your questions today. Now, please take your time to read the whole passage and underline the answers to your own questions. Got it? Okay, now go ahead, please.

[After three and a half minutes]

T : Time’s up. Let’s share your answers. How about the first one? Who would like to answer the question? Raise your hand. What Nobel prize did Tu Youyou win? If you know, you raise your hands. You please?

S5 : The Nobel prize for physiology or medicine.

T : Exactly. Sit down, please. So, everybody follows me. Physiology.

Ss : Physiology.

T : Good. How about the second one? Why was she awarded the Nobel prize? Who’d like to? You please?
S10: She discovered an artemisinin, a crucial new treatment for malaria.
T: Okay, very good. Exactly. Thank you. How about the third one? Is it easy? Maybe a little bit
difficult, right? So, let’s turn to a flow chart for help. The flow chart, it’s a graphic way
to show how a process works with necessary steps, understand? If you are going to draw
a flow chart, what information would you put here? What will be the key information?
What kind of words? Nouns? Verbs? Which one to show the steps? The step that means
what you do, do you think so? What kind of words should we pay attention to? Louder.
What kind of words?
S7: A verb.
T: Verbs, quite good, verb or verbal phrases. Thank you. So now please read and draw a flow
chart of the process of the discovery. Now go ahead. You may draw it on the worksheet.
Okay, that’s here. Right? [The teacher shows a piece of paper in her hand.] Now go
ahead.
[A after six and a half minutes]
T: I think most of you have already finished. So, who’d like to share your flow chart? How
about you? Come up here. [A student is invited to the platform.] Can you use the flow
chart to share your flow chart and retell the whole process for us? Can you please?
S5: At first, Tu Youyou was chosen to be a team member in 1967, and then Tu Youyou went to
Hainan where the…
T: It doesn’t matter… went to Hainan… this step. Now continue.
S5: And then she became the head of the project in 1969. Then she reviews ancient Chinese
medical text. Next, she examined and evaluated, but their project got stuck. Then Tu
Youyou would not acknowledge defeat and she analyzed again. After she found one
sentence by chance, after falling more than 190 times, the team finally succeeded in
1971. After that, they insisted on testing the medicine on themselves to make sure that
it was safe.
T: Ok, that’s first. Thank you for your sharing. I will give you later. Now let’s look at here.
What do you think of your classmate’s flow chart? What do you think of it? Do you like
it? Yes? Can you make some comments on her flow charts? Or do you have any
suggestion? How about this one, “became the head of the project”? Do you think it is
necessary here? Is it necessary in the flow chart of artemisinin discovery? What is such
kind of information? The head of the project is Tu Youyou? How do you understand?
What about Tu Youyou’s role? Do you know role? Tu Youyou’s role in the research. So,
if there is a flow chart about Tu Youyou’s different roles, which flow chart would you
put the information? How about you? So, what information would you put?
S3: I will put…
T: Which flow chart, the flow chart of the role or the flow chart of the research?
S3: The flow chart of role.
T: Of the role. Do you think it’s necessary here?
S3: I think it’s not that necessary.
T: It’s not that necessary. Thank you very much. So, you can see, we can make it more brief
and necessary information, but already you’ve done a great job. Thank you very much.
Now how about you? Gentlemen, would you like to share your flow chart? Please
retell the process. Go ahead. You can just look at here.
S3: At first, Chinese government formed the team of scientists and Tu Youyou was chosen in
chosen in the beginning. And next, Tu Youyou went to Hainan to study patients in 1969.
She became… [The student finds that he made the same mistake as the previous student.]
T: Yeah, what would you say now? She just reviewed… right?
S3: Yes, reviewed ancient medical texts to find the cure. After testing a collection of dried wormwood leaves, she found it, it’s not works. And she tried a method to solve the program. And at last, she used the low temperature to draw out the extract. At last, she and her team succeeded.

T: Wonderful, right? Let’s give him a big round of applause. So, what do you think of his flow chart? Do you like it? Besides some verbs, what information did he add? He also gave us some…? You please, gentleman.

S11: … timeline.

T: The timeline. So, do you think it’s better? If we give the timeline?

S11: Yes.

T: So, we can make a better flow chart. Thank you very much. Now let’s have a quick review here. This is the first one. They study patients in Hainan, right? And that’s actually we call the fieldwork. And then, how about the second picture? They…? What will be the key words? They evaluate. What do we call this research period? We say it some review work. How about next step? What did they do? Can you tell me the verb? What did they do? They refer to the… the next picture you can see…the dry sweet wormwood and the fresh one. Do you see that? So, what will be the key words? They test and… they boil. Exactly. So, what do we call this such kind of research period? What were they doing? They were doing some test, experiment, right? So, this is what we call the experiment. And then the project got stuck. So, what is your understanding of get stuck? What does that mean? Yes, you please.

S12: They met difficulties. The project was in difficulty.

T: People cannot… didn’t know what to do next, right? Thank you very much. So, this is the meaning of get stuck. Then, what happened the next? What happened? Did Tu Youyou give up? No. Which sentence tell us she did not give up? Can you please?

S1: She found one sentence just in a different way to see the wormwood by chance.

T: Yes, and this shows she didn’t give up. And actually, we have a sentence to show that. Can you read it together? Tu Youyou wouldn’t… Now let’s see, compared with Tu Youyou didn’t acknowledge, which one is better? Would not or did not?

Ss: Would.

T: Would is better? And why? What does the word “would” tell us? Any idea? Okay, now you may discuss with your partner. What does the word would tell us? Discuss with your partner.

[After 30 seconds]

T: Okay, so I think we got the answer. Would you please?

S13: Would will show Tu Youyou’s determination.

T: Yes, wonderful. Do you think so? Let’s give him a big round of applause. She was determined… she was unwilling to give up, right? So, she was so committed, so determined. Wonderful. Because of her, the artemisinin, the right way was found, and we finally come to this one. So, what did she do? Louder.

Ss: …

T: She insisted on testing the medicine on themselves, right? So, what can you get from the phrase “insist on”? What can it show? Do you have any idea?

S3: I think it shows her cautious.

T: To ensure the safety, right? And also, it shows it… Would you do that? You don’t know whether it’s safe, and you test it on yourself?

S3: Maybe not.

T: Maybe not. So, what kind of quality, up to Tu Youyou?
S3: Very brave.
T: Very brave, right? Very brave and very... we can say fearless. Do you think so? On the other side, what does it show?
Ss: Sacrificed.
T: Sacrificed. That’s good word. But I think it actually shows her confidence. Why do I say so? What is she confident about? How about you? What do you think? I think she’s very confident. Why?
S5: I think so, because if they are incompetent, they will not test the medicine on themselves, because it will kill them. Maybe.
T: So, it shows her confidence about the research findings. Do you think so? Exactly. Wonderful. Thank you very much. So, this is actually what we call the clinical test. This is the road to... let’s say, artemisinin discovery. Now, let’s come to your last question. What did she think of the award? Now please read and figure it out. Anyone? If raise your hands. What did she think of the award? You please.
S2: She thinks the honor is not just mine. There is a team behind me and all the people of my country. This success proves the great value of traditional Chinese medicine. It’s indeed an honor for Chinese scientific research and Chinese medicine to be spread around the world.
T: Very good, sit down please. Now let’s read this part together one more time.
[Ss read the sentences together]
T: I’m wondering, who are included in “all the people.” Now I need you to work in groups of four, share your ideas and state your reasons. Who are included? Okay, now go ahead.
[After two minutes of discussion]
T: Now, let’s share your ideas. Who will I be the first one? Come on. Your group?
S7: We think the patients.
T: The patients. And why?
S7: The patients have the spirits of sacrifice, because when the discovery of the medicine was unclear and they would like to join in the research.
T: Yes, join in the research, and let the medicine test on themselves, right? Very good ideas. Sit down, please. Any group? How about your group? Who’d like to say something? Anyone?
S13: Her teammates and her family.
T: Her teammates, team members. It’s obvious that they work together. Then the next one, what did you say?
S13: Her family.
T: Oh, her family! Why do you say that, her family?
S13: Because her family was...supported her to the experiment.
T: Thank you. That’s actually the truth. You know Tu Youyou just went to see her kids once I three years. Can you imagine that, once in three years? So, the family supported. How about your group?
S5: Chinese government supports her to start the discovery.
T: Why do you say Chinese government? Can you tell us your supporting evidence?
S5: In 1967, the Chinese government formed a team of scientists with the objective of discovering a new treatment for malaria.
T: Very good. Sit down, please. How about your group? Do you have any idea?
S10: I think people also included ancient people
T: Ancient people! Do you think so? Wonderful! Let’s give her a big round of applause for this group. The ancient people. Can you tell me why?
S10 : Because she found medical texts suggested that using the extract from sweet wormwood to cheat a fever. When she failed, she analyzed the medical text again, and she found one sentence suggesting the different way to achieve the wormwoods.

T : Exactly. So, we can say the research findings is actually based on ancient people’s wisdom. Very good. So how about these two groups? Do you want to say something? Yes, or no? How about you?

[The student shook his head]

T : So, I think we’ve already worked a lot of ideas here and I couldn’t agree with you more. So, we can say, what’s this… one more time? This is an artemisinin, but next time I want to see this, I think it will remind us of… where it comes from, the difficult research, the great efforts they made, and also the great honor and the greatness of all the people—Tu Youyou, who else, the team members, and also the ancient Chinese, the government, family members, even her teachers, patients, and those involved yet unknown by all of us. Do you think so?

Ss : Yes.

T : Quite good. So, here’s your another news. Word came that Tu Youyou, Albert Einstein, Marie Curie and Alan Turing were nominated BBC’s Greatest Scientist of the 20th Century. So, who are you going to vote for? Who is your science icon? I need you to after class, write a passage entitled My Science Icon. And you can see here, when you describe a person or people’s achievement, you can use these adjectives to describe them. And when you mention the research process, you should know the steps, and what did they actually do in the process? So, I think you can do a good job in your writing. Thank you for your cooperation. You’ve done great job. Thank you very much. Thank you.