
Original Paper

Using Visible Thinking Method to Enhance Students' Reading Comprehension and Narrative Writing Capabilities in Military Academies

Tina Pingting Tsai & Jyhjong Lin*

Tina Pingting Tsai, Center for General Education, R.O.C. Military Academy, Kaohsiung City, Taiwan

E-mail: tinatsai85@gmail.com

* Corresponding author, Jyhjong Lin, Information Management, Ming Chuan University, Taoyuan City, Taiwan. E-mail: jlin@mail.mcu.edu.tw

Abstract

In recent years, 'reading comprehension and narrative writing' has become one of the core general education courses in colleges to enhance students' career capabilities. In the same way, the national military academies in Taiwan have also set up such an educational goal to cultivate their students with such capabilities. In this paper, we present how to apply the well-known Visible Thinking method at general Chinese courses in the ROC military academy to enhance students' reading comprehension and narrative writing capabilities through its process of thinking, drawing, writing, and speaking. After practical teaching, test assessments are taken to verify the effects of the Visible Thinking method on the education of students' reading comprehension and narrative writing capabilities in national military academies.

Keywords: Reading Comprehension and Narrative Writing, Visible Thinking Method, Chinese Course, Military Academy

1. Introduction

In recent years, 'reading comprehension and narrative writing' has become one of the core general education courses in colleges to enhance students' career capabilities. In the same way, the national military academies in Taiwan have also set up such an educational goal to cultivate their students with such capabilities. In this view point, the course planning of the military academies should comply with such a goal as to actively improve students' reading comprehension and narrative writing capabilities. Therefore, in this paper, we explore how to adapt to such a specific learning goal by applying a suitable teaching method at general Chinese courses in military academies to enhance the learning effects of students' reading comprehension and narrative writing capabilities for their future military officer career.

To address this issue, we consider first the definition of reading comprehension and narrative writing capabilities in (Chang, 1992) that addresses the cultivation of students' thinking abilities in key analysis, situational design, and content narration. Therefore, learning topics in the course often focus on applied writing after reading texts. Also, these topics are often guided through activities such as topic analysis, problem-solving strategies, knowledge exploration, situational arrangement, and content narration. Then, among the many existing student-centered teaching methods in (Bonk and Graham, 2006; Abd-El-Khalick, et al., 2004; Quality Talk, 2020; Zhang, 2015; Ritchhart and Perkins, 2008), Visible Thinking (Ritchhart and Perkins, 2008) is a well-known approach that involves practicing the thinking process in various ways and hence is easy to integrate the thinking processes into class units. In general, the thinking process can be divided into three categories of visible activities: introducing and exploring ideas, integrating and organizing ideas, and exploring ideas in depth. Each category includes seven thinking process activities (hence there are totally 21 categorized thinking process activities) and each activity can be defined by its purpose, teaching materials, implementation steps, application variations, evaluations, and tips. Therefore, it is very suitable for providing students with class texts and thinking

activities to cultivate their reading comprehension and narrative writing capabilities by addressing their abilities in key analysis, situational design, and content narration.

Hence, we will use herein the Visible Thinking teaching method to design the teaching activities for the general Chinese courses in military academies to cultivate students' reading and writing abilities in key analysis, situational design, and content narration. For illustration, the method is applied to a 'Chinese Literature & Writing' course in the R.O.C. military academy with selected categorized thinking process activities. Finally, after realistic teaching, test assessments are taken to verify the applied effects of the Visible Thinking teaching method on the education of reading comprehension and narrative writing capabilities in national military academies.

2. Visible Thinking Class Design

According to (Ritchhart and Perkins, 2008), the Visible Thinking teaching method has 21 categorized thinking process activities for students' practicing reading and writing by addressing their abilities in key analysis, situational design, and content narration. In this paper, for example, the following 6 thinking process activities: Think-Puzzle-Explore (activate and clarify knowledge), Chalk Talk (reveal knowledge), Compass Points (decide and plan), CSI: Color, Symbol, Image (think and express), I Used to Think..., Now I think... (reflect and recognize), and Step Inside (deepen and extract) can be used to help students practice from reading to writing. Teachers can iterate these 6 activities with different teaching themes in various class units for students' elastic learning.

Therefore, with this method, we accommodate it at the general Chinese courses in military academies with the above mentioned 6 thinking process activities for students' learning reading and writing at various class units as follows.

1. Think-Puzzle-Explore. This is suitable at the beginning of a course as a way to generate motivation for reading, then lead individuals or groups to ask questions about the reads and clarify current understandings about these reads.
2. Chalk Talk. This is an open-ended paper discussion to ensure that all opinions from the individuals or groups about the questions and understandings are heard under enough time of thinking.
3. Compass Points. This is to solicit the possible decisions about the answers of the questions and respond with the proposed plan about the implementation of these answers. Further, the four steps of focused conversation method (excitement, worry, need, stance/step/suggestion) can be used to synthesize the decision making and plan proposed.
4. CSI: Color, Symbol, Image. This is to use vision and color to enhance the effects of thinking through associating with images and ideas, and then the induction of expression.
5. I Used to Think..., Now I think.... This is to help students reflect on how their thinking transforms and changes over time. It is a kind of meta-cognition training for reflection.
6. Step Inside. This is a kind of writing training that helps students enter a situation and speak or write how they think about that situation from concerned perspectives in order to gain a deeper understanding.

3. Practical Application

In this section, we apply the accommodated method to a 'Chinese Literature & Writing' course for enhancing students' reading comprehension and narrative writing capabilities in the R.O.C. military academy in Taiwan. The effectiveness of the application is verified by both of the comparison between pre- and post-class tests at curricular classes and the feedbacks of students after curricular classes on their learning about the education of reading and writing abilities.

A. Instructional Design

In our 'Chinese Literature & Writing' course, a "Newly Edited Chinese Selections" book (Wang, et al., 2023) is particularly selected to deliver the curricular contents for students' learning. In general, the course has 18 week classes, 2 hours per class, and 6 articles selected from the book used in these classes. Therefore, by applying the accommodated Visible Thinking method, Table 1 shows the syllabus about the instructions of the 18 week classes. Then, with the syllabus, Table 2 shows the class activities of each

week instruction (except for the introduction, writing training, and midterm and final exams).

B. Data from Practical Instruction

Based on the class schedule of the 2025 Fall semester at the R.O.C. military academy, the ‘Chinese Literature & Writing’ course that addressed students’ reading and writing capabilities was instructed on the Wednesdays from 09/10/2025 to 01/07/2026 with 26 students participated and the syllabus as shown in Table 1 were adopted for their studying in the 18 week classes. The following illustrates part of the 3th week class by a group of students (denoted as S1– S3) with the Think-Puzzle-Explore process-based learning activities as shown in Table 2.

1. The class began from students (S1 – S3)’ 10-min individual self-study of the selected modern poem ‘Geese’ where the author points out by means of describing the flight of geese that in the process of pursuing our ideals in life, although it is inevitable to feel difficult and helpless, we should still persevere and move forward bravely. Therefore, students read the poem to develop basic concepts about its contents and metaphors.

2. The class began from students (S1 – S3)’ 10-min individual *self-study* of the selected poem ‘Geese’ that in general motivates their reading by praising the flight of geese to encourage people's keeping persevere and move forward bravely in the process of pursuing life ideals, although it is inevitable to feel difficult and helpless. Therefore, this poem specifically addressed many conceptual subjects about the pursuing of people’s ideal in life, including the flight of geese, the life ideal, the pursuing process, difficulty, helplessness, perseverance, and brave.

Table 1. The syllabus about the instructions of the 18 week classes

week	thinking process activities	class texts
1	Introduction of class texts, activities, pre- and post-class tests, feedbacks	6 articles selected from the "Newly Edited Chinese Selections" book
2, 3	Think-Puzzle-Explore. motivate reading, ask questions about the reads, clarify understandings	selected modern poems (Geese)
4	Chalk Talk. discussion about questions with enough time of thinking	selected poems (Book of Songs, Qin Feng, Wu Yi)
5	Step Inside. enter a situation and write about that situation from concerned perspectives	selected poems (Ascending tower, March of Chariots)
6, 7	Step Inside. enter a situation and write about that situation from concerned perspectives	Health Master
8	writing training	writing guides, example demonstration, and writing exercises
9	midterm exam	report of reflection
10, 11	Compass Points. decisions about the answers of questions and the plan about the implementation of these answers	selected fictions (Notes of Garden)

12, 13	CSI: Color, Symbol, Image. use vision and color to enhance thinking through associating with images and ideas, and then the induction of expression	selected lyrics of Tang and Five Dynasties
14, 15	I Used to Think, Now I think. reflect on how thinking transforms and changes over time	selected proses (Transcendence Tower)
16, 17	writing training	writing guides, example demonstration, and writing exercises
18	final exam	report of reflection, feedbacks

Table 2. The class activities of each week instruction

learning activities	purposes
A 10-min individual self-study of a selected article in the "Newly Edited Chinese Selections" book	develop students' basic concepts about the class texts (motivate reading)
A 5-min individual pre-class test at the end of the self-study.	verify students' concepts about the reads
A 15-min individual thinking and asking questions about the reads	help students acquire knowledge about the reads (key analysis by asking questions about the reads)
A 15-min group discussion among peers about their thinking about the questions.	help students enhance acquisition via discussion to acknowledge the other groups' thoughts (situational design by clarifying understandings)
A 15-min group expression among all groups about their conclusions for the questions.	(with the teacher's comments or suggestions) help students make reflections on their acquisition about the questions (content narration by expressing understandings)
A 20-min teacher's integrating students' conclusions to make summaries about the questions.	give students' integrated view of the conclusions about the questions (clarifying understandings)
A 10-min individual post-class test at the end of the class.	verify students' learning effects about their reading, thinking, and writing of the reads

3. After self-study, the class had a 5-min individual pre-class test to clarify students (S1 – S3)' concepts about the poem being studied. Since this test is purposed to clarify students' thinking about how important the addressed conceptual subjects are for people, it thus asked ranking of these subjects to capture these students' thinking as below.

As addressed in the poem, there are 7 conceptual subjects about the pursuing of people's ideal in life including the flight of geese, the life ideal, the pursuing process, difficulty, helplessness, perseverance, and brave. Although all of them are important for people's pursuing life ideal, there are still certain perspectives to make them have different importance, such as their definition, people's experiences about them, and people's attitude about them. Please think about in terms of these perspectives which subjects are more important for people's pursuing life ideal, and rather which subjects are less. Then, please list them from the most important to the least.

4. After pre-class test, the teacher designated some issues relevant to the addressed conceptual subjects for students (S1 – S3)' 15-min individual critical *thinking*. In general, these issues can be certain kinds of

questions for students (S1 – S3) to discover the answers about the perspectives related to these subjects. For example, for the ‘difficulty’ subject, a series of questions could be issued for students to explore and answer such as

- (a) What is difficulty? Please give its definition.
- (b) What are your past experiences about difficulties that you ever had?
- (c) In addition to yourself, what difficulties did you experience that were had by other people? Would you also have the same difficulties if you had the same situations as they did?
- (d) In the future, is it possible for you to have the same difficulties, and if you have, how do you solve these difficulties?

Therefore, with these questions, each of the students (S1 – S3) had his/her individual critical *thinking* to explore the answers about the concerned perspectives of the addressed ‘difficulty’ subject such as its definition, his/her difficulties in the past, the same difficulties by other people in the past, and how to solve these difficulties in the future.

5. After critical *thinking* to explore the answers about the concerned perspectives of the addressed subjects, the group of students (S1 – S3) started a 15-min group *discussion* about their answers for these concerned perspectives. This could help these students clarify their thinking and understanding about the subjects via a series of sharing and discussing of their individual answers and the acknowledgement of other group peers’ thoughts.

Then, after sufficient interactions of sharing and discussing, students (S1 – S3) could gather consensus for concluding their group answers about the concerned perspectives. For our example, the conclusions include the group answers about the concerned perspectives of the ‘difficulty’ concept as shown in Table 3 with its definition, experiences by group peers in the past, experiences by other people in the past, and group avoidance plan in the future.

6. With the group answers about the concerned perspectives of the addressed subjects, all groups (including the group of S1 – S3) started a 15-min group *expression* for sharing their conclusions with each other. In particular, the teacher would give necessary comments or suggestions about the conclusions of each group. In general, this across-group sharing could clarify further students’ thinking about the subjects and also assist them make reflections on their conclusions by acknowledging and assessing the other group peers’ thoughts.

Table 3. The answers about the ‘difficulty’ concept

perspectives	students (S1 – S3)’ answers
definition of ‘difficulty’	anything that causes problems, is not easy to do, or is hard to overcome
experiences by group peers in the past	served as an intern cadre in the preparatory school to perform the leading duties and complete the assigned managerial tasks
experiences by other people in the past	classmates in the preparatory school to complete the assigned tasks while also keeping academic performance
group avoidance plan in the future	enhance time management to increase the time on academic studies after completing the assigned tasks

7. After the group *expression* for sharing students’ conclusions, the teacher had a 20-min instruction for *integrating* students’ conclusions to make summaries about the addressed subjects and relevant perspectives. This could give students an integrated view about the subjects and then assist them conclude their studying of the class instruction. For our example, each student (including S1 – S3) could conclude his/her studying about the ‘difficulty’ subject in terms of the perspectives about its definition,

his/her experiences in the past, experiences by other people in the past, and his/her avoidance plan in the future.

8. At the end, the class had a 10-min individual post-class test to verify students' learning effects about their thinking, acknowledging, reflecting of the addressed conceptual subjects. Since this test is purposed to verify how well students learn about the importance of these subjects for people's pursuing life ideal, it had thus the similar question as the pre-class test of ranking the conceptual subjects to capture how these students think about the importance of these subjects for people's life ideal.

As addressed in the poem, there are 7 conceptual subjects about the pursuing of people's ideal in life including the flight of geese, the life ideal, the pursuing process, difficulty, helplessness, perseverance, and brave. Although all of them are important for people's pursuing life ideal, there are still certain perspectives to make them have different importance, such as their definition, people's experiences about them, and people's attitude about them. Now, after our class instruction, please think again about which subjects are more important for people's pursuing life ideal, and rather which subjects are less. Then, please list them and explain your reasons from the most important to the least.

4. Verification of Learning Effects

After the class instruction, follow-up assessments via the comparison between pre- and post-class tests of students about their learning were taken to verify students' learning effects about the addressed subjects in the context of the studied poem. As presented above, the pre- and post-class tests were a question about how students think about the importance of these subjects for people's pursuing life ideal.

The test results of the class instruction were assessed as shown in Table 4. It is noticed that for judging how the 7 subjects are important *for people's pursuing life ideal*, the score criteria are set by the following considerations:

1. perseverance and brave will be rated as the top higher pair and more important than difficulty and helplessness during the pursue of life ideal; this is because difficulty and helplessness are almost inevitable; whether you can continue to move forward depends on whether you have perseverance and brave;
2. difficulty and helplessness will then be rated as the second higher pair and more important than the remaining 3 subjects; this is because difficulty can let us grow up and make our ideals more valuable, where helplessness can let us learn humility and seek support;
3. the life ideal and the pursuing process will further be rated as the third higher pair and more important than the flight of geese; this is because life ideal is the goal of our life journey that guides us forward and pursuing process provides us with the way of forwarding.

Then, the ranks and scores of how students think about these 7 subjects' importance were collected respectively by the pre- and post-class tests where the subjects ranked higher had lower positions (i.e., the highest one gets 1st ranked position and the lowest one gets 7th ranked position). As the assessment of the class instruction showed in Table 4, these 7 subjects' ranked positions had been declined or advanced between pre- and post-class tests. For instance, the total ranked positions of the top higher pair of subjects (i.e., perseverance and brave) had been declined from 153 to 130 between pre- and post-class tests. Further, the total ranked positions of the second higher pair (i.e., difficulty and helplessness) had also been declined from 220 to 211 between pre- and post-class tests. Finally, it can also be found that the total ranked positions of the third higher pair of subjects and the lowest one had been adversely advanced between pre- and post-class tests; this also reflected students' thinking about these three subjects as rather less importance for people's pursuing life ideal.

Table 4. The assessment of the class instruction

among the 7 subjects	pre-class test total ranked position	post-class test total ranked position
perseverance, brave	153	130
difficulty, helplessness	220	211
life ideal, pursuing process	241	247
flight of geese	126	127

Therefore, as one may conceive, such subjects' rank declines and advancements through the Think-Puzzle-Explore process-based learning activities at the 3th week class instruction could reflect students' learning effects about the 7 subjects after thinking and recognizing these subjects' respective importance for people's pursuing life ideal.

5. Conclusions

In this paper, we explore to apply the Visible Thinking teaching method at general Chinese courses in military academies to enhance the learning effects of students' reading comprehension and narrative writing capabilities for their future military officer career. The teaching activities of this method have been designed for these courses to cultivate students' capabilities by addressing their abilities in key analysis, situational design, and content narration. These activities are then actually practiced at a 'Chinese Literature & Writing' course's class instructions for the enhancement of students' reading and writing capabilities in the R.O.C. military academy in Taiwan. The effects of the application have then been verified by the comparison between the 3th week classes' pre- and post-class tests on their learning about the reading and writing abilities.

Hence, as the results show, the specific mechanisms of the Visible Thinking teaching method such as 'motivate reading', 'ask questions about the reads', and 'clarify understanding' can deepen students' concepts about the addressed subjects in the learning context through their integrating into the thinking, discussion, and even experience about these subjects.

In the future, in addition to the current work for practicing the enhancement of students' reading and writing capabilities, we will continue to explore the Visible Thinking teaching work for strengthening students' other capabilities for their future military officer career such as moral literacy and leadership capability. Also, since the Visible Thinking teaching method is herein only applied to the 'Chinese Literature & Writing' classes in the R.O.C. military academy in Taiwan, its application to other kinds of classes is thus valuable to be conducted in future studies for verifying its effectiveness on more academic classes.

References

- C. Bonk, & C. Graham (2006). *The Handbook of Blended Learning*. New Jersey, USA: Wiley.
- F. Abd-El-Khalick, F. BouJaoude, R. Duschl, N. Lederman, R. Mamlok-Naaman, A. Hofstein, M. Niaz, D. Treagust, & H. Tuan (2004). *Inquiry in Science Education: International Perspectives*, *Science Education*, 88(3), 397-419.
- H. Chang. (1992). *A Comparative Study of Writing*. Kaohsiung, Taiwan: Fu-Wen.
- H. Zhang. (2015). *Study. Think. Reach: H. Zhang's Flipping Practice*. Taipei, World Magazine.
- J. Wang, et al. (2023). *Newly Edited Chinese Selections*. Taipei, Sanmin Bookstore.
- Quality Talk. (2020). Retrieved from <http://quality-talk.org/>.
- R. Ritchhart, & D. Perkins. (2008). *Making Thinking Visible*, *Educational Leadership*, 65(5), 57-61.