

DEVELOPMENT OF MIND MAPPING INSTRUCTIONAL
MODEL TO ENHANCE STUDENTS'
CHINESE WRITING ABILITY

HU XIAOMIN

A thesis submitted in partial fulfillment of the requirements for
the Degree of Doctor of Philosophy Program in Curriculum and Instruction

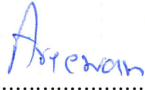
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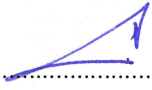
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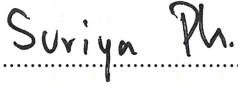
Thesis Title Development of Mind Mapping Instructional Model to Enhance Students' Chinese Writing Ability

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ABSTRACT

The objectives of this research were 1) to examine the factors affecting students' Chinese writing ability 2) to develop mind mapping instructional model to enhance students' Chinese writing ability and 3) to study the results of mind mapping instructional model to enhance students' Chinese writing ability. The population in Phase 1 were 150 students and 6 teachers respectively from 3 Primary Schools in Guilin City, the target groups in Phase 2 were 5 experts to confirm model and the sample group in Phase 3 were 50 students in Guilin Huitong Primary School. The instruments were 1) a set of questionnaire of students and teachers 2) a set of questionnaire for confirming problem based learning and blended learning instructional model 3) lesson plans and 4) Scoring rubric, data analyzed by percentage mean and standard deviation.

The findings were revealed that:

1. There are internal factors and external factors from both the students and lecturers affecting students' Chinese writing ability. The internal factors mainly included 1) physics and 2) psychology and The external factors mainly included 1) materials 2) teaching methods and 3) evaluation.

2. Mind mapping instructional model was 100% confirmed by 5 experts for further Implementation.

3. After implementing mind mapping instructional model, students' Chinese writing ability will be overall improved at 80% (Good Level).

Keywords: Mind mapping instructional model; Chinese writing ability

Acknowledgement

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Chapter 1

Introduction

Rationale

The Chinese Curriculum Standard for Compulsory Education (2022 edition) (formulated by the Ministry of Education of the People's Republic of China) states that Chinese writing is a compulsory course. The Primary Chinese Writing Course is usually scheduled as a compulsory subject in students' timetables. In China's primary education system, the Chinese language subject is considered one of the core disciplines with significant importance and role. The Chinese language curriculum aims to cultivate students' language proficiency, reading comprehension skills, and writing abilities to help them communicate, think, and express themselves effectively. Schools develop corresponding teaching plans and textbooks to ensure that students systematically grasp writing techniques and strategies throughout the learning process and are able to apply them to practical writing tasks.

In summary, The current problems of Chinese writing course in primary school are as follows: 1) The content of the textbook is too mechanic. 2) Lack of personalized teaching; 3) Lack of comprehensive evaluation. Wang Xiaobo believes that Chinese language writing courses excessively emphasize norms and lack the cultivation of creativity and individuality. Mary Johnson emphasizes the need for Chinese writing courses to focus more on developing students' expressive abilities, rather than just grammar and structure. Li Zongwu believes that Chinese writing courses should emphasize the development of students' expressive abilities, not just grammar and structure. Carlos Rodriguez argues that incorporating digital literacy and multimedia writing skills is essential in modern Chinese writing courses. By considering the above points, there is evidence to prove the existence of students' Chinese writing problems in primary school. (Guilin Huitong primary school, 2022).

The advantages of mind mapping teaching mode include: Help improve thinking ability and memory effectiveness: According to German psychologist Hermann Ebbinghaus, using mind mapping can help students better organize and connect knowledge, and improve memory effectiveness. Mind mapping presents information in a visual way, stimulates students' association and creativity, and promotes deep

thinking and understanding. Ebbinghaus, H. (1885). *Memory: A contribution to experimental psychology*. Promote correlation and understanding between concepts: American psychologist David Ausubel believes that mind mapping can help students establish connections between concepts and promote knowledge integration and induction. By presenting relevant concepts and information in a non-linear manner, students gain a clearer understanding of the relationship between topic structure and content.

Ausubel (1960). The use of advance organizers in the learning and retention of meaningful verbal material. *Journal of Educational Psychology*, 51(5), 267-272. Enhance logical thinking and problem solving: The mind mapping method developed by British educator Tony Buzan emphasizes the importance of innovative and non-linear thinking. He believes that mind mapping can help students develop systems thinking, critical thinking and problem solving skills. By organizing and presenting information in relationships, students can think about problems from multiple perspectives and find creative solutions. Buzan, T. (1974). *The mind map book*. BBC Active. These views reflect the advantages of the mind mapping teaching model, including improving thinking and memory, promoting associations and understanding between concepts, and improving thinking logic and problem solving skills. These advantages make mind mapping an effective teaching tool that is widely used in educational practice in different disciplines and fields.

The research finds that the use of mind mapping teaching mode can improve pupils' Chinese writing ability as follows: Zhan Zhihua and Zhang Hongwei (2018): This study explores the effects of using mind mapping in Chinese writing teaching in primary schools. The research results show that students' writing ability has been significantly improved through mind mapping teaching mode. They are better at conceiving and structuring essays, and they also show a more diverse and creative use of language. Wahyudi & Rasyidah (2020): This study explores the impact of using mind mapping in the teaching of Chinese writing in primary schools in Indonesia. The results show that mind mapping teaching mode can improve students' writing skills and writing expression ability. Through mind mapping, students can better organize their thoughts, expand their vocabulary, and demonstrate a higher level of logical thinking and argumentation ability. Chen and Lin (2016) : This study investigated the effects of using mind mapping for writing training in primary school students in

Taiwan. The results show that mind mapping can improve students' writing process and writing quality. Students better organize and present their ideas through mind mapping, improving the logic and coherence of their writing. These findings highlight the positive impact of using the mind mapping teaching model in improving pupils' Chinese writing ability. They show that mind mapping can help students organize their thoughts better, expand their vocabulary, improve their logical thinking and writing expression ability, and thus improve their writing skills and writing quality. This provides a basis and guidance for teachers to use mind mapping in primary school Chinese writing teaching.

As the rationale shown above, the author realizes the importance of studying “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability”.

Research Questions

1. What are the factors affecting students’ Chinese writing ability ?
2. Is mind mapping instructional model to enhance students’ Chinese writing ability appropriate for further implementation and how?
3. What are the results of implementing mind mapping instructional model students’ Chinese writing ability?

Research Objectives

1. To examine the factors affecting students’ Chinese writing ability.
2. To develop mind mapping instructional model to enhance students’ Chinese writing ability.
3. To study the results of Mind Mapping Instructional Model to enhance students’ Chinese writing ability.

Research Hypothesis

After implementing mind mapping instructional model, students’ Chinese writing ability will be overall improved at 80% (Good Level).

Scope of the Research

Population and the sample group

Population

The total of 300 student from 4 classes of students with different levels of learning achievement, who enrolled in Chinese Writing course at Guilin Huitong Primary School in semester 1 academic year 2023. Those sections involve the following.

50 students in class A

50 students in class B

50 students in class C

50 students in class D

50 students in class E

50 students in class F

The sample group

The 50 students who enrolled in Chinese writing course in grade 4 from class section C are obtained by cluster random sampling.

Independent variable

Mind Mapping Instructional Model

Dependent variable

Chinese Writing Ability

Contents

According to the Chinese Writing Course in grade five in this study, the researcher chooses Unit 1 Describe things (8 hours) and Unit 2 Describe the experience (8 hours) for the experiment.

Time

Semester 1 in Academic year 2023 (September 2023- January 2024)

Advantages

To the students: They can improve their writing interest and writing ability through the mind mapping instructional model.

To the teachers: They can improve their teaching skills and enhance new techniques in teaching through the research.

To the institute: It can get more experience and advice in managing primary school and help the teachers and students to teach and learn in a better organism.

Definition of Terms

The factors affecting Chinese writing ability refers to the internal and external factors collected from students using questionnaire and interviews for lecturers designed by the researcher. The internal factors involve the information about students while external factors consist of information about the teacher and circumstances. In addition, the factors will be obtained by structured interviews with the teachers.

The development of mind mapping instructional model refers to the creation and implementation of a teaching approach that utilizes mind mapping techniques to enhance learning and comprehension. The mind-mapping instructional model was created by British scholar Tony Buzan in the early 1960s. It is designed to help students organize and connect information, stimulate critical thinking, and foster creativity. The Mind Mapping Instructional Model consists of five components: 1) Topic selection; 1) Keyword collection; 1) Organize the mind map; 1) Fill in details and expand; 1) Use a mind map; is confirmed by the experts in 4 aspects: 1) Utility Standards, 2) Feasibility Standards, 3) Propriety Standards and 4) Accuracy Standards (Stufflebeam, 2012) as the follows:

Utility standards are intended to ensure that the developed instructional model will serve the information needs of intended users.

Feasibility standards are intended to ensure that the developed instructional model will be realistic, prudent, flexible, and frugal.

Propriety standards are intended to ensure that the developed instructional model will be conducted in conformity to teaching principles and provide positive results.

Accuracy standards are intended to ensure that the developed instructional model shows a measure of closeness to a true.

Mind mapping instructional model refers to a teaching approach that utilizes mind maps as a visual tool to enhance learning and understanding. It involves the use of diagrams or graphical representations to organize information, concepts, and relationships in a structured and inter connected manner. The steps of mind mapping teaching mode are as follows: (Wang, 2007; Zhou Guohua, 2010; Li, 2012).

1. Topic selection: Choose a topic or topic that is appropriate for the student, make sure it is relevant to the content of the study, and stimulate the student's interest and thinking.

2. Keyword collection: Guide students to collect keywords and concepts related to the topic. This can be done through discussion, brainstorming, or reading material. Students can write down all the keywords and related information that come to mind.

3. Organize mind maps: Students organize key words in the form of mind maps. The center of the mind map is the selected topic, and students can use branches to connect keywords and concepts with the topic to form a hierarchical map.

4. Supplementary details and extensions: Students can add more branches and sub-branches to complement and expand their mind map. They can add specific details, examples, or further concepts to each branch to deepen their thinking and understanding.

5. Using maps for learning or expression: Students can develop learning activities or expressions according to the keywords and links on the maps. They can write essays, prepare presentations, answer questions, or demonstrate thought processes based on the structure and content of the map.

Chinese writing ability refers to the proficiency and skill level an individual has in writing in the Chinese language where Chinese language skills are required. Zhang (2022) emphasizes the students' Chinese writing ability can be evaluated through 4 compositions comprising test items aligned with specific standards.

Item 1: Content of the article

Standard 1: Topic clarity and relevance

Standard 2: Clarity and Logic of Viewpoints

Item 2: Linguistic expression of the article

Standard 1: Grammatical Accuracy and Vocabulary

Standard 2: Fluency of expression and variety of sentence patterns

Item 3: The creativity of the article

Standard 1: Uniqueness and Novelty

Standard 2: Depth and breadth

Students of primary School refers to children who are enrolled in primary or elementary school, which typically includes students in the early stages of formal education, usually ranging from kindergarten or first grade to the fifth or sixth grade, depending on the educational system in a particular country. These students are typically between the ages of 5 to 12 years old, and primary school serves as the foundational level of their education, providing them with basic skills in subjects such as mathematics, language arts, science, and social studies.

Guilin Huitong Primary School refers to a primary school located in Guilin, Guangxi Zhuang Autonomous Region, China. It is known as Guilin Huitong Experimental Elementary School.

Research Framework

Based on the research objectives, relevant theories are compiled and studied i.e., mind mapping instructional model (Tang, 2023) and Chinese writing ability (Liu, 2021). These thoughts and principles are employed as the foundation of the following research framework as shown in figure 1.1:

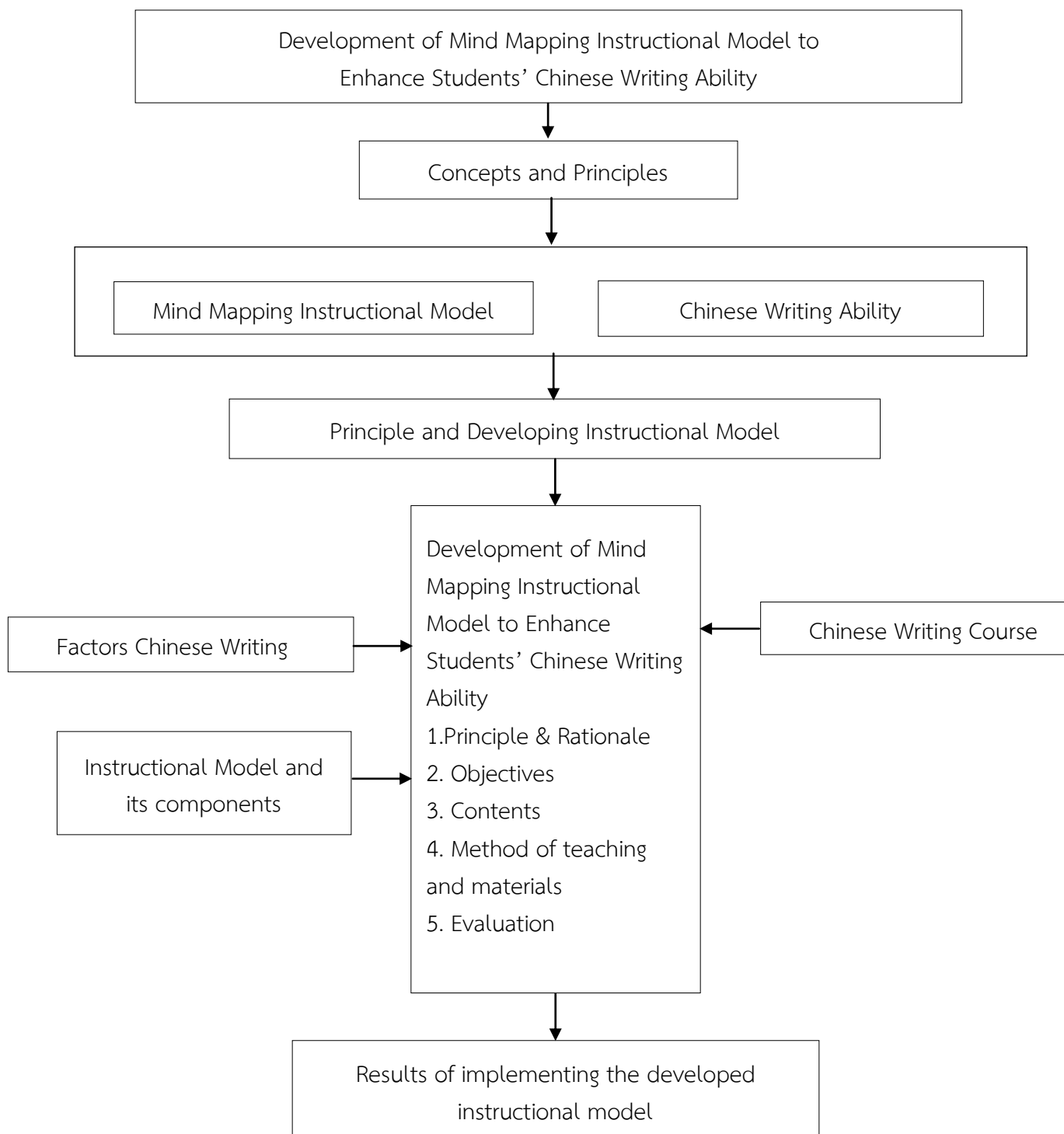


Figure 1.1 Research Framework

Chapter 2

Literature Review

In the study of "Development of Mind Mapping Instructional Model to Enhance Students' Chinese Writing Ability", the researcher studied the documents concerning the following Chinese Writing Ability.

1. Chinese Writing Course in Primary school
2. Development of Instructional Model
3. Mind Mapping Instructional Model
4. Chinese Writing Ability
5. Related Research

The details are as follows.

Chinese Writing Course in Primary school

Principle & rationale

The principles of Chinese Writing Course in Primary School include:

- 1) Advocating practice and application: focusing on cultivating students' ability to use writing skills in practice and encouraging them to apply what they have learned to practical writing.
- 2) Cultivate expression ability: Focus on cultivating students' thinking logic, observation and description ability, so that they can accurately and clearly express their ideas and opinions.
- 3) Pay attention to the writing process: pay attention to the planning, organization, revision and editing of students in the writing process to help them form a complete writing process and improve the quality of writing.
- 4) Personalized teaching: According to the ability level and needs of students, flexibly adjust the teaching content and methods pay attention to explore and cultivate each student's unique writing style.
- 5) Encourage innovation and thinking: Encourage students to show creativity in writing, and develop their critical thinking and critical skills through the exploration of different styles, themes and writing forms.

Zhang (2022) emphasizes the students' Chinese writing ability can be evaluated through 4 compositions comprising test item aligned with specific standards.

Item 1: Content of the article

Standard 1: Topic clarity and relevance

Standard 2: Clarity and Logic of Viewpoints

Item2: Linguistic expression of the article

Standard 1: Grammatical Accuracy and Vocabulary

Standard 2: Fluency of expression and variety of sentence patterns

Item 3: The creativity of the article

Standard 1: Uniqueness and Novelty

Standard 2: Depth and breadth

Objectives

The objectives of Chinese Writing Course in Primary School are as follows (Wang, 2020):

1. Develop students' writing ability: Through the teaching and practical activities of the course, develop students' basic writing skills, including writing expression, grammar and sentence pattern application. The goal is for students to be able to express their ideas and opinions accurately, clearly and coherently

2. Improve students' thinking ability: cultivate students' thinking logic, observation and description ability through thinking, organization and arrangement in the writing process. The goal is for students to be able to clear their minds, organize their essays coherently, and be able to think deeply about problems.

3. Cultivate students' creativity: Encourage students to show creativity in writing and stimulate their imagination and creative expression. The goal is for students to be able to think independently and present their views and ideas with unique perspectives and expressions.

4. Cultivate students' critical thinking: Guide students to think about different styles, subject matter and writing forms, and cultivate their understanding and analysis ability of diverse viewpoints. The goal is to equip students with the ability to examine issues, evaluate information, and express their own opinions.

5. Develop students' rhetorical skills: Through learning different rhetorical devices and writing skills, develop students' rhetorical ability. The goal is to enable students to use appropriate rhetorical devices to make the essay more convincing and appealing.

6. Improve students' self-expression ability: Encourage students to explore their own strengths and interests in writing, and cultivate their unique writing style. The goal is for students to be able to express their opinions and emotions authentically and confidently. By achieving these goals, the Chinese Writing Course in Primary School aims to cultivate students' all-round writing literacy and ability. To help students master basic writing skills, expand the breadth and depth of thinking, develop creative and critical thinking, and enhance self-expression and communication skills.

Curriculum structure

According to students' writing level and needs, flexible setting of different difficulties and types of writing tasks, and timely personalized guidance and assessment to promote the individual development of each student.

Table 2.1 Chapters and contents used in the present study

Unit	Chapter	Contents	Times (32 hrs.)
Unit 1: Describe the experience	1.1	Chapter1: Description of the natural landscape Topic: Sea of flowers in spring Content: Describe the beautiful and gorgeous sea of flowers in spring, how to feel the breath of spring, the color, shape and fragrance of flowers, etc.	8 hrs.
	1.2	Chapter 2: Describe the characters Topic: My good friend Content: Describe your best friend, including physical features, personality traits	
Unit 2: Describe the experience	2.1	Chapter 1: Happy Holidays Topic: My experience in summer camp Content: Describe your summer camp experience, including the activities, new friends, learned knowledge or skills, interesting memories, etc.	8 hrs.

Table 2.1 (Continued)

Unit	Chapter	Contents	Times (32 hrs.)
	2.2	Chapter 2: Unforgettable Trips Topic: My family trip Content: Describe the experience of traveling with your family, including the destination, the way of traveling, the experience of scenic spots, the taste of food, and the feeling and harvest of travel.	
Unit 3: Expressing emotion	3.1	Chapter 1: My Dream Topic: My ideal career Content: Express your desire and pursuit of your ideal career, including why you choose this career, the abilities and skills you need, and how to work hard to realize your dreams.	8 hrs.
	3.2	Chapter 2: Gratitude to Parents Topic: My parents are the best Content: Express gratitude to parents, describe all the love and care they have paid for themselves, and how they return their love.	
Unit 4: Argumentative writing	4.1	Chapter 1: Eating Healthy Topic: The importance of keeping healthy Content: Discuss the importance of staying healthy, provide advice on healthy eating, reasonable exercise plan and precautions, etc.	8 hrs.
	4.2	Chapter 2: Environmental Protection Topic: Take care of our Earth Content: Discuss the importance of environmental protection, provide methods and measures to protect the environment, and how everyone can contribute to the protection of the earth.	

The researcher choose Unit 1 and Unit 2or implementing the developed f model in the present study.

Development of Instructional Model

Definition of Instructional model

Yelan (1993) defined instructional model as the teaching model is commonly known as the big method. It is not only a teaching method, but also a whole and systematic operating style from teaching principle, teaching content, teaching goal and task, teaching process to teaching organization form, which is theorized. Liboshu (2022) defined instructional model as the specific structure of teaching activities which reflects the logical outline of a particular teaching theory and keeps the relative of a certain kind of teaching. Its role is to design courses, arrange teaching materials, guide classroom teaching and so on. Ding (2021) defined instructional model as a teaching model is a plan or type that can be used to set up courses (long-term courses in various disciplines), design teaching materials, and guide teaching in a classroom or other setting.

From the definition above, it can be concluded that instructional model refers to the teaching model can be defined as a relatively stable structure and procedure of teaching activities established under the guidance of certain teaching ideas or teaching theories. As a structural framework, it highlights the teaching mode's macroscopic grasp of the whole teaching activity and the internal relations and functions among various elements. As an activity program, it highlights the orderliness and operability of the teaching mode.

The teaching mode usually includes five factors, which are regularly related to each other is the structure of the teaching mode. They are: theoretical basis, teaching objectives, operating procedures, realization conditions and teaching evaluation.

The study of teaching model is a kind of innovation in teaching research methodology. It guides people to comprehensively explore the interaction between various factors and their diversified forms in the teaching process, grasp the essence and law of the teaching process from a dynamic point of view, and also plays a certain role in strengthening the teaching design and studying the optimal combination of the teaching process.

Components of Instructional model

Bloom (2013): Bloom proposed the taxonomy of educational objectives, which categorizes learning into cognitive, affective, and psychomotor domains. This model emphasizes the importance of clear learning objectives for effective instructional design.

Merrill (2014): Merrill introduced the Component Display Theory (CDT), which focuses on presenting information in ways that promote active learning. The CDT model consists of four components: activation, demonstration, application, and integration.

Gagné (2015): Gagné developed the Nine Events of Instruction model, which describes a sequence of events that should be followed to achieve effective learning. These events include gaining attention, informing learners of objectives, stimulating recall of prior learning, presenting content, providing guidance, eliciting performance, providing feedback, assessing performance, and enhancing retention and transfer.

Dick and Carey (2016): Dick and Carey proposed the Systems Approach Model for instructional design. This model emphasizes a systematic process that includes analyzing learners, setting instructional objectives, designing instructional strategies, developing and selecting instructional materials, and evaluating the effectiveness of instruction.

Keller (2017): Keller developed the ARCS model of motivation, which stands for Attention, Relevance, Confidence, and Satisfaction. This model suggests that instructional designers should focus on capturing learners' attention, making the content relevant, building learner confidence, and ensuring satisfaction with the learning experience.

Mayer (2018): Mayer's Cognitive Theory of Multimedia Learning emphasizes the use of multimedia elements to enhance learning. This theory suggests that instructional materials should present information in both visual and auditory formats to optimize learning and retention.

Ormrod (2019): Ormrod proposed the elaboration theory, which suggests that learners should actively engage with the content by connecting new information to prior knowledge. This model emphasizes the importance of providing meaningful learning experiences.

Sweller (2019): Sweller's Cognitive Load Theory highlights the limitations of working memory and suggests that instructional designers should minimize cognitive load to optimize learning. This model recommends techniques such as providing worked examples and reducing extraneous information.

Jonassen (2020): Jonassen's Constructivist Learning Environments model focuses on creating learning environments that foster active construction of knowledge. It emphasizes the use of authentic, real-world tasks and problem-solving activities to promote deep understanding.

Siemens (2020): Siemens introduced Connectivism as a learning theory for the digital age. This theory suggests that learning is an ongoing process that occurs through networks and connections. Instructional models based on connectivism emphasize the importance of building and utilizing networks of resources and expertise.

Li (2013) proposed the "Nine teaching elements" model, emphasizing that teachers should include nine aspects of teaching materials, teaching methods, teaching AIDS, environment, students, goals, content, methods and evaluation in teaching design.

Wu (2014) proposed the "three-dimensional structure teaching model", which emphasized that teaching activities should include cognitive layer, skill layer and emotional layer, so as to comprehensively promote the development of students' comprehensive literacy.

Hu (2017) proposed the "skill guidance model", which emphasizes that students' practical ability and innovative ability should be cultivated in teaching to meet the demand for talents in modern society.

Deng (2019) explored the "task-based teaching model", which emphasizes task-centered teaching and combines knowledge with practical problems to stimulate students' learning interest and motivation.

From the information above, the instructional model employed in the present study involve 5 components in line with the theories above i.e., principle and rationale, objectives, contents, methods of teaching & materials and evaluation.

Confirmatory factor analysis

To ensure the appropriateness of developed instructional model before implementation, the developed instructional model is confirmed depending on

program evaluation standards in 4 aspects : 1) Utility Standards, 2) Feasibility Standards, 3) Propriety Standards and 4) Accuracy Standards (Stufflebeam and Social Impact, 2012).

Utility standards are intended to ensure that the developed instructional model will serve the information needs of intended users.

Feasibility standards are intended to ensure that the developed instructional model will be realistic, prudent, flexible, and frugal.

Propriety standards are intended to ensure that the developed instructional model will be conducted in conformity to teaching principles and provide positive results.

Accuracy standards are intended to ensure that the developed instructional model shows a measure of closeness to a true value.

Mind Mapping Instructional Mode

Background

Novak and Cañas (2008): According to Novak and Cañas, mind mapping is a visual tool that helps students organize and represent knowledge in a meaningful way. It allows learners to generate and connect concepts, facilitating a deeper understanding of the subject matter. Mind mapping is widely used in educational settings as a tool for brainstorming, note-taking, and concept representation.

Theory

Buzan's Mind Mapping Theory: Tony Buzan's mind mapping theory emphasizes the use of visual-spatial thinking to enhance memory, creativity, and problem-solving skills. Buzan argues that the non-linear structure of mind maps stimulates both hemispheres of the brain, allowing for holistic thinking and improved information retention. Mind mapping is seen as an effective technique for organizing ideas, making connections, and promoting critical thinking.

Cognitive Load Theory: Cognitive Load Theory suggests that instructional materials should be designed in a way that minimizes cognitive load and optimizes learning. Mind mapping aligns with this theory by providing a visually appealing and concise representation of complex information. By reducing the cognitive load associated with text-based notes, mind maps free up cognitive resources for higher-order thinking processes.

Dual Coding Theory: Dual Coding Theory proposes that combining verbal and visual representations enhances learning and improves memory retention. Mind maps leverage this theory by using a combination of keywords, images, and visual elements to represent information. The integration of text and visuals in mind maps provides multiple retrieval paths, increasing the likelihood of information recall.

Methods of teaching

The teaching methods and steps of Chinese scholars on the mind map teaching model are as follows:

Wang (2007) emphasizing that mind mapping teaching should focus on cultivating students' thinking ability, creative ability, and critical thinking.

Step 1: Introduce a topic or question to stimulate students' thinking and interest.

Step 2: Guide students to construct a mind map and organize key concepts and information.

Step 3: Encourage students to engage in collaborative learning and group discussions, share and exchange their mind maps.

Step 4: Guide students to reflect and summarize, helping them deepen their understanding and application of the topic.

Zhou Guohua (2010): Advocate the combination of mind mapping and classroom teaching to promote the improvement of students' thinking, memory, and comprehension abilities.

Step 1: Introduce the basic principles and usage methods of mind mapping.

Step 2: Teachers and students work together to construct a mind map that showcases the levels and relationships of knowledge.

Step 3: Guide students to construct personal mind maps based on their own understanding and memory.

Step 4: Students present and share mind maps, and evaluate and provide feedback to each other.

Li (2012): It is believed that the mind mapping teaching model can improve students' initiative, participation, and creative thinking abilities.

Step 1: Determine the theme and goals, stimulate students' interest and thinking.

Step 2: Guide students to construct a mind map, organize and summarize key concepts and knowledge.

Step 3: Organize students to engage in group collaborative learning and work together to improve the mind map.

Step 4: Students expand and apply their personal mind maps to unleash creative thinking.

These Chinese scholars' viewpoints emphasize the importance of mind mapping teaching methods and provide corresponding teaching steps. They include steps such as introducing themes or questions, guiding students to construct mind maps, organizing collaborative learning and group discussions, and encouraging students to reflect and summarize. These steps aim to cultivate students' thinking ability, creative ability, critical thinking, and promote their understanding and application of knowledge.

Foreign scholars believe that the teaching methods and steps of the mind map teaching model can be summarized as follows:

1) **Topic selection:** Choose a topic or topic that is appropriate for the student, make sure it is relevant to the content of the study, and stimulate the student's interest and thinking.

2) **Keyword collection:** Guide students to collect keywords and concepts related to the topic. This can be done through discussion, brainstorming, or reading material. Students can write down all the keywords and related information that come to mind

3) **Organize mind maps:** Students organize key words in the form of mind maps. The center of the mind map is the selected topic, and students can use branches to connect keywords and concepts with the topic to form a hierarchical map.

4) **Supplementary details and extensions:** Students can add more branches and sub-branches to complement and expand their mind map. They can add specific details, examples, or further concepts to each branch to deepen their thinking and understanding.

5) **Using maps for learning or expression:** Students can develop learning activities or expressions according to the keywords and links on the maps. They can write essays, prepare presentations, answer questions, or demonstrate thought

processes based on the structure and content of the map.

From above the researcher choose of foreign scholars' s step to teach in this course.

Mind mapping instructional model refers to a teaching approach that utilizes mind maps as a visual tool to enhance learning and understanding. It involves the use of diagrams or graphical representations to organize information, concepts, and relationships in a structured and inter connected manner. The steps of mind mapping teaching mode are as follows: (Wang, 2007; Zhou Guohua, 2010; Li, 2012)

1) **Topic selection:** Choose a topic or topic that is appropriate for the student, make sure it is relevant to the content of the study, and stimulate the student's interest and thinking.

2) **Keyword collection:** Guide students to collect keywords and concepts related to the topic. This can be done through discussion, brainstorming, or reading material. Students can write down all the keywords and related information that come to mind

3) **Organize mind maps:** Students organize key words in the form of mind maps. The center of the mind map is the selected topic, and students can use branches to connect keywords and concepts with the topic to form a hierarchical map.

4) **Supplementary details and extensions:** Students can add more branches and sub-branches to complement and expand their mind map. They can add specific details, examples, or further concepts to each branch to deepen their thinking and understanding.

5) **Using maps for learning or expression:** Students can develop learning activities or expressions according to the keywords and links on the maps. They can write essays, prepare presentations, answer questions, or demonstrate thought processes based on the structure and content of the map.

Roles of teachers and students

Roles of teachers

Yang (2018): In mind mapping teaching, the role of teachers is the guide and instructor. They should provide clear guidance explaining how mind mapping works and how to use it. Teachers should also encourage students to think, discuss, and

organize information, and provide timely feedback and guidance.

Mayer and Wittrock (2006): According to Mayer and Wittrock, in mind mapping teaching, the role of the teacher is to provide skeletal support and stimulate students' creativity. Teachers can give starting points or topics for mind mapping and provide templates or guidance to help students organize and express ideas. At the same time, teachers should also encourage students to use their imagination and creativity to display and expand the content of the mind map.

Roles of students

Yang (2018) defended that students' roles in mind mapping teaching are active participants and builders. They should actively think, ask questions, discuss, and organize relevant concepts and information into mind maps. Students can apply their knowledge and understanding to fill in and expand the mind map to further deepen their understanding of the topic.

Novak and Canas (2008): According to Novak and Canas, in mind mapping teaching, the role of students is the builder of knowledge. They organize and present concepts by creating mind maps and share and expand their own mind maps through discussion and communication with others. Students are expected to actively engage in collaborative learning, share the structure and content of the mind map, and gain further learning opportunities from peer feedback.

Strengths and weaknesses of mind mapping

Strengths of mind mapping

According to Yang (2018), the advantages of mind mapping include:

Visual representation: Mind mapping uses visual elements such as graphics and colors to make information more intuitive and easy to understand.

Conceptual connections: Mind mapping can help students discover connections and relationships between concepts, promoting knowledge integration and deep understanding.

Diverse applications: Mind mapping is suitable for different disciplines and tasks, such as knowledge organization, project management, and creative thinking.

The advantages of mind mapping mentioned by Novak and Canas (2008) are:

Knowledge activation: Mind mapping stimulates students' thinking and memory skills by getting them to actively construct concepts and relationships.

Engaging in learning: Mind mapping encourages students to actively participate in the learning process and provides an interactive way to enhance learning.

Visual summary: Mind maps can be used as a visual summary of knowledge for students to review and review.

Weaknesses of mind mapping

Zhang (2019) points out that the disadvantages of mind mapping include:

Information overload: When mind mapping becomes complex, the problem of information overload can occur, making it difficult for students to sort out their thoughts and relationships.

Time consuming: Building a detailed mind map takes more time and effort and may interfere with the completion of other learning tasks.

Subjective factors: Each student may have a different understanding and organization of concepts, making the effect of mind mapping different from person to person.

Mayer (2014) mentioned the limitations of mind mapping:

Language limitations: For non-native learners or students with language impairments, mind mapping may be limited by language understanding and expression.

Complexity management: When a mind map becomes complex, students may have difficulty managing and understanding multiple relationships and concepts within it.

Disciplinary applicability: Mind mapping may have limited application in some disciplines, such as mathematics, because these disciplines are more heavily weighted towards symbols and formulas.

Chinese Writing Ability

Chinese writing ability refers to the proficiency and skill level an individual has in writing in the Chinese language. It encompasses various aspects, including grammar, vocabulary usage, sentence structure, coherence, organization of ideas, and understanding of Chinese characters. Chinese writing ability involves the capacity to effectively communicate thoughts, express ideas, and convey information through written form in Chinese. It is an essential component of language proficiency and

plays a crucial role in academic, professional, and personal contexts where Chinese language skills are required. The students' Chinese writing ability can be evaluated through 4 compositions comprising test items aligned with specific standards.

Item 1: Content of the article

Standard 1: Topic clarity and relevance

Standard 2: Clarity and Logic of Viewpoints

Item2: Linguistic expression of the article

Standard 1: Grammatical Accuracy and Vocabulary

Standard 2: Fluency of expression and variety of sentence patterns

Item 3: The creativity of the article

Standard 1: Uniqueness and Novelty

Standard 2: Depth and breadth

These writing abilities aim to develop students' communication skills, creativity, critical thinking, and self-expression. By mastering these aspects, students can effectively convey their ideas, engage readers, and produce well-structured and cohesive pieces of writing in Chinese language.

Some domestic and foreign scholars on the Chinese writing ability of Chinese primary school students:

Ding and Hua (2016): The research finds that Chinese primary school students have some common problems in Chinese writing, such as insufficient vocabulary, frequent grammatical errors and simple sentence structure. This may be related to the emphasis on knowledge points and mechanical writing training under the education system. Therefore, it is necessary to focus on cultivating students' creative thinking and critical writing skills.

Li and Gao (2019): Research finds that Chinese primary school students often lack logic and organization in Chinese writing. They lack coherence in expressing ideas and storylines, and tend to use templated sentence patterns and vocabulary. Therefore, it is necessary to strengthen students' writing training and cultivate their ability of thinking and integration.

Ren and Zheng (2017): Research finds that Chinese primary school students often lack confidence and initiative in the writing process. Their pursuit of literary talent and creativity is less, and they pay more attention to following the requirements of textbooks and teachers. Therefore, there is a need to provide more

writing opportunities and a positive writing environment that encourages students to express their opinions and ideas.

Related Research

Some domestic and foreign scholars' researches on the theme of "Development of Mind Mapping Instructional Model to Enhance Students' Chinese Writing Ability" are as follows:

Lin and Huang (2013): Study about a mind-map-based teaching model for Chinese writing teaching was proposed. The result had found that using mind mapping to help students organize and develop writing ideas, students' Chinese writing ability can be improved, and their creative thinking and logical expression ability can be promoted.

Lee (2014): Study about explored the effectiveness of mind mapping as an instructional strategy to enhance Chinese writing ability in elementary school students. The result had found students who used mind mapping showed better organization of ideas and improved writing quality.

Chen (2015): Study about investigated the impact of mind mapping instruction on college students' Chinese writing ability. The result had found that students who received mind mapping instruction demonstrated higher levels of creativity, organization, and coherence in their writing.

Wang and Zhang (2016): Study about examined the influence of a mind mapping instructional approach on middle school students' Chinese writing performance. The result had found mind mapping facilitated students' ability to generate and connect ideas, resulting in improved writing fluency and structure.

Yu and Li (2017): Study about conducted a comparative study on the effects of mind mapping instruction and traditional writing instruction on high school students' Chinese writing ability. The result had found students who received mind mapping instruction exhibited higher levels of critical thinking, idea generation, and overall writing quality.

Wu and Liu (2018): Study about explored the application of mind mapping in improving Chinese writing skills of foreign learners. The result had found mind mapping effectively enhanced learners' organization and coherence in writing, allowing them to express their thoughts more fluently.

Li and Zhang (2019): Study about investigated the effects of mind mapping instruction on primary school students' Chinese writing ability. The result had found mind mapping helped students improve their ability to generate ideas, structure their writing, and express themselves more accurately.

Zhang and Li (2020): Study about examined the impact of mind mapping on college students' narrative writing skills in Chinese as a second language. The result had found mind mapping fostered students' creativity, coherence, and linguistic accuracy in writing narratives.

Wang and Liu (2021): Study about explored the effectiveness of mind mapping instruction in improving the argumentative writing skills of high school students. The result had found mind mapping enhanced students' ability to organize their thoughts, present persuasive arguments, and develop coherent essays.

Chen and Huang (2022): Study about investigated the effects of integrating mind mapping into Chinese writing instruction for students with learning disabilities. The result had found mind mapping facilitated their ability to plan and structure their writing, resulting in improved written expression.

Park and Kim (2013): Study about conducted a comparative study on the effects of mind mapping and outlining strategies on Korean students' Chinese writing ability. The result had found mind mapping was more effective in enhancing students' organization, creativity, and overall writing quality.

Tanaka and Suzuki (2014): Study about explored the use of mind mapping as a teaching model for Chinese writing instruction in Japanese middle schools. The result had found mind mapping helped improve students' ability to generate ideas, structure their writing, and enhance their overall writing competence.

Li and Zhou (2015): Study about examined the impact of mind mapping on Chinese heritage learners' writing proficiency. The result had found mind mapping assisted students in generating and organizing ideas, leading to improved coherence and fluency in their Chinese writing.

Rhee and Choi (2016): Study about investigated the effects of incorporating mind mapping into Chinese writing instruction for Korean elementary school students. The result had found mind mapping facilitated students' ability to generate ideas and organize their writing, resulting in improved overall writing performance.

Chen and Zhang (2017): Study about explored the effectiveness of mind mapping instruction in improving Chinese writing skills for international students. The result had found mind mapping enhanced students' ability to structure their writing, express themselves with greater clarity, and convey their thoughts more effectively.

Park and Kim (2018): Study about conducted a study on the effects of mind mapping as a pre-writing strategy for Chinese writing in Korean high school students. The result had found mind mapping improved students' ability to generate ideas, plan their writing, and produce well-organized essays.

Suzuki and Yamamoto (2019) studied about investigated the effects of mind mapping on Japanese university students' Chinese writing ability. The result had found mind mapping enhanced students' ability to organize their writing, improve coherence, and enhance their overall writing quality.

In summary, research by domestic and foreign experts and scholars has shown that using mind map teaching models to enhance students' Chinese writing ability is an effective teaching method. Mind mapping helps students organize and develop writing ideas, improve writing quality, creative thinking, and logical expression abilities. This research result has important implications for educational practice and provides an effective teaching strategy for teachers to promote the development of students' Chinese writing ability.

Chapter 3

Research Methodology

In the study of “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability” the researcher used Mixed Method of Research. This research is divided into 3 phases.

Phase 1 was conducted to answer research objective 1: To examine the factors affecting students’ Chinese writing ability.

Phase 2 was conducted to answer research objective 2: To develop Mind Mapping Instructional Model enhance students’ Chinese writing ability.

Phase 3 was conducted to answer research objective 3: To study the results of Mind Mapping Instructional Model to enhance students’ Chinese writing ability.

The details are as follows.

Phase 1 was conducted to answer research objective 1: To examine the factors affecting students’ Chinese writing ability.

Population

Group 1: 150 former fourth-grade students of semester 1 on academic year 2022 in from Guilin Huitong Primary School.

Class 1: 50 students

Class 2: 45 students

Class 3: 55 students

Research instrument

The questionnaire for students

Designing instrument 1 (The questionnaire for students)

1. Study literatures on Chinese writing ability, and factors affecting the development of Chinese writing ability.

2. Design a questionnaire on factors to improve Chinese writing ability of fourth-grade students at Guilin Huitong Primary School.

3. Present the draft of questionnaire to the advisors for checking correctness and completion.

4. Assess the validity of questionnaire on factors to improve Chinese writing

ability of fourth-grade students at Guilin Huitong Primary School by 5 experts (List name in Appendix A) through Index of Item-Objective Congruence (IOC) according to the criteria shown below (Phongsri, 2011).

+1 = Sure that the contents are related to the topics

0 = Not sure that the contents are related to the topics

-1 = The contents are not Guangxi Province related to the topics

The acceptable items must have the IOC values not less than 0.5. The IOC calculated from the validation measures 1.00.

5. Design Likert 5-point rating scale questionnaire on the following score rating criteria.

Score rating criteria

5 means the highest

4 means high

3 means moderate

2 means few

1 means the fewest

The factors affecting Chinese writing ability obtained from the students are interpreted using MEAN interpretation criteria proposed by Phongsri (2011).

4.51-5.00 means the highest

3.51-4.50 means high

2.51-3.50 means moderate

1.51-2.50 means few

1.00-1.50 means the fewest

Data collection

1. Ask for permission for data collection.
2. Collect data from the assigned students using the developed questionnaire.

Data analysis

Descriptive statistics, frequency, mean (μ) standard deviation (σ)

Group 2: 3 teachers who teach the Chinese writing course at Guilin Huitong Primary School.

Research instrument

The interview for the lecturers

Designing instrument 2 (The interview for the lecturers)

1. Study literature on Chinese writing ability improve of Chinese writing ability factors affecting.
2. Design the draft of open-ended interview on factors affecting Chinese writing ability.
3. Present the draft of open-ended interview to the advisors for checking correctness and completion.
4. Assess the validity of open-end interview on factors affecting Chinese writing ability for the students by 5 experts (List name in Appendix A) through Index of Item-Objective Congruence (IOC) according to the criteria shown below. (Phongsri, 2011)

+1= Sure that the contents are related to the topics

0 = Not sure that the contents are related to the topics

-1 = Sure that the contents are not related to the topics

The acceptable items must have the IOC values not less than 0.5. The IOC calculated from the validation measures 1.00.

Data collection

1. Ask for permission for data collection.
2. Collect data from the assigned lecturers using the developed interview.

Data analysis

Content analysis

Output Phase 1

Factors affecting Chinese writing ability of students at primary school by table 3.1 conduct research from Phase 1.

Table 3.1 Summary how to conduct research from Phase 1

Topics	Details
Research process	Analyzed both internal and external factors
objective Research	To examine the factors affecting students' Chinese writing ability.
Conduct research	Design internal and external factors that influence the practical ability of students in primary school. Design questionnaires and lecturer interview outlines.
Target group	1) 150 former students of students in primary school. 2) 3 teachers who teach Chinese writing Course in primary school.
Instrument	1) Questionnaires 30 items. 2) Interview by 10 questions
Data analysis	1) Descriptive Statistics i.e., Frequency, mean (μ) standard deviation (σ) for questionnaires. 2) Content analysis for interview
Research process	Analyzed both internal and external factors
Output	The result of the factors affecting Chinese writing ability.

Phase 2 was conducted to answer research objective 2: To develop mind mapping instructional model for enhancing Chinese writing ability of students at primary school.

Research instrument

Conformity Assessment Form of mind mapping instructional model in terms of accuracy standard, propriety standard, feasibility standard, and utility standard.

Designing instrument (the questionnaire for IOC)

1. Study related concepts, principles, process about developing instructional model, including results in terms of factors affecting from research Chinese writing ability objective 1.

2. Design handout of mind mapping instructional model.

3. Design a questionnaire on confirming the appropriateness of the instructional model in terms of accuracy standard, propriety standard, feasibility standard, and utility standard. 4. Present the draft of open-ended interview to the advisors for checking correctness and completion.

5. Assess the validity of the questionnaire on confirming the appropriateness of the instructional model by 5 experts (List name in Appendix A) through Index of Item-Objective Congruence (IOC) according to the criteria shown below (Phongsri, 2011).

1 = Sure that the contents are related to the topics

0 = Not sure that the contents are related to the topics

-1 = Sure that the contents are not related to the topics

The acceptable items must have the IOC values not less than 0.5. The IOC calculated from the validation measures 1.00.

6. Design the conformity assessment form of mind mapping instructional model.

Data collection

1. Ask for permission of data collection

2. Collect appropriateness of the instructional model in terms of accuracy standard, propriety standard, feasibility standard, and utility standard from the 5 experts using the developed conformity assessment form of mind mapping instructional model.

Data analysis

Descriptive analysis i.e. frequency and percentage. The acceptable items must not be less than 100%.

Output Phase2

Instructional model the appropriateness of which is confirmed by experts for further implementation by table 3.2 conduct research from Phase 2.

Table 3.2 Summary how to conduct research from Phase 2

Topics	Details
Research process	Development of mind mapping in terms of accuracy standards, propriety standards, feasibility standards, and utility standards.
Research objective	To develop mind mapping instructional model to enhance Chinese writing ability of students at primary school.
Conduct research	Study the component for development of mind mapping instructional model
Target group	5 experts through Item-Objective Congruence (IOC) according to the criteria
Instrument	The questionnaire
Data analysis	Frequency and percentage
Output	The appropriateness of mind mapping instructional model is confirmed by experts for further implementation.

Phase 3 was conducted to answer research objective³ :To study the results of mind mapping instructional model to enhance students' Chinese writing ability.

Population

The total of 300 students from 6 classes of students with different levels of learning achievement, who enrolled in Chinese writing Course at in Guilin Huitong Primary School semester 1 academic year 2023. Those sections involve the following.

50 students in Class A

50 students in Class B

50 students in Class C

50 students in Class D

50 students in Class E

50 students in Class F

The sample group

The 50 students who enrolled in Chinese writing Course from class section C are obtained by cluster random sampling.

Research design

Table 3.3 Post test Only Experimental Design

Group	X	T1
Sample group	Students' Chinese writing ability	Mapping instructional model

X - Mapping instructional model

T1 - Students' Chinese writing ability

Research instruments

1. Lesson plans using mind mapping instructional model
2. Rubric scoring

Designing instrument 1 (Lesson plans)

1. Study contents, objectives, methods of teaching, materials and evaluation.
2. Design lesson plans by format given.
3. Present the lesson plan to the advisors for checking correctness, completion and improvement.
4. Assess the validity of the designed lesson plans by 5 experts (List name in Appendix A) through Index of Item-Objective Congruence (IOC) according to the criteria shown below (Phongsri, 2011).

+1 = Sure that the contents are related to the topics

0 = Not sure that the contents are related to the topics

-1 = Sure that the contents are not related to the topics

The acceptable items must have the IOC values not less than 0.5. The IOC calculated from the validation measures 1.00.

5. Conduct a try-out of the developed lessons plans with another group of samples for further improvements and implementation with the sample group.

Designing instrument 2 (Rubric scoring form)

1. Study the rubric scoring criteria
2. Design rubric scoring criteria.
3. Present the developed rubric scoring criteria to the advisors for checking correctness, completion and improvement.
4. Assess the validity of the designed rubric scoring criteria by 5 experts (List name in Appendix A) through Index of Item-Objective Congruence (IOC) according to the criteria shown below. (Phongsri, 2011)

+1 = Sure that the descriptors are related to the issue of assessment

0 = Not sure that the descriptors are related to the issue of assessment

-1= Sure that the descriptors are not related to the issue of assessment

The acceptable items must have the IOC values not less than 0.5. The IOC calculated from the validation measures 1.00.

Data collection

1. Ask for permission of data collection
2. Collect students' performance by using rubric scoring before assessment by external raters.

Data analysis

Categorize students' performance according to rubric scoring criteria into their levels descriptor.

Output Phase 3 (Rubric Scoring Criteria)

Results of implementing mind mapping instructional model – students' performance according to rubric scoring criteria into their levels descriptor by table 3.4.

Table 3.4 Summary how to conduct research from Phase 3

Topics	Details
Research process	1) Design lesson plan 2) Design scoring rubric form
Research objective	To study the results of Mind Mapping Instructional Model to enhance students' Chinese writing ability.
Conduct research	Designing instrument 1 (Lesson plan) Designing instrument 2 (Rubric evaluation form)
The sample group	The 50 students who enroll in Chinese writing Course in primary school in the 1st semester, the academic year 2023 from class C are obtained by cluster sampling.
Instrument	1. Lesson plan 2. Rubric evaluation form
Data analysis	Categorize students' writing ability according to rubric scoring criteria into their levels descriptor.
Output	Students' writing ability are at a good level $\geq 80\%$.

From the figure 3.1 show that the summary handout of mind mapping that consisted of 1) Principle and rationale were as about the Chinese writing course, asked question about students and the importance of instructional model 2) Objectives, to develop mind mapping instructional model to improve Chinese writing ability of students in Primary School. 3) Contents, were chosen unit 1-2 children's Chinese writing ability 4) Method of teaching and materials, were based on mind mapping instructional model materials and 5) Evaluation was as through literature review and daily teaching experience to determine how to evaluate and invite expert to confirm.

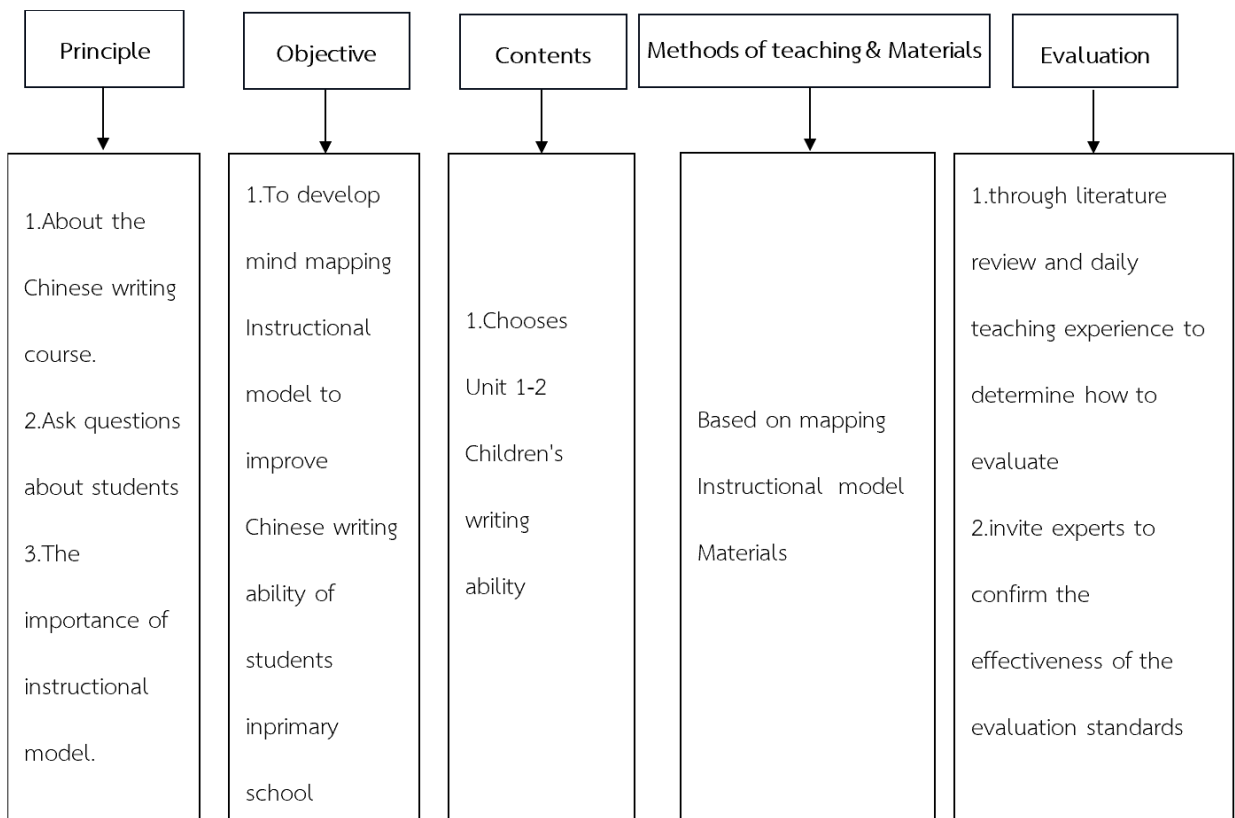


Figure 3.1 Summary handout of mind mapping instructional model

Chapter 4

Results of Analysis

In the study of “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability”, the researcher studied the documents concerning the following.

Part 1: Analysis results serving objective 1– 1. To examine the factors affecting students’ Chinese writing ability.

Part 2: Analysis results serving objective 2–2. To develop mind mapping instructional model to enhance students’ Chinese writing ability s.

Part 3: Analysis results serving objective 3–To study the results of Mind Mapping Instructional Model to enhance students’ Chinese writing ability

Data Analysis Results

Part 1: Analysis results serving objective 1–To study the factors affecting students’ Chinese writing ability.

Table 4.1 Common data of the respondent in overall (N=150)

Data	Frequency	Percentage
Gender		
A. Male	68	45.30
B. Female	82	54.70
Total	150	100.00
Age		
A. below 9 yrs.	4	2.70
B. 9-10 yrs.	81	54.00
C. 11-12 yrs.	63	42.00
D. over 12 yrs.	2	1.30
Total	150	100.00

From table 4.1, the common data of the respondent in overall showed that about eighty-two of the respondents are female, representing 54.70 % of the total participants. The male respondents make up 45.30% of the total. The age distribution is relatively concentrated, 9-10 years old is the most common, 54% of the respondents belong to this category.

Table 4.2 The result of questionnaire from students in overview (N=150)

No.	Factors	μ	σ	Interp retation	Ranking within All Factors
Internal factors(respondents)					
1	You knows that Chinese Writing course is an important compulsory course for students.	4.22	1.49	High	28
2	You feels that Chinese Writing course is the great significance to personal's Chinese writing ability.	4.52	1.56	High	4
3	You believes that the good technique in teaching to improve Chinese writing ability in Chinese writing course.	4.35	1.56	High	17
4	You believes that materials and learning resources to improve Chinese writing ability in Chinese writing course.	4.57	1.84	Highest	2
5	You are very actively engaged in Chinese Writing activities in the classroom.	4.51	1.46	High	6
6	You feel that homework projects to give full play to own strengths in Chinese writing course.	4.45	1.58	High	8

Table 4.2 (Continued)

No.	Factors	μ	σ	Interp retation	Ranking within All Factors
7	You feel that Chinese writing course is the great significance to personal growth and development in future.	4.31	1.55	High	22
8	You feel that the assignments assigned by the lecturers and the feedback can help students better apply what they have learned.	4.35	1.52	High	18
9	You can master Chinese writing Ability by Mind Mapping Instructional process in Chinese writing course.	4.36	1.55	High	16
10	You are satisfied with the friendly cooperation and interaction between students and teachers or peers in the Chinese writing course.	4.55	1.53	High	3
11	You feel that homework or project work assigned by teachers and students can help students better apply the knowledge they have learned.	4.51	1.55	High	5
12	You have new ideas based on their responses to learning about Chinese writing ability in Chinese writing course.	4.44	1.60	High	9
13	You can develop their sense of accomplishment and pride through different activities in Chinese writing course.	4.34	1.59	High	19
Total Average		4.42	1.57	High	

Table 4.2 (Continued)

No.	Factors	μ	σ	Interp retation	Ranking within All Factors
External Factor					
1	You think teachers have an impact on pupils' Chinese and writing ability.	4.33	1.45	High	20
2	Teachers give enough writing guidance and feedback in Chinese writing course.	4.4	1.63	High	13
3	Teachers regularly organize writing competitions and correct compositions to stimulate pupils' interest and motivation in writing.	4.36	1.68	High	14
4	Teachers can provide writing instruction and practice tailored to the student's level and needs.	4.24	1.48	High	27
5	Teachers can use a variety of teaching methods to improve students' Chinese writing ability.	4.59	1.84	Highest	1
6	Teachers use practical examples and hands-on activities to help students understand and apply writing ability.	4.43	1.59	High	10
7	The teacher chooses appropriate teaching methods according to the characteristics of Chinese writing course and the tasks and goals of Chinese writing ability.	4.43	1.54	High	11
8	The content of the textbook is combined with the students' actual life and experience.	4.27	1.55	High	24

Table 4.2 (Continued)

No.	Factors	μ	σ	Interpretation	Ranking within All Factors
9	The textbook provides practical, interactive, and inspiring cases and materials to useful for students.	4.47	1.53	High	7
10	Teachers can give students timely and specific feedback on writing.	4.32	1.66	High	21
11	Teachers can make individual evaluation according to different ability levels of students.	4.25	1.55	High	26
12	Teachers encourage students to improve their writing skills by evaluating each other.	4.36	1.55	High	15
13	The availability of Mind Mapping Instructional Model can affect students interest in Chinese writing courses.	4.43	1.53	High	12
14	The environments is clean and bright, with desks and chairs, blackboards, podiums, computers, projectors, large screens, loudspeakers and other multimedia facilities to facilitate the teaching process.	4.26	1.47	High	25
15	The class size of students in Chinese writing class is appropriate.	4.3	1.54	High	23
Total Average		4.36	1.57	High	

Table 4.2 indicated that internal factors affecting the Chinese learning ability of primary school students are found to be at a high level overall ($\mu=4.42$). Considering each item individually, it was found that NO.4 have the highest mean ($\mu=4.57$), followed by NO.10 ($\mu=4.55$), and the lowest mean is NO.1 ($\mu=4.22$).

For external factors affecting the Chinese learning ability of primary school students, the overall level is found to be moderate ($\mu=4.36$). Considering each item individually, it was found that EF5 has the highest mean ($\mu=4.59$), followed by NO.7 ($\mu=4.47$), and the lowest mean is NO.4 ($\mu=4.24$).

Table 4.3 Common data of the respondent in Guilin Huitong Primary School (N=50)

Data	Frequency	Percentage
Gender		
A. Male	22	44.300
B. Female	28	56.00
Total	50	100.00
Age		
A. below 9 yrs.	0	0.00
B. 9-10 yrs.	23	46.00
C. 11-12 yrs.	26	52.00
D. over 12 yrs.	1	2.00
Total	50	100.00

From table 4.3 the common data of the respondent majoring in Guilin Huitong Primary School the most gender is female, 56.00% .The most age is 11-12 yrs, 52.00%.

Table 4.4 The result of questionnaire from students in Guilin Huitong Primary School (N=50)

No.	Factors	μ	σ	Interp retation	Ranking within All Factors
Internal Factor					
1	You knows that Chinese Writing course is an important compulsory course for students.	4.26	1.51	High	25
2	You feels that Chinese Writing course is the great significance to personal's Chinese writing ability .	4.72	1.42	Highest	1
3	You believes that the good technique in teaching to improve Chinese writing ability in Chinese writing course.	4.32	1.53	High	22
4	You believes that materials and learning resources to improve Chinese writing ability in Chinese writing course.	4.58	1.61	High	6
5	You are very actively engaged in Chinese Writing activities in the classroom.	4.46	1.47	High	13
6	You feel that homework projects to give full play to own strengths in Chinese writing course.	4.56	1.34	High	8
7	You feel that Chinese writing course is the great significance to personal growth and development in future.	4.5	1.43	High	12
8	You feel that the assignments assigned by the lecturers and the feedback can help students better apply what they have learned.	4.34	1.44	High	20

Table 4.4 (Continued)

No.	Factors	μ	σ	Interpretation	Ranking within All Factors
9	You can master Chinese writing Ability by Mind Mapping Instructional process in Chinese writing course.	4.52	1.45	High	10
10	You are satisfied with the friendly cooperation and interaction between students and teachers or peers in the Chinese writing course.	4.7	1.50	Highest	2
11	You feel that homework or project work assigned by teachers and students can help students better apply the knowledge they have learned.	4.56	1.47	High	7
12	You have new ideas based on their responses to learning about Chinese writing ability in Chinese writing course.	4.4	1.53	High	16
13	You can develop their sense of accomplishment and pride through different activities in Chinese writing course.	4.64	1.61	High	3
Total Average		4.50	1.49	High	
External Factor					
1	You think teachers have an impact on pupils' Chinese and writing ability.	4.38	1.39	High	17
2	Teachers give enough writing guidance and feedback in Chinese writing course.	4.5	1.58	High	11
3	Teachers regularly organize writing competitions and correct compositions to stimulate pupils' interest and motivation in writing.	4.54	1.66	High	9

Table 4.4 (Continued)

No.	Factors	μ	σ	Interpretation	Ranking within All Factors
4	Teachers can provide writing instruction and practice tailored to the student's level and needs.	4.14	1.40	High	27
5	Teachers can use a variety of teaching methods to improve students' Chinese writing ability.	4.62	1.90	High	4
6	Teachers use practical examples and hands-on activities to help students understand and apply writing ability.	4.62	1.46	High	5
7	The teacher chooses appropriate teaching methods according to the characteristics of Chinese writing course and the tasks and goals of Chinese writing ability.	4.32	1.56	High	21
8	The content of the textbook is combined with the students' actual life and experience.	4.32	1.46	High	23
9	The textbook provides practical, interactive, and inspiring cases and materials to useful for students.	4.4	1.75	High	15
10	Teachers can give students timely and specific feedback on writing.	4.28	1.37	High	24
11	Teachers can make individual evaluation according to different ability levels of students.	4.04	1.41	High	28
12	Teachers encourage students to improve their writing skills by evaluating each other.	4.36	1.37	High	19

Table 4.4 (Continued)

No.	Factors	μ	σ	Interp retation	Ranking within All Factors
13	The availability of Mind Mapping Instructional Model can affect students interest in Chinese writing courses.	4.44	1.47	High	14
14	The environments is clean and bright, with desks and chairs, blackboards, podiums, computers, projectors, large screens, loudspeakers and other multimedia facilities to facilitate the teaching process.	4.36	1.43	High	18
15	The class size of students in Chinese writing class is appropriate.	4.22	1.58	High	26
Total Average		4.37	1.52	High	

Table 4.4 indicates that internal factors affecting the Chinese learning ability of primary school students are found to be at a high level overall ($\mu=4.50$). Considering each item individually, it was found that NO.2 have the highest mean ($\mu=4.72$), followed by NO.10 ($\mu=4.7$), and the lowest mean is NO.1 ($\mu= 4.26$).

For external factors affecting the Chinese learning ability of primary school students the overall level is found to be moderate ($\mu=4.37$). Considering each item individually, it was found that EF5 has the highest mean ($\mu=4.62$), followed by NO.6 ($\mu=4.62$), and the lowest mean is NO.11 ($\mu=4.04$).

Table 4.5 Common data of the respondent in Guilin Yucai Primary School (N=50)

Data	Frequency	Percentage
Gender		
A. Male	18	36
B. Female	32	64
Total	50	100
Age		
A. below 9 yrs.	2	4.00
B. 9-10 yrs.	31	62.00
C. 11-12 yrs.	16	32.00
D. over 12 yrs.	1	2.00
Total	50	100.00

From table 4.5 the common data of the respondent majoring in Guilin Yucai Primary School the most gender is female, 64%. The most age is 9-10 yrs., 62.00%.

Table 4.6 The result of questionnaire from students in Guilin Yucai Primary School (N=50)

No.	Factors	μ	σ	Interpretation	Ranking within All Factors
Internal Factor					
1	You know that Chinese Writing course is an important compulsory course for students.	4.02	1.55	High	28
2	You feel that Chinese Writing course is of great significance to personal Chinese writing ability.	4.18	1.67	High	23
3	You believe that the good technique in teaching to improve Chinese writing ability in Chinese writing course.	4.22	1.69	High	22

Table 4.6 (Continued)

No.	Factors	μ	σ	Interpretation	Ranking within All Factors
4	You believe that materials and learning resources to improve Chinese writing ability in Chinese writing course.	4.42	2.00	High	15
5	You are very actively engaged in Chinese Writing activities in the classroom.	4.5	1.53	High	10
6	You feel that homework projects to give full play to own strengths in Chinese writing course.	4.16	1.87	High	25
7	You feel that Chinese writing course is of great significance to personal growth and development in the future.	4.04	1.69	High	27
8	You feel that the assignments assigned by the lecturers and the feedback can help students better apply what they have learned.	4.44	1.58	High	13
9	You can master Chinese writing Ability by Mind Mapping Instructional process in Chinese writing course.	4.1	1.58	High	26
10	You are satisfied with the friendly cooperation and interaction between students and teachers or peers in the Chinese writing course.	4.3	1.59	High	21
11	You feel that homework or project work assigned by teachers and students can help students better apply the knowledge they have learned.	4.62	1.51	High	5

Table 4.6 (Continued)

No.	Factors	μ	σ	Interp retation	Ranking within All Factors
12	You have new ideas based on their responses to learning about Chinese writing ability in Chinese writing course.	4.56	1.75	High	7
13	You can develop their sense of accomplishment and pride through different activities in Chinese writing course.	4.18	1.61	High	24
Total Average		4.29	1.664	High	
External Factor					
1	You think teachers have an impact on pupils' Chinese and writing ability.	4.44	1.46	High	14
2	Teachers give enough writing guidance and feedback in Chinese writing course.	4.66	1.75	High	3
3	Teachers regularly organize writing competitions and correct compositions to stimulate pupils' interest and motivation in writing.	4.3	1.64	High	20
4	Teachers can provide writing instruction and practice tailored to the student's level and needs.	4.52	1.40	High	9
5	Teachers can use a variety of teaching methods to improve students' Chinese writing ability.	4.66	1.57	High	4
6	Teachers use practical examples and hands-on activities to help students understand and apply writing ability.	4.36	1.80	High	17

Table 4.6 (Continued)

No.	Factors	μ	σ	Interpretation	Ranking within All Factors
7	The teacher chooses appropriate teaching methods according to the characteristics of Chinese writing course and the tasks and goals of Chinese writing ability.	4.68	1.60	Highest	1
8	The content of the textbook is combined with the students' actual life and experience.	4.34	1.52	High	18
9	The textbook provides practical, interactive, and inspiring cases and materials to useful for students.	4.62	1.44	High	6
10	Teachers can give students timely and specific feedback on writing.	4.56	1.68	High	8
11	Teachers can make individual evaluation according to different ability levels of students.	4.38	1.44	High	16
12	Teachers encourage students to improve their writing skills by evaluating each other.	4.5	1.37	High	11
13	The availability of Mind Mapping Instructional Model can affect students interest in Chinese writing courses.	4.68	1.53	Highest	2
14	The environments is clean and bright, with desks and chairs, blackboards, podiums, computers, projectors, large screens, loudspeakers and other multimedia facilities to facilitate the teaching process.	4.32	1.58	High	19

Table 4.6 (Continued)

No.	Factors	μ	σ	Interp retation	Ranking within All Factors
15	The class size of students in Chinese writing class is appropriate.	4.46	1.54	High	12
Total Average		4.50	1.56	High	

Table 4.6 for internal factors affecting the Chinese learning ability of primary school students, the overall level is found to be moderate ($\mu=4.29$). Considering each item individually, it was found that NO.11 have the highest mean ($\mu=4.62$), followed by NO.12 ($\mu=4.56$), and the lowest mean is NO.1 ($\mu=4.02$).

For external factors affecting the Chinese learning ability of primary school students, the overall level is found to be moderate ($\mu=4.50$). Considering each item individually, it was found that EF7 has the highest mean ($\mu=4.68$), followed by NO.13 ($\mu=4.68$), and the lowest mean is NO.3 ($\mu=4.3$).

Table 4.7 Common data of the respondent in Guilin Zhuoran primary school (N=50)

Data	Frequency	Percentage
Gender		
A. Male	28	56.00
B. Female	22	44.00
Total	50	100.00
Age		
A. below 9 yrs.	2	4.00
B. 9-10 yrs.	27	54.00
C. 11-12 yrs.	21	42.00
D. over 12 yrs.	0	0.00
Total	50	100.00

From table 4.7, the common data of the respondent majoring in Guilin Zhuoran Primary School the most gender is male, 56.00% .The most age is 9-10 yrs., 54.00%.

Table 4.8 The result of questionnaire from students in Guilin Zhuoran Primary School (N=50)

No.	Factors	μ	σ	Interpretation	Ranking within All Factors
Internal Factor					
1	You know that Chinese Writing course is an important compulsory course for students.	4.38	1.43	High	10
2	You feel that Chinese Writing course is of great significance to personal Chinese writing ability.	4.66	1.60	Highest	2
3	You believe that the good technique in teaching to improve Chinese writing ability in Chinese writing course.	4.52	1.47	High	6
4	You believe that materials and learning resources to improve Chinese writing ability in Chinese writing course.	4.72	1.92	Highest	1
5	You are very actively engaged in Chinese Writing activities in the classroom.	4.58	1.40	High	5
6	You feel that homework projects to give full play to own strengths in Chinese writing course.	4.64	1.47	High	4
7	You feel that Chinese writing course is of great significance to personal growth and development in the future.	4.38	1.52	High	9

Table 4.8 (Continued)

No.	Factors	μ	σ	Interpretation	Ranking within All Factors
8	You feel that the assignments assigned by the lecturers and the feedback can help students better apply what they have learned.	4.28	1.55	High	17
9	You can master Chinese writing Ability by Mind Mapping Instructional process in Chinese writing course.	4.46	1.61	High	8
10	You are satisfied with the friendly cooperation and interaction between students and teachers or peers in the Chinese writing course.	4.64	1.49	High	3
11	You feel that homework or project work assigned by teachers and students can help students better apply the knowledge they have learned.	4.36	1.66	High	12
12	You have new ideas based on their responses to learning about Chinese writing ability in Chinese writing course.	4.36	1.55	High	13
13	You can develop their sense of accomplishment and pride through different activities in Chinese writing course.	4.2	1.52	High	21
Total Average		4.48	1.55	High	
External Factor					
1	You think teachers have an impact on pupils' Chinese and writing ability.	4.16	1.52	High	24
2	Teachers give enough writing guidance and feedback in Chinese writing course.	4.04	1.53	High	28

Table 4.8 (Continued)

No.	Factors	μ	σ	Interp retation	Ranking within All Factors
3	Teachers regularly organize writing competitions and correct compositions to stimulate pupils' interest and motivation in writing.	4.24	1.77	High	18
4	Teachers can provide writing instruction and practice tailored to the student's level and needs.	4.06	1.62	High	27
5	Teachers can use a variety of teaching methods to improve students' Chinese writing ability.	4.48	2.04	High	7
6	Teachers use practical examples and hands-on activities to help students understand and apply writing ability.	4.32	1.50	High	15
7	The teacher chooses appropriate teaching methods according to the characteristics of Chinese writing course and the tasks and goals of Chinese writing ability.	4.3	1.45	High	16
8	The content of the textbook is combined with the students' actual life and experience.	4.16	1.70	High	23
9	The textbook provides practical, interactive, and inspiring cases and materials to useful for students.	4.38	1.38	High	11
10	Teachers can give students timely and specific feedback on writing.	4.12	1.88	High	25

Table 4.8 (Continued)

No.	Factors	μ	σ	Interpretation	Ranking within All Factors
11	Teachers can make individual evaluation according to different ability levels of students.	4.32	1.78	High	14
12	Teachers encourage students to improve their writing skills by evaluating each other.	4.22	1.88	High	19
13	The availability of Mind Mapping Instructional Model can affect students interest in Chinese writing courses.	4.18	1.59	High	22
14	The environments is clean and bright, with desks and chairs, blackboards, podiums, computers, projectors, large screens, loudspeakers and other multimedia facilities to facilitate the teaching process.	4.1	1.42	High	26
15	The class size of students in Chinese writing class is appropriate.	4.22	1.50	High	20
Total Average		4.22	1.64	High	

Table 4.8 indicates that internal factors affecting the Chinese learning ability of Primary School students are found to be at a high level overall ($\mu=4.48$). Considering each item individually, it was found that NO.4 have the highest mean ($\mu=4.72$), followed by NO.2 ($\mu=4.66$), and the lowest mean is NO.13 ($\mu=4.2$).

For external factors affecting the Chinese learning ability of primary school students, the overall level is found to be moderate ($\mu=4.22$). Considering each item individually, it was found that EF5 has the highest mean ($\mu=4.48$), followed by NO.9 ($\mu=4.38$), and the lowest mean is NO.2 ($\mu=4.04$).

Table 4.9 Common data of the respondent in the teachers who are teaching Chinese Writing Course Grade 4 from 3 Primary Schools in Guilin

Data	Frequency	Percentage
Gender		
A. Male	2	33.30
B. Female	4	66.70
Total	6	100.00
Experience teaching		
A. below 3 yrs.	2	33.30
B. 3-6 yrs.	C	33.03
C. 7- 9 yrs.	1	16.70
D. over 9 yrs.	1	16.70
Total	6	100.00
Age		
A. below 25 yrs.	2	33.30
B. 25-35 yrs.	2	33.30
C. 36-50 yrs.	2	33.30
D. over 50 yrs.	0	0.00
Total	6	100.0

From table 4.9, the common data of the lecturers shows that the most common gender is Female, representing 66.70% of the respondents, while male lecturers make up 33.30% of the sample.

Through the interviews with 6 teachers, the factors that affect primary school students' Chinese writing ability are summarized as follows:

Internal factors

Physical factors: In the teaching of Chinese writing course for primary school students, four teachers mentioned reading habits, believing that if students develop a good reading habit, they can accumulate more vocabulary, language materials and story materials, understand and learn different writing styles and skills, enrich students' literary literacy and imagination, understand different cultural thoughts and social backgrounds,

and inspire students' creativity. Broaden students' cognitive and thinking horizons. In addition, three teachers also mentioned knowledge reserve, which further indicated the importance of reading.

Psychological factors: In the teaching of Chinese writing course for primary school students, the six lecturers all stressed the need to stimulate students' interest and enthusiasm in writing. They believe that through diversified teaching methods, good classroom atmosphere, vivid teaching process and positive recognition and feedback from teachers or parents, students can be encouraged to complete writing training seriously, actively participate in writing learning, and even take the initiative to think, reflect and create writing. In the interview, many teachers also emphasized the importance of writing practice, encouraging students to create boldly and improve their writing ability through more practice and reflection.

External factor

Teaching methods: All six teachers believe that appropriate methods should be adopted to stimulate students' interest in writing learning and creativity in the teaching process. All teachers suggested that the mind mapping method should be adopted in teaching to analyze the articles and stories in the textbooks. By disassembling and sorting out the themes expressed in the articles and dividing the themes into sections, students can clearly grasp the writing logic and overall structure of the articles, help students better understand the content of the articles, learn the writing style and writing skills of the articles, and improve students' writing ability. In addition, teachers A, D and F also put forward suggestions to enrich and adopt diversified teaching methods to stimulate students' interest and initiative in writing learning.

Evaluation: In terms of teaching evaluation and feedback, the six teachers all agreed that students' writing learning effect and writing level can be effectively evaluated through daily homework, exams, writing evaluation and other ways, and then according to their writing results, positive affirmation and encouragement are given, emphasizing their advantages and good writing habits, so as to stimulate students' writing interest and creative motivation. Among them, teachers A, B, C and F suggested encouraging students to speak and express actively in the teaching process, and gave

affirmation and encouragement to improve students' enthusiasm in learning writing. Teacher E and Teacher F also mentioned that by commenting on students' daily assignments and exams, they can correct students' problems in writing and stimulate students' reflection and summary of writing skills.

Resources: All the six teachers agreed that textbooks, workbooks and other auxiliary materials, literary works and multimedia teaching resources can better promote students' learning of writing. The five teachers also improved their writing skills and structures by encouraging students to imitate and learn from good writing models. Teacher B and Teacher E suggested enriching teaching resources, including books, articles, pictures, videos, etc., which can help students better master writing skills, accumulate writing materials, and stimulate students' interest in learning.

Teaching environment: All six teachers agreed that teaching environment has an important impact on students' learning of writing, and a good learning environment can stimulate students' learning enthusiasm. Teachers B, C and D suggested to enhance the interest of classroom teaching, stimulate the enthusiasm of students to participate in writing through continuous story writing and multimedia teaching, and even promote students' active learning and creation of writing. Teacher E believes that building a good classroom atmosphere is conducive to improving students' creative desire and mobilizing students' creative enthusiasm. Teacher F suggested providing students with rich creative materials to stimulate their imagination and encourage them to create boldly.

Family atmosphere: All the six teachers believe that the family environment has an important impact on students' writing ability, and they also agree that families should create a good reading environment, such as parents accompanying children to read books, encouraging children to read more, etc., to cultivate children's good reading habits. Teachers A, B and F advised parents to provide a good language environment for their children to improve their language expression and writing skills. Teachers B, E and F also mentioned that the family creative environment, including providing students with a quiet and comfortable writing environment and parents providing creative support for students' writing, can promote students' enthusiasm in writing and improve students' writing level.

Phase 2: Analysis results serving Objective 2 – Development of Mind Mapping Instructional Model to Enhance Students' Chinese Writing Ability

To serve objective 2, the collected data confirming the appropriateness of 5 components of instructional model are analyzed in 4 areas, i.e. utility, feasibility, propriety, and accuracy and presented by frequency and percentage of the specialists as shown in table and description below.

Table 4.10 Frequency and percentage of confirmability of utility, feasibility, propriety, and accuracy of the instructional model components in 5 components of instructional model by specialists

No.	Development of flipped classroom instructional model to improve physical innovative ability for undergraduate students	Opinion of the Specialists															
		Utility				Feasibility				Propriety				Accuracy			
		Agree		Disagree		Agree		Disagree		Agree		Disagree		Agree		Disagree	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	Principle and Rationale	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0
2	Objectives	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0
3	Contents	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0
4	Methods of Teaching & Materials	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0
5	Evaluation	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0	5	100.00	5	0

From table 4.10, the confirmability of each component of the instructional model by 5 specialists 100 % all utility standards, feasibility standards, propriety standards, and accuracy standards.

Principle and rationale

The principle and rationale of the instructional model were confirmed to be appropriate by 5 specialists 100 % for utility standards, feasibility standards, propriety standards, and accuracy standards.

Objectives

The objectives of principle and rationale of the instructional model were confirmed to be appropriate by 5 specialists 100 % for utility standards, feasibility standards, propriety standards, and accuracy standards.

Contents

The contents of principle and rationale of the instructional model were confirmed to be appropriate by 5 specialists 100 % for utility standards, feasibility standards, propriety standards, and accuracy standards.

Methods of teaching & materials

The methods of teaching & materials of the instructional model were confirmed to be appropriate by 5 specialists 100 % for utility standards, feasibility standards, propriety standards, and accuracy standards.

Evaluation

The evaluation of teaching & materials of the instructional model were confirmed to be appropriate by 5 specialists 100 % for utility standards, feasibility standards, propriety standards, and accuracy standards.

Phase 3: The analysis results serve the purpose of objective 3 -- To study the effect of mind mapping teaching method on improving students' Chinese writing ability.

Objective 3 analysis results are reports on students' performance and satisfaction with Chinese writing ability based on the evaluation criteria based on the score through the mind mapping teaching model specified in Chapter 3 as well as tables and descriptive analysis.

Chinese writing ability over all 6 standards

Table 4.11 Students' performance results based on analysis and overall grading assessment

Assessment aspects	\bar{x}	S.D.	Interpretation of quality levels	Rank
Article content	9.28	0.97	Excellent	1
Article language expression	8.82	1.24	Good	3
Article creativity	8.92	1.10	Good	2
Average	9.01	1.12	Excellent	

After indicating the mind map teaching model, students' performance was evaluated at an excellent level ($\bar{x}=9.01$) through analysis and average scoring criteria. The content of the article is the most obvious aspect of student development, followed by the creativity of the article and the language expression of the article.

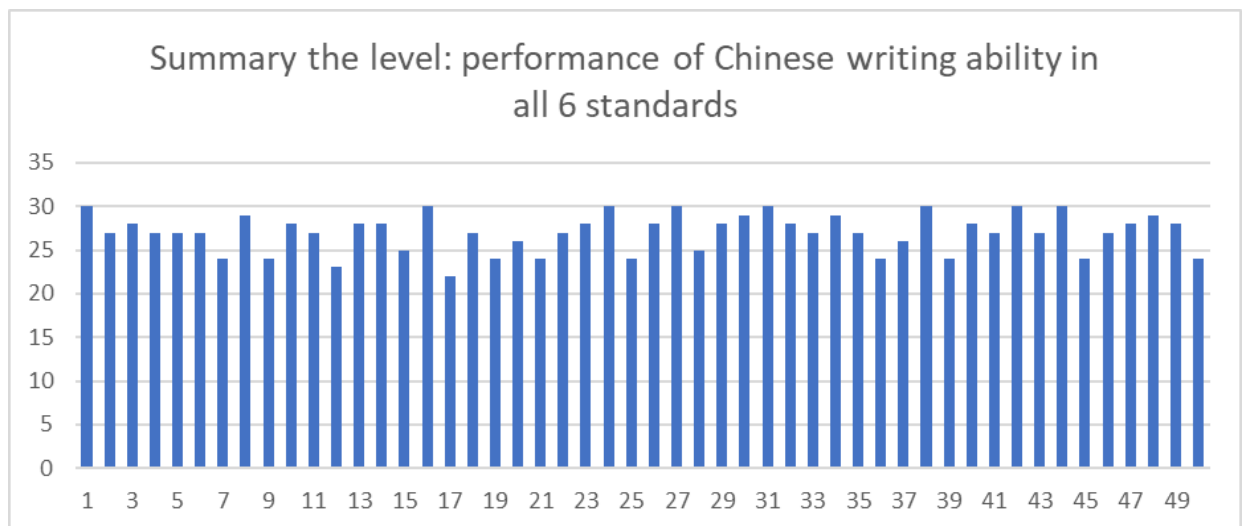


Figure 4.1 Relative gained score of students' Chinese writing ability (summary the level: performance of Chinese writing ability in all 6 standards) Improvement through mind map learning

Table 4.12 Relative development scores of students' Chinese writing ability
(summary level: performance of Chinese writing ability in all 6 standards)
Improvement through mind map learning

Fraction	Grade
25-30	Excellent
19-24	Good
13-18	Medium
7-12	Pass
less than 7	Poor

Summary level: Chinese writing ability exceeds 6 standards

The level of development	Frequency	Percentage
Excellent	39	78.00
Good	11	20.00
Medium	0	0.00
Pass	0	0.00
poor	0	0.00

As can be seen from table 4.12, all students (100%) showed good Chinese writing ability. Among them, 39 people (78%) were excellent and 11 people (22%) were good. There are 0 students (10%) at the middle level and below, and no student has poor Chinese writing ability.

Overall, it can be seen from table 4.12 that after implementing the mind map teaching model, the Chinese writing ability of most students (100%) has been improved. This result is consistent with the research hypothesis after implementing the mind map teaching model. The overall improvement of students' Chinese writing ability is 80% (above good level). Therefore, we can conclude that the mind map teaching method is effective in improving students' Chinese writing ability.

Article content

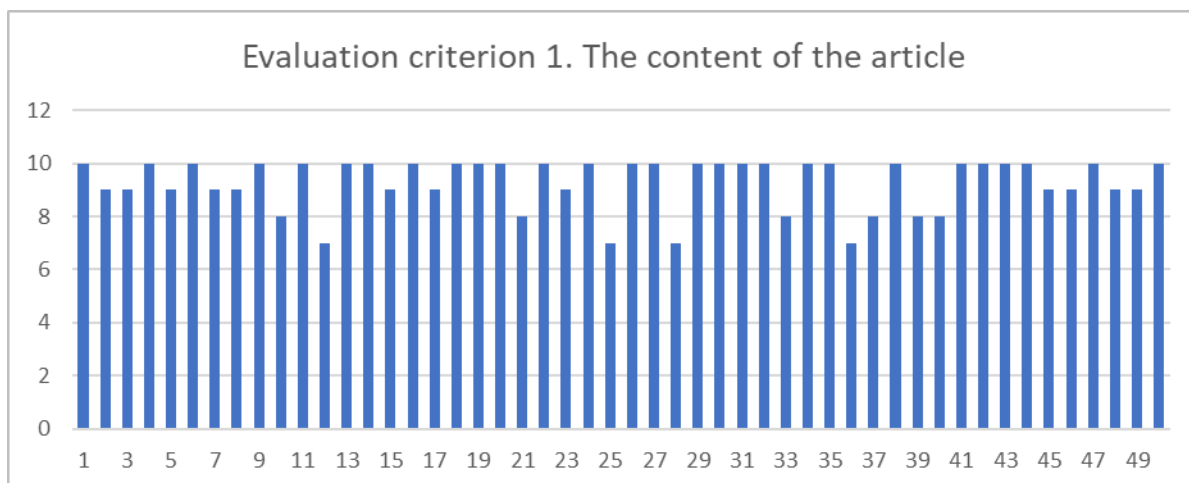


Figure 4.2 Relative gained score of students' Chinese writing ability (evaluation criterion 1. The content of the article) Improvement through mind map learning

Table 4.13 Relative development scores of students Chinese' writing ability (evaluation criterion 1. The content of the article) is improved through mind mapping

Standard One: Topic clarity and relevance

Standard Two: Clarity and Logic of Viewpoints

Fraction

13-15

10-12

7-9

4-6

less than 4

Grade

Excellent

Good

Medium

Pass

Poor

Summarize the content of Level Project 1 articles

The level of development	Frequency	Percentage
Excellent	40	80.00
Good	10	20.00
Medium	0	0.00
Pass	0	0.00
poor	0	0.00%

Content of the article reaches a good or excellent level, exceeding 80% of what was expected in the research hypothesis. This shows that the mind map teaching method has a significant positive impact on improving students' Chinese writing ability.

The language expression of the article

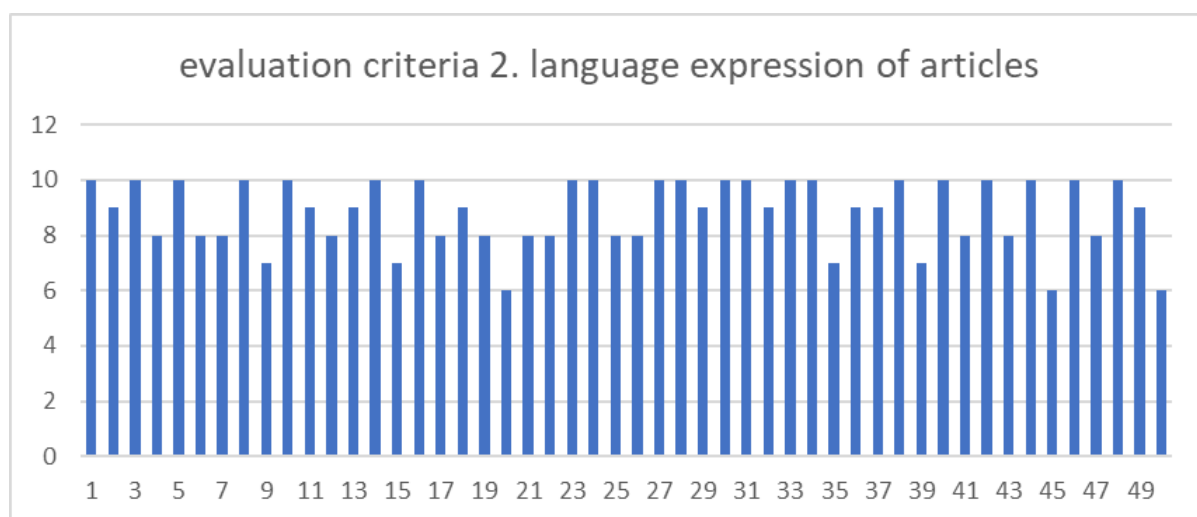


Figure 4.3 Relative gained score of students' Chinese writing ability
(evaluation criteria 2: language expression of articles)
Improvement through mind map learning

Table 4.14 Relative development scores of students' Chinese writing ability
(evaluation criteria 2: language expression of articles) improved through
mind mapping

Standard One: Grammatical Accuracy and Vocabulary

Standard Two: Fluency of Expression and Diversity of Sentence Patterns

Fraction	Grade
less than 4	Excellent
13-15	Good
10-12	Medium
7-9	Pass
4-6	Poor

Table 4.14 (Continued)

Summary level 2. The language expression of the article		
The level of development	Frequency	Percentage
Excellent	30	60.00
Good	17	34.00
Medium	3	6.00
Pass	0	0.00
poor	0	0.00

The language expression of the article reaches a good or excellent level, exceeding 80% of the expectations in the research hypothesis. This shows that the mind map teaching method has a significant positive impact on improving students' Chinese writing ability.

The creativity of the article

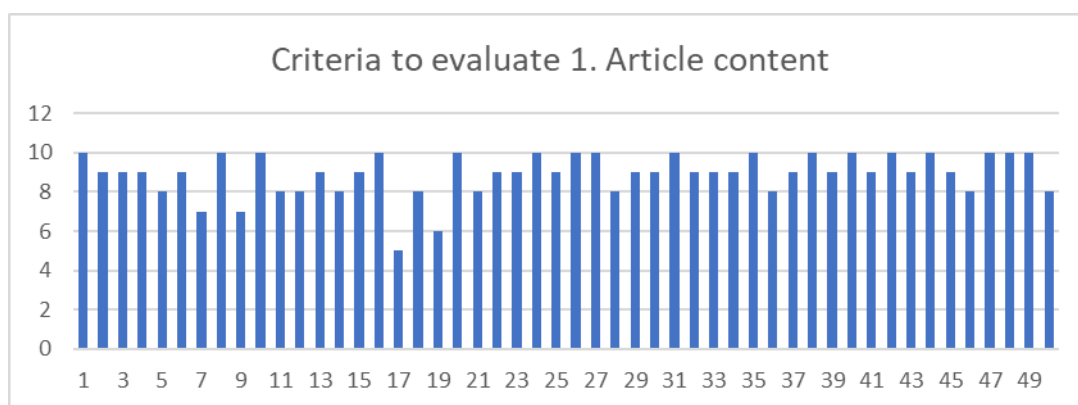


Figure 4.4 Relative gained score of students' Chinese writing ability (evaluation criteria 3: creativity of articles) Improvement through mind map learning

Table 4.15 Relative development scores of students' Chinese writing ability (evaluation criteria 3: creativity of articles) improved through mind mapping

Standard One: Uniqueness and Novelty		
Standard Two: Depth and Breadth		
Fraction	Grade	
13-15	Excellent	
10-12	Good	
7-9	Medium	
4-6	Pass	
less than 4	Poor	
Summary level 3. Creativity of the article		
The level of development	Frequency	Percentage
Excellent	36	72.00
Good	12	24.00
Medium	2	4.00
Pass	0	0.00
poor	0	0.00

The creativity of the article reached a good or excellent level, exceeding 80% of the expectations in the research hypothesis. This shows that the mind map teaching method has a significant positive impact on improving students' Chinese writing ability.

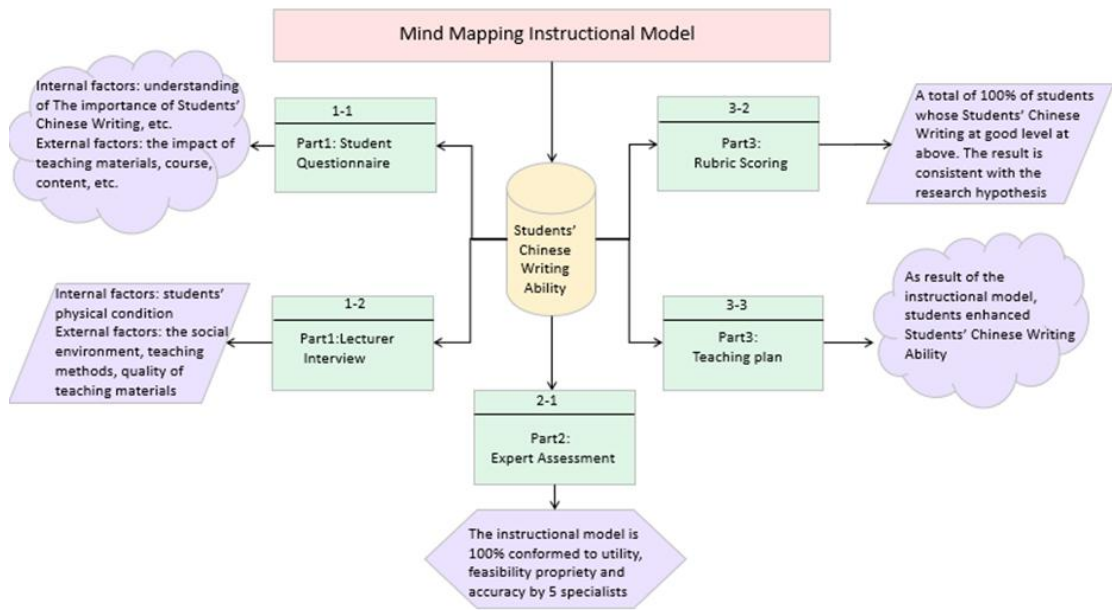


Figure 4.5 After the implementation of the mind map learning model

Chapter 5

Conclusion Discussions and Recommendations

After analyzing and presenting the data analysis results in Chapter 4, the following conclusions and discussions can be drawn to serve all the research goals of Study 4 of this study "Developing Mind Map Teaching Methods to Improve Students' Chinese Writing Abilities". In addition, some methods are recommended based on the research results.

Research objectives

1. To examine the factors affecting students' Chinese writing ability.
2. To develop mind mapping instructional model to enhance students' Chinese writing ability.
3. To study the results of mind mapping instructional model to enhance students' Chinese writing ability.

Conclusion

1. There were 2 factors affecting students' Chinese writing ability: 1) physics and psychology were in internal factors. 2) materials, teaching methods and evaluation were in external factors from the result from the students and the lecturers.

2. Mind mapping instructional model to enhance students' Chinese writing ability included 5 components: 1) Principle and Rationale, 2) Objectives, 3) Contents, 4) Method of teaching & materials and 5) Evaluation. The model was 100% conformed to utility standards, feasibility standards, propriety standards, and accuracy standards as assessed by 5 specialists.

3. After implementing mind mapping instructional model, students' Chinese writing ability will be overall improved at 80% (Good Level).

Discussions

1. There were 2 factors affecting students' Chinese writing ability: 1) physics and psychology were in internal factors. 2) materials, teaching methods and evaluation were in external factors from the result from the students and the lecturers according to

1.1 Internal factors: Physics: students can actively participate in the teaching from their experience, students not only need to listen carefully, but also need to practice, including emphasizing students' thinking ability when doing cases, so as to better complete understanding, analysis, problem solving and so on. Psychology: In the teaching of the Chinese writing, is an important psychological training, which requires students to use their brains to think about problems, emphasizing the positive thinking of learners. In addition, the lecturers also stressed that students should practice more, communicate more, and summarize and improve in the practice process.

1.2 External factor: Materials: are important factors that affect students' learning of Chinese writing courses, teaching with multiple practical and varies materials, use cases improves students' Chinese writing ability. Teaching methods: can stimulate students' interest in learning Chinese writing, and stimulating students' learning initiative is an important purpose of using teaching methods. Evaluation: could reflect students' learning effect and knowledge level.

2. Mind mapping instructional model to enhance students' Chinese writing ability was 100%, confirmed by the experts in 4 aspects: 1) Utility standards, 2) Feasibility standards, 3) Propriety standards and 4) Accuracy standards (Stufflebeam, 2012) and in term of principle and rational, objectives, contents, teaching method and materials, and evaluation as the follows:

Utility standards were intended to ensure that the developed instructional model would serve the information needs of intended users.

Feasibility standards were intended to ensure that the developed instructional model would be realistic, prudent, flexible, and frugal.

Propriety standards were intended to ensure that the developed instructional model would be conducted in conformity to teaching principles and provide positive results.

Accuracy standards were intended to ensure that the developed instructional model showed a measure of closeness to a true.

3. After implementing mind mapping instructional model, students' Chinese writing ability will be overall improved at 80% (Good Level) according to

3.1 Mind mapping instructional model was a teaching approach that utilizes mind maps as a visual tool to enhance learning and understanding. It

involved the use of diagrams or graphical representations to organize information, concepts, and relationships in a structured and interconnected manner. And there were 5 steps of mind mapping were as follows: (Wang, 2007; Zhou Guohua, 2010; Li, 2012).

1) **Topic selection:** the students could choose a topic that is appropriate for the them, made sure it was relevant to the content of the study, and stimulated the student's interest and thinking.

2) **Keyword collection:** to guide students to collect keywords and concepts related to the topic. This could be done through discussion, brainstorming, or reading material. Students can write down all the keywords and related information that come to mind.

3) **Organize mind maps:** the students organized key words in the form of mind maps. The center of the mind map was the selected topic, and students could use branches to connect keywords and concepts with the topic to form a hierarchical map.

4) **Supplementary details and extensions:** the students could add more branches and sub-branches to complement and expand their mind map. They could add specific details, examples, or further concepts to each branch to deepen their thinking and understanding.

5) **Using maps for learning or expression:** the students could develop learning activities or expressions according to the keywords and links on the maps. They could write essays, prepare presentations, answer questions, or demonstrate thought processes based on the structure and content of the map.

3.2 Teachers was the guide and instructor, to provide clear guidance explaining how mind mapping works and how to use it, also encourage students to think, discuss, and organize information, and provide timely feedback and guidance. (Yang, 2018) and to provide skeletal support and stimulate students' creativity, give starting points or topics for mind mapping and provide templates or guidance to help students organize and express ideas. At the same time, should also encourage students to use their imagination and creativity to display and expand the content of the mind map (Mayer and Wittrock, 2006).

3.3 Students were active participants and builders of knowledge, they should actively think, ask questions, discuss, and organize relevant concepts and

information into mind maps, apply their knowledge and understanding to fill in and expand the mind map to further deepen their understanding of the topic. (Yang, 2018). They organized and presented concepts by creating mind maps and shared and expand their own mind maps through discussion and communication with others. They were expected to actively engage in collaborative learning, share the structure and content of the mind map, and gained further learning opportunities from peer feedback. (Novak and Canas, 2008):

3.4 Strengths of Mind Mapping according to Yang (2018) and Novak and Canas (2008) defined that mind mapping used visual elements such as graphics and colors to make information more intuitive and easy to understand could help students discover connections and relationships between concepts, promoting knowledge integration and deep understanding, was suitable for different disciplines and tasks, such as knowledge organization, project management, and creative thinking, stimulated students' thinking and memory skills by getting them to actively construct concepts and relationships, to actively participate in the learning process and provides an interactive way to enhance learning.

Recommendations

The results of this study lead to 4 recommendations: applicability of the results and future research.

1. Teachers can stimulate students' interest in learning and develop higher-level writing skills by flexibly using principles, objectives, content, teaching methods and materials, and assessment methods in teaching. By introducing mind maps in the classroom, educational practitioners can create a more interactive and participatory learning environment, allowing students to more actively participate in the writing process, thereby better achieving educational goals.

2. Suggestions for students. During the learning process, students should have a good learning attitude and develop mind mapping instructional model to enhance students' Chinese writing ability through more practice and more thinking.

3. Teaching material designers can draw on the five components of the mind map teaching method to clarify teaching goals, provide challenging and practical content, and use diverse teaching methods and materials. Incorporate elements that promote thinking and creativity to help students better understand applied

knowledge. The application of mind mapping teaching method can enable students to have a deeper understanding and application of writing skills and achieve more significant results.

4. The mind map teaching method is incorporated into the school teaching reform strategy to provide a teaching method for innovation. School administrators need to provide training support to help teachers understand and apply this method. This reform not only improves writing skills, but also cultivates innovative thinking and subject abilities, creates a dynamic learning atmosphere, and promotes the improvement of overall teaching standards.

Future research

1. In-depth study of the long-term effects of mind mapping teaching method
2. Explore the applicability of mind mapping among different age groups
3. Combining advanced technology to carry out mind mapping research in online learning environments

The possibility of integrating artificial intelligence, natural language processing and online collaboration tools in Chinese writing education can also be explored in the future, which will help further understand the news of the mind map teaching model.

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Appendices

Appendix A
A List of Specialists for IOC Verification and Confirm
instructional model

List name the specialist to check research instruments for IOC

1. Assistant Professor Dr.Prapai Sridama Computer and Teachbnolog Program
Bansomdejchaopraya Rajabhat
University
2. Assistant Professor Dr.Nuttamon Puchatree Learning Innovation and Teachbnology
Program Bansomdejchaopraya Rajabhat
University
3. Assistant Professor Dr.Sarayuth Sethakajor Administration Program
Bansomdejchaopraya Rajabhat
Universit
4. Professor Wangzaixin Guilin University of Electronic
Technology
5. Associate Professor, Dr.Tantianmei Guangxi Normal University

List name the specialist to evaluate the Instructional Model

1. Assistant Professor Dr. Tanaput Chanchaen Learning Innovation and Teachbnoology
Bansomdejchaopraya Rajabhat
University
2. Assistant Professor Dr.Wanida Ploysangwal English Program
University of the Thai Chamber of
Commerce
3. Dr. Panas Jansritong Admistration Program
Kirk University
4. Professor Chen Qingwen Yulin Normal College
5. Associate Professor, Ouyang Xiujun Guangxi Normal University

Appendix B
Official Letter

Ref. No. MHESI 0643.14/1700



Graduate School
Bansomdejchaopraya Rajabhat University
1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

5 September 2023

Subject Request for permission to implement experiment

Dear President of Huitong Primary School in Guilin city

Regarding the thesis entitled "Development of Mind Mapping Instructional Model to Enhance Students' Chinese Writing Ability" for pupils in Guilin University of Electronic Science and Technology of Mrs. Huxiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at Bansomejchaopraya Rajabhat University code number 6473103124 Thailand under the supervision of

Major Advisor : Associate Professor Dr. Areewan Iamsa-ard

Co-advisor : Associate Professor. Jittawisut Wimutipanya

Co-advisor : Associate Professor Dr.Suriya Phankosol

the researcher needs to collect data using questionnaire in terms of factors affecting students' Chinese writing ability from 50 students of section C who enroll in Chinese writing course of Huitong Primary School in Guilin city. Hence, I'm formally requesting your assistance in distributing the attached questionnaire to the informants as referred above and please send the completed ones back to the researcher No. 1, Jinji Road, Guilin, Guangxi, China, 541004.

The researcher plans to use this data for her thesis completion and further necessary publication as required by the Ph.D. course.

I am grateful for your consideration of my request. I pledge to adhere to any stipulations you deem fit. You may reach me at the phone number or email address provided below in case of any related questions. I look forward to your response.

Sincerely,

(Asst.Prof.Dr.Kanakorn Sawangcharoen)
Dean of Graduate School
Bansomejchaopraya Rajabhat University

Tel. +66 0204737000 Ext.

Fax. +66 0204737000

Ref. No. MHESI 0643.14/1901



Graduate School
BansomdejchaoprayaRajabhat University
1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

5 September 2023

Subject Request for evaluation of instructional model

Dear Assistant Professor Dr. Tanaput Chancharoen

Attachment: Validation sheets

Regarding the thesis entitled "Development of Mind Mapping Instructional Model to Enhance Students' Chinese Writing Ability" of HuXiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at BansomdejchaoprayaRajabhat University code number 6473103124, Thailand under the supervision of Associate.Professor Dr.Areewan Iamsa-ard as major advisor and Associate.Professor. Jittawisut Wimutipanya and Associate.Professor. Dr.Suriya Phankosol as co-advisors, the instructional model will be developed in the said research. In view with this, the researcher would like your expertise to evaluate the appropriateness of such a developed instructional model. Knowing your experience in the field of Education, I would like to ask for your help in evaluating the said instructional model before its implementation.

I will be glad to hear your suggestions and comments for the improvement of the instructional model. Your positive response is highly appreciated.

Sincerely,

A handwritten signature in blue ink, appearing to be 'Kanakorn Sawangcharoen'.

(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School
BansomdejchaoprayaRajabhat University

Tel. (662) 4737000
Fax. (662) 4737000

Ref. No. MHESI 0643.14/1702



Graduate School
BansomejchaoprayaRajabhat University
1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

๕ September 2023

Subject Request for evaluation of instructional model

Dear Assistant Professor Dr.Wanida Ploysangwal

Attachment Validation sheets

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability ” of HuXiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at BansomejchaoprayaRajabhat University code number 6473103124, Thailand under the supervision of Associate.Professor Dr.Areewan lamsa-ard as major advisor and Associate.Professor. Jittawisut Wimutipanya and Associate.Professor. Dr.Suriya Phankosol as co-advisors. the instructional model will be developed in the said research. In view with this, the researcher would like your expertise to evaluate the appropriateness of such a developed instructional model. Knowing your experience in the field of Education, I would like to ask for your help in evaluating the said instructional model before its implementation.

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Sincerely,

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(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School
BansomejchaoprayaRajabhat University

Tel. (662) 4737000
Fax. (662) 4737000

Ref. No. MHESI 0643.14/ 1703



Graduate School
BansomdejchaoprayaRajabhat University
1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

5 September 2023

Subject Request for evaluation of instructional model

Dear Associate Professor, Ouyang Xiujun

Attachment Validation sheets

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability ” of HuXiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at BansomdejchaoprayaRajabhat University code number 6473103124, Thailand under the supervision of Associate.Professor Dr.Areewan lamsa-ard as major advisor and Associate.Professor. Jittawisut Wimitipanya and Associate.Professor. Dr.Suriya Phankosol as co-advisors, the instructional model will be developed in the said research. In view with this, the researcher would like your expertise to evaluate the appropriateness of such a developed instructional model. Knowing your experience in the field of Education, I would like to ask for your help in evaluating the said instructional model before its implementation.

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Sincerely,

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(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School
BansomdejchaoprayaRajabhat University

Tel. (662) 4737000
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Ref. No. MHESI 0643.14/1704



Graduate School
BansomdejchaoprayaRajabhat University
1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

5 September 2023

Subject Request for evaluation of instructional model

Dear Dr.Panas Jansritong

Attachment Validation sheets

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability ” of HuXiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at BansomdejchaoprayaRajabhat University code number 6473103124, Thailand under the supervision of Associate.Professor Dr.Areewan lamsa-ard as major advisor and Associate.Professor. Jittawisut Wimutipanya and Associate.Professor. Dr.Suriya Phankosol as co-advisors, the instructional model will be developed in the said research. In view with this, the researcher would like your expertise to evaluate the appropriateness of such a developed instructional model. Knowing your experience in the field of Education, I would like to ask for your help in evaluating the said instructional model before its implementation.

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(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School
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Ref. No. MHESI 0643.14/ 1705



Graduate School
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1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

5 September 2023

Subject Request for evaluation of instructional model

Dear Professor Dr.ChenQingwen

Attachment Validation sheets

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability ” of HuXiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at BansomdejchaoprayaRajabhat University code number 6473103124, Thailand under the supervision of Associate.Professor Dr.Areewan lamsa-ard as major advisor and Associate.Professor. Jittawisut Wimutipanya and Associate.Professor. Dr.Suriya Phankosol as co-advisors, the instructional model will be developed in the said research. In view with this, the researcher would like your expertise to evaluate the appropriateness of such a developed instructional model. Knowing your experience in the field of Education, I would like to ask for your help in evaluating the said instructional model before its implementation.

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(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School
BansomdejchaoprayaRajabhat University

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Ref. No. MHESI 0643.14/1706



Graduate School
Bansomdejchaopraya Rajabhat University
1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

5 September 2023

Subject Request for data collection

Dear President of Huitong Primary School in Guilin city

Attachment 1. Copies of questionnaire

2. Interview paper

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability” for pupils in Guilin University of Electronic Science and Technology of Mrs. Huxiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University code number 6473103124 Thailand under the supervision of

Major Advisor : Associate Professor Dr. Areewan Iamsa-ard

Co-advisor : Associate Professor. Jittawisut Wimutipanya

Co-advisor : Associate Professor Dr. Suriya Phankosol

the researcher needs to collect data using questionnaire in terms of factors affecting students’ Chinese writing ability from 50 students of section C who enroll in Chinese writing course of Huitong Primary School in Guilin city. Hence, I’ m formally requesting your assistance in distributing the attached questionnaire to the informants as referred above and please send the completed ones back to the researcher No. 1, Jinji Road, Guilin, Guangxi, China, 541004.

The researcher plans to use this data for her thesis completion and further necessary publication as required by the Ph.D. course.

I am grateful for your consideration of my request. I pledge to adhere to any stipulations you deem fit. You may reach me at the phone number or email address provided below in case of any related questions. I look forward to your response.

Sincerely,

(Asst. Prof. Dr. Kanakorn Sawangcharoen)
Dean of Graduate School
Bansomdejchaopraya Rajabhat University

Tel. +66 0204737000 Ext.

Fax. 66 0204737000

Ref. No. MHESI 0643.14/ 1707



Graduate School
Bansomdejchaopraya Rajabhat University
1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

5 September 2023

Subject Request for research tool validation

Dear Assistant Professor Dr.Prapai Sridama

Attachment Validation sheets

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability” of Huxiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University code number 6473103124 , Thailand under the supervision of Associate.Professor Dr.Areewan Iamsa-ard as major advisor and Associate.Professor. Jittawisut Wimutipanya and Associate.Professor. Dr.Suriya Phankosol as co-advisors, the written rubric scoring and questionnaire as instruments will be used in the said research. In view with this, the researcher would like your expertise to validate the attached rubric scoring and questionnaires to qualify for conduction. Knowing your experience in the field of Education, I would like to ask for your help in validating the said instrument before administering it to the participants of the study.

The research objective, definitions of terms, rubric scoring , questionnaire and the validation sheets are hereby attached. I will be glad to hear your suggestions and comments for the improvement of the instrument. Your positive response is highly appreciated.

Sincerely,

A handwritten signature in black ink, appearing to be 'Kanakorn Sawangcharoen'.

(Asst.Prof.Dr.Kanakorn Sawangcharoen)
Dean of Graduate School
Bansomdejchaopraya Rajabhat University

Tel. +66 0204737000 Ext.
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Ref. No. MHESI 0643.14/1708



Graduate School
Bansomdejchaopraya Rajabhat University
1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

5 September 2023

Subject Request for research tool validation

Dear Assistant Professor Dr.Tantianmei

Attachment Validation sheets

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability” of Huxiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University code number 6473103124 , Thailand under the supervision of Associate.Professor Dr.Areewan lamsa-ard as major advisor and Associate.Professor. Jittawisut Wimutipanya and Associate.Professor. Dr.Suriya Phankosol as co-advisors, the written rubric scoring and questionnaire as instruments will be used in the said research. In view with this, the researcher would like your expertise to validate the attached rubric scoring and questionnaires to qualify for conduction. Knowing your experience in the field of Education, I would like to ask for your help in validating the said instrument before administering it to the participants of the study.

The research objective, definitions of terms, rubric scoring , questionnaire and the validation sheets are hereby attached. I will be glad to hear your suggestions and comments for the improvement of the instrument. Your positive response is highly appreciated.

Sincerely,

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(Asst.Prof.Dr.Kanakorn Sawangcharoen)
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Bansomejchaopraya Rajabhat University

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Ref. No. MHESI 0643.14/ 1709



Graduate School
Bansomdejchaopraya Rajabhat University
1061 Itsarapap 15 Itsarapap Rd.
Thonburi Bangkok 10600

5 September 2023

Subject Request for research tool validation

Dear Assistant Professor Dr.Nuttamon Punchatree

Attachment Validation sheets

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability” of Huxiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University code number 6473103124 , Thailand under the supervision of Associate.Professor Dr.Areewan lamsa-ard as major advisor and Associate.Professor. Jittawisut Wimutipanya and Associate.Professor. Dr.Suriya Phankosol as co-advisors, the written rubric scoring and questionnaire as instruments will be used in the said research. In view with this, the researcher would like your expertise to validate the attached rubric scoring and questionnaires to qualify for conduction. Knowing your experience in the field of Education, I would like to ask for your help in validating the said instrument before administering it to the participants of the study.

The research objective, definitions of terms, rubric scoring , questionnaire and the validation sheets are hereby attached. I will be glad to hear your suggestions and comments for the improvement of the instrument. Your positive response is highly appreciated.

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Thonburi Bangkok 10600

5 September 2023

Subject Request for research tool validation

Dear Assistant Professor Dr.SarayutSethakajor

Attachment Validation sheets

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability” of Huxiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University code number 6473103124 , Thailand under the supervision of Associate.Professor Dr.Areewan Iamsa-ard as major advisor and Associate.Professor, Jittawisut Wimutipanya and Associate.Professor, Dr.Suriya Phankosol as co-advisors, the written rubric scoring and questionnaire as instruments will be used in the said research. In view with this, the researcher would like your expertise to validate the attached rubric scoring and questionnaires to qualify for conduction. Knowing your experience in the field of Education, I would like to ask for your help in validating the said instrument before administering it to the participants of the study.

The research objective, definitions of terms, rubric scoring , questionnaire and the validation sheets are hereby attached. I will be glad to hear your suggestions and comments for the improvement of the instrument. Your positive response is highly appreciated.

Sincerely,

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(Asst.Prof.Dr.Kanakorn Sawangcharoen)
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Ref. No. MHESI 0643.14/1711



Graduate School
Bansomdejchaopraya Rajabhat University
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Thonburi Bangkok 10600

5 September 2023

Subject Request for research tool validation

Dear Professor Wangzaixin

Attachment Validation sheets

Regarding the thesis entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability” of Huxiaomin, a Ph.D. student majoring in Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University code number 6473103124 , Thailand under the supervision of Associate.Professor Dr.Areewan lamsa-ard as major advisor and Associate.Professor. Jittawisut Wimutipanya and Associate.Professor. Dr.Suriya Phankosol as co-advisors, the written rubric scoring and questionnaire as instruments will be used in the said research. In view with this, the researcher would like your expertise to validate the attached rubric scoring and questionnaires to qualify for conduction. Knowing your experience in the field of Education, I would like to ask for your help in validating the said instrument before administering it to the participants of the study.

The research objective, definitions of terms, rubric scoring , questionnaire and the validation sheets are hereby attached. I will be glad to hear your suggestions and comments for the improvement of the instrument. Your positive response is highly appreciated.

Sincerely,

A handwritten signature in black ink, appearing to be 'Kanakorn'.

(Asst.Prof.Dr.Kanakorn Sawangcharoen)
Dean of Graduate School
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Appendix C

Research Instrument

- Questionnaire for students (Objective 1)
- Interview for lecturers (Objective 1)
- Questionnaire for experts (Objective 2)
- Lesson Plan 1 (Objective 3)
- Scoring Rubric Form (Objective 3)

Questionnaire for students (Objective 1)

:Directions

These questionnaires are the instruments for collecting data in 1 phase of st the research entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability” , conducted by Hu Xiaomin , a Ph.D .student in Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University under the supervision of under the supervision of Major Advisor :Associate.Professor Dr.Areewan lamsa-ard, Co-advisor: Associate.Professor. Jittawisut Wimutipanya and Co-advisor: Associate.Professor. Dr.Suriya Phankosol.

into is divided This questionnaire3 i ctionsse.e.

Common data of the respondent **1 Section**

Section2 Information on factors factors affecting students’ Chinese writing ability.

e Closedis th The questionnaire type- be ended questions that can only scale rating summated answered by selecting from provided number to, 5 scales.

of the factors wo groupsof t The important issues of the items consist: Internal factors(respondents) xternal factorsE and(teachers, teaching methods, teaching resources, teaching environment, reflection)

Section3Further suggestions

of purpose ire are only used for theData obtained from this questionna n confidentialnd remaiconducting aforementioned research a.personal Individual or avoided ion will bedata presentat.

Answer the questionnaire:

Common data of the respondent **1 Section**

*:Directions*Please put ✓ into the according to your own personal data.

1. Gender is Male Female
2. Grade 4 students from three primary schools in Guilin
 - Guilin Huitong primary school
 - Guilin Yucai Primary School
 - Guilin Zhuoran primary school
3. Age A. below 17 yrs. B. 17-20 yrs. C. 21-23 yrs. D. over 23 yrs.

Section 2 Questionnaire on factors for enhancing sports injury ability of undergraduate Students.

Directions: Please rate the following factors affecting sports injury ability by putting into the attitude level column based on the criteria given below. Each question can select only one answer.

5 means you **STRONGLY** agree with the contents.

4 means you **QUITE** agree with the contents.

3 means you remain **NEUTRAL**. with the contents

2 means you **DO NOT QUITE** agree with the contents

1 means you **DO NOT STRONGLY** agree with the contents

Contents	Answers				
	5	4	3	2	1
Internal factors(respondents)					
1. You knows that Chinese Writing course is an important compulsory course for students.					
2. You feels that Chinese Writing course is the great significance to personal's Chinese writing ability .					
3. You believes that the good technique in teaching to improve Chinese writing ability in Chinese writing course.					
4. You believes that materials and learning resources to improve Chinese writing ability in Chinese writing course.					
5. You are very actively engaged in Chinese Writingactivities in the classroom.					
6. You feel that homework projects to give full play to own strengths in Chinese writing course.					
7. You feel that Chinese writing course is the great significance to personal growth and development in future.					
8. You feel that the assignments assigned by the lecturers and the feedback can help students better apply what they have learned.					
9.You can master Chinese writing Ability by Mind Mapping Instructional process in Chinese writing course.					

Contents	Answers				
	5	4	3	2	1
10.You are satisfied with the friendly cooperation and interaction between students and teachers or peers in the Chinese writing course.					
11.You feel that homework or project work assigned by teachers and students can help students better apply the knowledge they have learned.					
12.You have new ideas based on their responses to learning about Chinese writing ability in Chinese writing course.					
13.You can develop their sense of accomplishment and pride through different activities in Chinese writing course.					
External factors(teachers, teaching methods, teaching resources, teaching environment, teaching reflection)					
1.You think teachers have an impact on pupils' Chinese and writing ability.					
2.Teachers give enough writing guidance and feedback in Chinese writing course.					
3.Teachers regularly organize writing competitions and correct compositions to stimulate pupils' interest and motivation in writing.					
4.Teachers can provide writing instruction and practice tailored to the student's level and needs.					
5.Teachers can use a variety of teaching methods to improve students' Chinese writing ability.					
6.Teachers use practical examples and hands-on activities to help students understand and apply writing ability.					
7.The teacher chooses appropriate teaching methods according to the characteristics of Chinese writing course and the tasks and goals of Chinese writing ability.					
8.The content of the textbook is combined with the students' actual life and experience.					
9.The textbook provides practical, interactive, and in spiring cases and materials to useful for students.					
10.Teachers can give students timely and specific feedback					

Contents	Answers				
	5	4	3	2	1
on writing.					
11.Teachers can make individual evaluation according to different ability levels of students.					
12.Teachers encourage students to improve their writing skills by evaluating each other.					
13.The availability of Mind Mapping Instructional Model can affect students interest in Chinese writing courses.					
14.The environments is clean and bright, with desks and chairs, blackboards, podiums, computers, projectors, large screens, loudspeakers and other multimedia facilities to facilitate the teaching process.					
15.The class size of students in Chinese writing class is appropriate.					

Section3improving the better instruction orSuggestions f

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Thank you for your kind cooperation for completing the
 tionnaireques!
 Researcher
 Mrs.Hu Xiaomin

Interview for Lecturers

(Objective 1)

Directions:

This interview is a part of research entitled “Development of Mind Mapping Instructional Model to Enhance Students’ Chinese Writing Ability”.

Research Objectives: 1 To examine the factors affecting students’ Chinese writing ability of primary students

It is conducted by Hu Xiaomin, a Ph.D. student in Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University under the supervision of under the supervision of Major Advisor: Associate.Professor Dr.Areewan lamsa-ard, Co-adviso: Associate.Professor. Jittawisut Wimutipanya and Co-advisor: Associate.Professor. Dr.Suriya Phankosol.

The following open questions are the instrument for collecting data in 1st phase of the research, concerning about factors to affect students’ Chinese writing ability of primary students.

Please write down your own opinion for each questions. Data obtained from this questionnaire are only used for the purpose of conducting aforementioned research and remain confidential. Individual or personal data presentation will be avoided.

These questions are the instrument for collecting data in 1st phase of the research.

1. Gender is A. Male B. Female

2. 3 teachers who are teaching Chinese writing course Grade 4 from 3 primary schools in Guilin
 - A. Guilin Huitong primary school
 - B. Guilin Yucai Primary School
 - C. Guilin Zhuoran primary school

- 3.Experience teaching
 - A. Below 3 yrs. B. 3-6 yrs. C. 7- 9 yrs. D. Over 9 yrs.

- 4.Age
 - A. below 25 yrs. B. 25-35yrs. C.36-49 yrs. D. over 49 yrs.

5. Professional title
 - A. Professor B. Associate Professor
 - C. Assistant Professor D. Lecturer

Section 2 Interview on factors affecting students' Chinese writing ability.

Directions: The type of question is open-ended questions, you can answer according to your actual situation. Your answers will only be used in this research and will not be disclosed individually.

1. As a primary school Chinese teacher, what do you think is the most important factor affecting pupils' Chinese writing ability?

2. What methods have you used in your teaching to improve students' writing skills? Please share some effective teaching methods.

3. How do you think textbooks and books affect students' writing ability? What are your suggestions for making better use of textbooks and books to promote students' writing development?

4. In your classroom, how do you conduct instructional evaluations and feedback to help students improve their writing skills?

5. How do you help students develop good writing habits and positive attitudes toward learning?

6. For the choice of teaching materials, what kind of resources do you prefer to use?

7. How do you think the teaching environment affects students' writing ability? How do you create a positive, encouraging teaching environment that inspires students' writing potential?

8. What do you think are the different effects of small class system and large class system on students' Chinese writing ability?

9. Which aspects of your teaching need to be improved, or which aspects do you want the school to support you?

10. In addition to teachers and teaching methods, how do you think the home environment affects students' writing ability? How do you work with parents to encourage students to continue developing their writing skills at home?

Comment and recommendation for improving the better instruction

.....

Thank you for your kind cooperation for completing the questions.

Researcher
 Mrs. Hu Xiaomin

Questionnaire for experts (Objectives: 2)

Dear assessors,

The present study is conducted by Hu Xiaomin, a Ph.D. student in Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University, Thailand, under the supervision of the following advisors.

1. Associate Professor Dr. Areewan Iamsa-ard
2. Co-advisor: Associate Professor. Jittawisut Wimutipanya
3. Co-advisor: Associate Professor. Dr. Suriya Phankosol.

The attached open questions are the instrument for collecting data in phase 2 of the research, the objective of which is to confirm instructional model.

Please write down your own opinion for each question. Data obtained from here are only used for the purpose of conducting aforementioned this questionnaire research and remain confidential. Individual or personal data presentation will be avoided.

These questions involve 3 parts as follows.

Part 1: Assessor's information

Part 2: Assessment of the quality of instructional model on 5-point rating scale basis in 4 aspects: 1) Utility Standards 2) Feasibility Standards 3) Propriety Standards and 4) Accuracy Standards.

Part 3: Suggestion

questionnaire The researcher certifies that all information obtained from this will be used for academic purposes and to generate maximum benefit meeting objectives.

Thank you very much for dedicating your valuable time and providing useful information to this research for the benefit of further research and development.

Ph.D. student

Mrs. Hu Xiaomin

Curriculum and Instruction Program

Bansomdejchaopraya Rajabhat University

Scoring Rubric Form (Objective 3)

Assessment form for Validity of Rubric

Research Title: Development of Mind Mapping Instructional Model to Enhance Students' Chinese Writing Ability

Research Objectives: 3.To study the results of mind mapping instructional model to enhance students' Chinese writing ability.

Assessor: Assistant Professor Dr.Wapee Kong -In

Position: English Program

Workplace: Bansomdejchaopraya Rajabhat University

Directions: Please assess the validity of the attached lesson plans regarding the given issues by putting \checkmark in the box according to the following criteria.

+1= if you think the lesson plan CORRESPONDS with the item of assessment

0 =if you are NOT SURE the lesson plan corresponds with the item of assessment

-1=if you think the lesson plan DOES NOT correspond with the item of assessment

Item	score				
	5	4	3	2	1
	Perform all or nearly all of the following tasks well	Do almost all of the following tasks well	Complete most of the following tasks	Inability to complete most or many of the following tasks	Cannot complete any of the following tasks
Item: 1 Content of the article					
Standard 1: Topic clarity and relevance	The topic of the article is very clear and highly relevant to the title or situation. The content of the article closely focuses on the topic and does not deviate from the topic.	The topic of the article is relatively clear and has a certain relevance to the title or situation. The content of the article basically revolves around the topic, but there are some deviations from the topic.	The topic of the article has a certain degree of clarity and is related to the title or situation, but there are some ambiguities that require readers to infer or understand.	The topic of the article is not very clear and has little relevance to the topic or situation. The reader needs to spend more energy to understand the topic and content of the article.	The topic of the article is very unclear and has almost no relevance to the topic or situation. It is difficult for readers to understand the topic and content of the article.

Item	score				
	5	4	3	2	1
	Perform all or nearly all of the following tasks well	Do almost all of the following tasks well	Complete most of the following tasks	Inability to complete most or many of the following tasks	Cannot complete any of the following tasks
Standard 2: Clarity and Logic of Viewpoints	The point of view of the article is very clear, and it can clearly express the author's position and opinions. Each paragraph in the article is developed around the theme, and the logical relationship is very clear.	The point of view of the article is relatively clear and can express the author's position and opinions. However, some points of view are not clear enough and require readers to make certain inferences or understandings. There is also a certain logical relationship between the various paragraphs in the article, but there may be some areas that are not clear enough.	The views of the article are clear to a certain extent and can express some of the author's views, but some views are not clear enough and require a certain amount of understanding by the reader. There are also some areas where the logical relationship between the various paragraphs in the article is not clear enough.	The point of view of the article is not very clear, and readers need to spend more energy to understand the author's position and point of view. At the same time, there may be great confusion in the logical relationship between the various paragraphs in the article	The point of view of the article is very unclear, and it is difficult for readers to understand the author's position and opinions. At the same time, the logical relationship between the various paragraphs in the article is also very confusing, requiring readers to make a lot of inferences and understanding.

Item	score				
	5	4	3	2	1
	Perform all or nearly all of the following tasks well	Do almost all of the following tasks well	Complete most of the following tasks	Inability to complete most or many of the following tasks	Cannot complete any of the following tasks
Item 2 : Linguistic expression of the article					
Standard 1: Grammatical Accuracy and Vocabulary	Grammar is used very accurately without any grammatical errors or spelling errors. The vocabulary is rich, the words are used appropriately, and no inappropriate words or expressions are used.	The grammar used is relatively accurate, with only a few grammatical errors or spelling errors, which do not affect the reader's understanding. Have a relatively rich vocabulary and be able to choose appropriate words according to different situations and expressions.	There is a certain accuracy in the use of grammar, but there are some obvious grammatical errors or spelling errors that require readers to infer and understand. Vocabulary is limited and sometimes inappropriate words are used.	The use of grammar is not very accurate, and there are many grammatical errors or spelling errors, requiring readers to spend more energy to understand the meaning of the article. The vocabulary is small and inappropriate word usage is common.	The use of grammar is very inaccurate, and there are a large number of grammatical errors or spelling errors, making it difficult for readers to understand the meaning of the article. Vocabulary is very limited and misuse of words is common.

Item	score				
	5	4	3	2	1
	Perform all or nearly all of the following tasks well	Do almost all of the following tasks well	Complete most of the following tasks	Inability to complete most or many of the following tasks	Cannot complete any of the following tasks
Standard 2: Fluency of expression and variety of sentence patterns	The expression of the article is very fluent, the sentences are fluent, and there are no grammatical errors or unclear expressions. Use a variety of sentence	The expression of the article is relatively smooth, with only a few language errors or unclear expressions. There are various sentence patterns used, but	The expression of the article has a certain degree of fluency, but there are some obvious language problems or unclear expressions, which require.	The expression of the article has a certain degree of fluency, but there are some obvious language problems or unclear expressions, which require.	The expression of the article is very unfluent, and there are a lot of grammatical errors or unclear expressions, making it difficult for readers to understand

Item	score				
	5	4	3	2	1
	Perform all or nearly all of the following tasks well	Do almost all of the following tasks well	Complete most of the following tasks	Inability to complete most or many of the following tasks	Cannot complete any of the following tasks
Item 3 :The creativity of the article					
Standard 1: Uniqueness and Novelty	The point of view or expression of the article is very unique and can bring new thinking and enlightenment to readers. The article proposes new perspectives or solutions, or uses unique angles and methods in the argumentation process.	The point of view or expression of the article is unique and can arouse the interest and attention of readers. The article is novel in some aspects, but not completely innovative	The point of view or expression of the article has a certain degree of novelty, but it is not very unique. The article may be innovative in some details or aspects, but overall there is no breakthrough in conventional thinking.	The article's ideas or expressions lack uniqueness and novelty. The article may simply elaborate or explain a known point without proposing new ideas or solutions	The point of view or expression of the article is very mediocre, without any novelty or uniqueness. The article may simply reiterate or elaborate on a known point.

Item	score				
	5	4	3	2	1
	Perform all or nearly all of the following tasks well	Do almost all of the following tasks well	Complete most of the following tasks	Inability to complete most or many of the following tasks	Cannot complete any of the following tasks
Standard 2: Depth and Breadth	The article has a profound perspective and can delve into the nature and root causes of the problem. The article covers a wide range of fields, covering multiple aspects and angles, showing the author's rich knowledge and experience.	The point of view of the article is relatively profound and can provide an in-depth analysis of one aspect or a certain detail of the problem. The article covers a wide range of areas, but may only cover certain aspects or perspectives	The article's point of view has a certain depth, but may not reach a very profound level. The area covered by the article is relatively limited and only covers certain aspects or angles.	The article's views lack depth and only remain on the surface or shallow level of analysis. The areas covered by the article are relatively limited and only cover certain aspects or angles	The article's point of view is very shallow and only briefly describes or explains the problem. The area covered by the article is very limited and lacks breadth and diversity

No.	Items	Assessment As Results			Remarks
		+1	0	-1	
1	Content of the article				
	Standard 1: Topic clarity and relevance				
	Standard 2: Clarity and Logic of Viewpoints				
2	Linguistic expression of the article				
	Standard 1: Grammatical Accuracy and Vocabulary				
	Standard 2: Fluency of expression and variety of sentence patterns				
3	The creativity of the article				
	Standard 1: Uniqueness and Novelty				
	Standard 2: Depth and breadth				

The criteria from item 1-3 overall 6 standards

Score Range	Mean
25- 30	Excellent
19 - 24	Good
13 - 18	Moderate
7 - 12	Improved
Less than 7	Fail

The criteria from item 1 : Content of the article

Standard1 :Topic clarity and relevance	
Standard2 :Clarity and Logic of Viewpoint	
Score Range	Meaning
9 - 10	Excellent
7- 8	Good
5 - 6	Moderate
3 - 4	Improved
Less than 3	Fail

The criteria from item 2 : The language expression of the article

Standard1 :Grammatical accuracy and vocabulary	
Standard2 :Fluency of expression and variety of sentence patterns	
Score Range	Meaning
9 - 10	Excellent
7- 8	Good
5 - 6	Moderate
3 - 4	Improved
Less than 3	Fail

The criteria from item 3 : The creativity of the article

Standard1 :Uniqueness and Novelty	
Standard2 :Depth and breadth	
Score Range	Meaning
9 - 10	Excellent
7- 8	Good
5 - 6	Moderate
3 - 4	Improved
Less than 3	Fail

Suggestions

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Lesson plan 1 (Objective 3)

Teaching:

Based on the mind map teaching method , it refers to an integrated teaching model that is divided into 4 steps in the classroom :

Step 1: Introduction (1 hour)

The teacher introduces the definition, history and practical application scenarios of mind mapping to arouse students' interest in mind mapping. At this stage, teachers ask students about the beauty and diversity of natural landscapes they have seen in their daily lives. By showing some pictures or videos of beautiful natural landscapes, students can be guided to feel the charm of nature and stimulate their interest in learning. Demonstrates the basic steps and structure of constructing a simple natural landscape mind map, emphasizing the role of each part. And explain examples of articles constructed based on mind maps.

(1) Questions that teachers can ask in advance:

What is the most beautiful natural landscape you have ever seen?

In what ways do you think the beauty of natural landscapes is reflected?

What does natural landscape mean to you?

What impact do you think natural landscapes have on humans?

Have you ever experienced a specific activity or event in a natural landscape?

What do you think is the relationship between natural landscape, culture and history?

What elements or features in a natural landscape do you think capture your attention the most?

Have you ever felt a special emotion or atmosphere in a natural landscape?

What characteristics or habits of animals and plants in the natural landscape impress you?

Have you ever learned some science or environmental awareness in a natural landscape?

Project 1: Introduction to mind mapping

Introduction to mind mapping

Mind map is a graphic tool for organizing and expressing thoughts. It organizes, categorizes and associates information through nodes, branches and keywords to help people better understand and remember information. Mind maps usually start with a central node and expand outward to several branch nodes. Each branch node

can further expand into child nodes, thus forming a hierarchical structure.

The origins of mind mapping can be traced back to the 1960s, when British psychologist Tony Buzan developed a thinking tool called "Mind Map" to help people better understand and remember information. Buzan believes that mind mapping can promote people's thinking activities and improve people's creativity and learning abilities. Therefore, he defined mind mapping as "a thinking tool that presents information graphically, which can help people better understand and remember information."

Before writing, students can conceive the structure and content of the article by drawing a mind map. Mind mapping can help students clearly plan the topics, paragraphs and key points of the article, and avoid problems such as confusion or digression during the writing process. Mind mapping can help students open up their minds and stimulate their creativity. By listing different keywords or topics in the mind map, students can associate more relevant content, thus enriching the content and details of the article. In addition, students can draw mind maps to organize their thoughts and ideas and clarify the content and key points that need to be expressed. This can reduce errors and ambiguities in language expression during the writing process and improve the accuracy of the article.

Project 2 : How to construct a mind map of natural landscape

How to construct a mind map for natural landscape writing

First, the goal and perspective of the natural landscape must be clearly described. For example, do you want to depict the spectacular scenery of mountains and rivers, or emphasize the mysterious atmosphere of a forest? Before building a mind map, identify the core topics and subtopics of your writing. Second, take advantage of mind mapping to organize and present information. In mind maps, elements such as color, shape, size, etc. can be used to highlight important information and subtopics to help readers better understand and remember. For example, different colored markers or icons can be used to represent different landscape features, attractions or activities. In addition, pay attention to details and descriptions of features. In natural landscape writing, detail and character are key to making the reader resonate and leave a lasting impression. Therefore, list the various details and features of the landscape in your mind map and fully demonstrate them in your writing. Finally, pay attention to the logic and coherence of your writing. When building a mind map, make sure the logical relationships between topics and subtopics are clear and clear. In the writing process, paragraph and sentence structures should be arranged appropriately to make the article smooth and smooth.

In short, by clarifying the goals, using mind maps, paying attention to the description of details and features, and maintaining logic and coherence, a more vivid, interesting and attractive mind map for natural landscape writing can be constructed.

Step 2 : Practical operation (1.5 hour)

Teachers guide students to construct mind maps describing natural landscapes by themselves, using hand-drawn or electronic tools. Prompt students to list possible writing topics and subtopics in their mind maps, such as weather, terrain, plants, animals, etc. Students are encouraged to describe natural landscapes from different perspectives and use graphics and text to express their ideas. For example, use color, shape, and size to highlight important information. Students begin writing based on the topics and subtopics in the mind map , trying to translate their ideas into words.

The writing assignment requirements

1.The article should clearly describe a theme of natural landscape, such as mountains and rivers, forests, lakes, etc., and expand on related descriptions and discussions around this theme.

2.The article should have a distinct point of view or theme, and the logical relationship between paragraphs and sentences should be clear and understandable.

3.The article should use accurate grammar and a rich vocabulary to describe the characteristics and wonders of the natural landscape.

4.The article should be smooth and free of grammar errors and typos, while using various sentence structures to express different aspects of the natural landscape.

5.The article should show unique creativity and a novel perspective that can interest readers and resonate with them.

6.The article should provide an in-depth description and analysis of the natural landscape, while also having a certain breadth that covers different aspects of the natural landscape.

Step 3 : Discussion (1 hour)

The teacher divided the students into groups and asked them to work together to refine and improve their mind maps and further refine the description of the natural landscape. Organize students to share their experiences and gains from practical operations, and encourage them to exchange strategies and difficulties in building mind maps. Guide the group to discuss the differences, advantages and disadvantages of different mind maps in describing natural landscapes, and improve students' understanding and application ability of graphical thinking. Students revise

and improve the article based on feedback from group discussions and teacher guidance.

Task group work:

1. Team members need to discuss and determine the core theme and sub-themes of the article. For example, do you want to depict the spectacular scenery of mountains and rivers, or emphasize the mysterious atmosphere of forests?

2. In mind mapping, you can use elements such as color, shape, and size to highlight important information and sub-topics. Team members need to discuss and determine how to use these elements to highlight important information.

3. Team members need to discuss and list various details and features of the landscape, such as weather, terrain, plants, animals, etc. They need to list these details and features in the mind map and fully demonstrate them in their writing.

4. Team members need to discuss and determine how to maintain the logic and coherence of the article.

5. After completing the task, team members are required to present their natural landscape mind maps and corresponding articles, and share their experiences and gains throughout the process.

Step 4 : Evaluation (0.5 hour)

Students present their natural landscape mind maps and corresponding articles. Teachers provide personalized feedback, paying attention to the logic and creativity of students' mind maps, and the corresponding description level. Teachers conduct classroom observations, record students' performance and progress throughout the process, and provide timely praise and encouragement.

Materials :

- 1) Textbooks
- 2) Books on writing

Learning Resources :

- 1) Videos about natural landscapes
- 2) Relevant academic papers

Chinese Writing Course PPT Picture



幻灯片1



幻灯片2



幻灯片3



幻灯片4



幻灯片5



幻灯片6



幻灯片7



幻灯片8



幻灯片9



幻灯片10



幻灯片11



幻灯片12



幻灯片13



幻灯片14



幻灯片15



幻灯片16



幻灯片17



幻灯片18

Clip Video

1. https://www.bilibili.com/video/BV1AL4y1T7ud/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
2. https://www.bilibili.com/video/BV1gg4y1z7jn/?spm_id_from=trigger_reload&vd_source=f9073fb920ac435667862a9dc6ebd2fe
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5. https://www.bilibili.com/video/BV1xC4y1h7bh/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
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Task for individual work:

1. The student needs to consider what kind of natural landscape they want to depict, such as mountains and rivers, forests, lakes, etc. Then they need to determine the core theme and sub-themes of the article, such as terrain, climate, biology, etc.

2. In the mind map, students can list possible writing topics and sub-topics, such as weather, terrain, plants, animals, etc. Then use graphics and text to express ideas, such as using color, shape, and size to highlight important information.

3. Students can collect information about natural landscapes through various channels such as the internet, books, pictures, etc., including information about terrain, climate, biology, history, etc.

4. Students need to transform their ideas into words and organize the structure and content of the article based on the themes and sub-themes in the mind map. During the writing process, attention should be paid to logical and coherent

presentation, and the paragraph and sentence structure should be arranged reasonably to make the article smooth and readable.

Assign after-class homework and require students to further improve their natural landscape mind maps and articles based on the experience and learning content of this experiment.

Lesson Plan 2 (4 hours)

Teaching:

Based on the mind map teaching method , it refers to an integrated teaching model that is divided into 4 steps in the classroom :

Step 1 : Introduction (1 hour)

After studying Lesson Plan 1, students have a preliminary understanding of the mind map writing method. On this basis, combined with the theme of character description, teachers can guide students to think about some familiar characters, such as parents, teachers, celebrities, etc., and encourage them to list the characteristics and qualities of these characters. Demonstrates the basic steps and structure of constructing a simple character description mind map, emphasizing the role of each part. Explain examples of character description articles constructed based on mind maps.

(1) Questions that teachers can ask in advance:

- ①Who is your favorite character?
- ②What attracts you most about this character?
- ③What are the characteristics of this character's appearance?
- ④What is the personality of this character?
- ⑤What is this character's occupation or identity?
- ⑥What are the interests and hobbies of this character?
- ⑦What do you think are the strengths and weaknesses of this character?
- ⑧What are the similarities or differences between this character and you?
- ⑨How do you show various aspects of this character through mind mapping?

Project 1 : How to construct a mind map for character description

How to construct a mind map for character description

First, clearly describe the character's goals and perspective. For example, do you want to portray the image of a teacher, or emphasize the personality characteristics of a star? Before building a mind map, identify the core topics and subtopics of your writing. Take advantage of mind mapping to organize and present information. In mind maps, elements such as color, shape, size, etc. can be used to

highlight important information and subtopics to help readers better understand and remember. For example, different colored markers or icons can be used to represent different characteristics or qualities.

In addition, pay attention to details and descriptions of features. In character description, details and characteristics are key to making readers resonate and leave a lasting impression. Therefore, it is necessary to list the details and characteristics of all aspects of the character in the mind map and fully display them in the writing. For example, you can describe the character's appearance, behavior, personality, etc. Pay attention to the logic and coherence of your writing. When building a mind map, make sure the logical relationships between topics and subtopics are clear and clear. In the writing process, paragraph and sentence structures should be arranged appropriately to make the article smooth and smooth. For example, you can first describe the character's appearance, then personality characteristics, and finally describe information such as background and occupation.

Step 2 : Practical practice (1.5 hours)

Teachers guide students to personally construct mind maps describing character characteristics, using hand-drawing or electronic tools. Prompt students to list possible writing topics and subtopics in their mind map, such as appearance, personality, background, career, hobbies, etc. Encourage students to describe characters from different perspectives and use graphics and text to express their ideas. For example, use color, shape, and size to highlight important information. Students begin writing based on the topics and subtopics in the mind map , trying to translate their ideas into words.

The writing assignment requirements

1.Choose a clear character as the object of description and focus on describing their characteristics and personality. Avoid vague or general descriptions and make the character image specific.

2.When describing characters, there should be a clear viewpoint or theme throughout the article. The structure and content of the article should revolve around this viewpoint or theme, and there should be logical relationships between paragraphs.

3.Use accurate grammar and rich vocabulary to describe character traits, avoiding grammar errors and unclear expressions.

4.The article should be smooth and logical, with diverse sentence structures to avoid monotony. Use rhetorical devices and descriptive techniques appropriately to enhance the article's expressive force.

5. Use accurate grammar and rich vocabulary to describe character traits, avoiding grammar errors and unclear expressions.

6. The character description should have a certain depth and breadth, making the character image more vivid and three-dimensional. In addition to describing the character's physical characteristics, it should also delve into their inner world, revealing the character's personality, emotions, values, etc.

Step 3 : Discussion (1 hour)

The teacher divided the students into groups and asked them to work together to refine and improve their mind maps and further refine the description of the character's characteristics. Organize students to share their experiences and gains from practical operations, and encourage them to exchange strategies and difficulties in building mind maps. Guide the group to discuss the differences, advantages and disadvantages of different mind maps in describing character characteristics, and improve students' understanding and application ability of graphical thinking. Students revise and improve the article based on feedback from group discussions and teacher guidance.

Task group work:

1. Team members need to discuss and determine the core theme and sub-themes of the article, such as whether to portray the image of a teacher or emphasize the personality traits of a star?

2. Team members need to work together and collect information and data about the characteristics of the characters through various channels such as the Internet, books, and pictures. This information includes aspects such as appearance, personality, background, occupation, interests, and hobbies. This information will provide the material and content for constructing the mind map.

3. In the mind map, team members need to list possible writing topics and sub-topics, such as appearance, personality, background, career, hobbies, etc. Then use graphics and text to express their ideas, such as using colors, shapes, and sizes to highlight important information.

4. Team members need to start writing based on the topics and subtopics they are responsible for, and try to translate their ideas into words. During the writing process, they need to pay attention to logic and coherence, and arrange paragraphs and sentence structures reasonably to make the article smooth and coherent.

Step 4 : Evaluation (0.5 hours)

Students present mind maps of their character descriptions and corresponding articles. Teachers provide personalized feedback, paying attention to the logic and

creativity of students' mind maps, and the corresponding description level. Teachers conduct classroom observations, record students' performance and progress throughout the process, and provide timely praise and encouragement.

Materials:

- 1) Textbooks
- 2) Books on writing

Learning Resources:

- 1) Video about character description
- 2) Relevant academic papers

Chinese Writing Topic P PT Picture



幻灯片1



幻灯片2



幻灯片3



幻灯片4



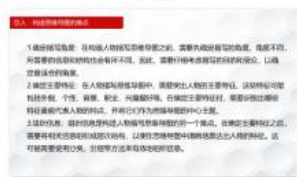
幻灯片5



幻灯片6



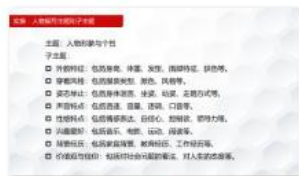
幻灯片7



幻灯片8



幻灯片9



幻灯片10



幻灯片11



幻灯片12



幻灯片13



幻灯片14



幻灯片15

Clip Video

1. https://www.bilibili.com/video/BV1pX4y1K7Gi/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe

2. https://www.bilibili.com/video/BV18t4y1H7XZ/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe

3. https://www.bilibili.com/video/BV1uK4y1R7zr/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe

4. https://www.bilibili.com/video/BV1mY4y1t71J/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe

5. https://www.bilibili.com/video/BV1xk4y1A7Hq/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe

6. https://www.bilibili.com/video/BV1yz4y1q7ho/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe

7. https://www.bilibili.com/video/BV1nT411j7bi/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe

Task for individual work:

1. Choose a familiar character as the object of your description. This character can be a family member, friend, idol, historical figure, etc.

2. Students can list the appearance characteristics, personality traits, background experiences, and other topics of the characters, and further refine and expand each topic. Use graphics and text to express your ideas, highlighting important information and connections.

3. Based on the topics and subtopics in the mind map, start writing articles describing the characteristics of the characters.

4. After completing the task, further improve and refine your mind map and article based on feedback from your teacher and other students.

Assign after-class homework and require students to further improve their character description mind maps and articles based on the experience and learning content of this experiment.

Lesson Plan 3 (4 hours)

Teaching:

Based on the mind map teaching method , it refers to an integrated teaching model that is divided into 4 steps in the classroom :

Step 1 : Introduction (1 hour)

After the previous study, students have a preliminary understanding of the mind map writing method. On this basis, combined with the theme of "My Summer Camp Experience", teachers can guide students to recall the situation of the summer camp and encourage them to list the characteristics and activities of the summer camp. Demonstrates the basic steps and structure of constructing a mind map of a summer camp experience, emphasizing the role of each part. Explain an example of a summer camp experience article structured based on a mind map.

(1) Questions that teachers can ask in advance:

- ①What type of summer camp did you attend?
- ②What are the characteristics of this summer camp?
- ③What is your most unforgettable experience in summer camp?
- ④What impact did this experience have on you?
- ⑤Who are the new friends you met at the summer camp? What's the story between you two?
- ⑥What impact did this summer camp have on your growth?
- ⑦How would you represent various aspects of your summer camp experience through mind mapping?

Project 1 : How to construct a mind map depicting “My Summer Camp Experience”

How to Construct a Mind Map of “My Summer Camp Experience”

First, clearly describe the goals and perspective of “My Summer Camp Experience.” For example, do you want to show the overall atmosphere and activity arrangements of the summer camp , or do you want to emphasize personal growth and experience in the summer camp? Before building a mind map, identify the core topics and subtopics of your writing. Take advantage of mind mapping to organize and present information. In mind maps, elements such as color, shape, size, etc. can be used to highlight important information and subtopics to help readers better understand and remember. For example, different colored markers or icons can be used to represent different features or activities.

In addition, pay attention to details and descriptions of features. In describing “My Summer Camp Experience,” details and characteristics are key to making the

reader relate and leave a lasting impression. Therefore, list the details and characteristics of all aspects of the summer camp in your mind map and fully demonstrate them in your writing. For example, you can describe the summer camp environment, activity arrangements, food and accommodation conditions, etc. Pay attention to the logic and coherence of your writing. When building a mind map, make sure the logical relationships between topics and subtopics are clear and clear. In the writing process, paragraph and sentence structures should be arranged appropriately to make the article smooth and smooth. For example, you can first describe the overall atmosphere of the summer camp, then describe your personal experiences and feelings, and finally summarize the impact and gains of the summer camp on you.

Step 2 : Practical practice (1.5 hours)

Teachers guide students to build a mind map describing "My Summer Camp Experience" by themselves, using hand-drawn or electronic tools. Prompt students to list possible writing topics and subtopics in their mind map, such as the name of summer camp, location, time, activities, feelings, etc. Encourage students to describe the summer camp experience from different perspectives and use graphics and text to express their ideas. For example, use color, shape, and size to highlight important information. Students begin writing based on the topics and subtopics in the mind map , trying to translate their ideas into words.

The writing assignment requirements

1.The article should focus on the theme of "My Summer Camp Experience" and be relevant to the theme, avoiding deviations from the theme or overly general descriptions.

2.When describing the summer camp experience, there should be a clear perspective or theme throughout the article, such as the highlights, significance, and feelings of summer camp. The structure and content of the article should revolve around this perspective or theme, with logical relationships between paragraphs.

3.Use accurate grammar and a rich vocabulary to describe the summer camp experience, avoiding grammar errors and unclear expressions.

4.The article should be smooth and flowing, with diverse sentence structures to avoid monotony. Use rhetorical devices and descriptive techniques appropriately to enhance the article's expressive force.

5.When describing the summer camp experience, have a unique perspective and novel way of expression, such as describing different activities, characters, events, etc., to show your unique style.

6.The description of summer camp experience should have a certain depth and breadth, such as detailed depictions of activities, characters, events, etc., as well as your own feelings and reflections.

Step 3 : Discussion (1 hour)

The teacher divided the students into groups and asked them to work together to refine and improve their mind maps and further refine the description of the summer camp experience. Organize students to share their experiences and gains from practical operations, and encourage them to exchange strategies and difficulties in building mind maps. Guide the group to discuss the differences, advantages and disadvantages of different mind maps in describing summer camp experiences , and improve students' understanding and application ability of graphical thinking. Students revise and improve the article based on feedback from group discussions and teacher guidance.

Task group work:

1.Team members need to discuss and determine the core theme and sub-themes of the article together. For example, do you want to show the overall atmosphere and activity arrangement of the summer camp, or emphasize the personal growth and experience during the summer camp?

2.Team members need to work together to list the details and characteristics of each aspect of the summer camp, and list these details and characteristics in a mind map.

3.Team members need to discuss and determine how to maintain the logic and coherence of the article. They can start by describing the overall atmosphere of the summer camp, then describe their personal experiences and feelings, and finally summarize the impact and gains of the summer camp on themselves.

4.After completing the task, team members can present their summer camp experience mind maps and corresponding articles, and share their experiences and gains throughout the process.

Step 4 : Evaluation (0.5 hours)

Students present their mind maps and corresponding essays describing “My Summer Camp Experience.” Teachers provide personalized feedback, paying attention to the logic and creativity of students' mind maps, and the corresponding description level. Teachers conduct classroom observations, record students' performance and progress throughout the process, and provide timely praise and encouragement.

Materials:

- 1) Textbooks
- 2) Books on writing

Learning Resources:

- 1) Video about summer camp activities
- 2) Relevant academic papers

Chinese Writing Topic P PT Picture

The presentation consists of 14 slides:

- 幻灯片1:** Title slide: "我的夏令营经历"的思维导图教学
- 幻灯片2:** Table of Contents (目录) with steps: 01 Step1: 引入, 02 Step2: 实操, 03 Step3: 讨论, 04 Step4: 评价
- 幻灯片3:** Introduction: 回想夏令营的情景 (Recalling the summer camp scene) with photos of camp activities.
- 幻灯片4:** Introduction: 引发兴趣 (Arousing interest) with text on the role of mind maps.
- 幻灯片5:** Introduction: 引发兴趣 (Arousing interest) with a list of 7 guiding questions.
- 幻灯片6:** Introduction: 构建夏令营的思维导图 (Building a mind map of the summer camp) with a central node "我的夏令营经历" and four branches.
- 幻灯片7:** Introduction: 构建夏令营思维导图的要点 (Key points for building the mind map) with text on content and structure.
- 幻灯片8:** Introduction: 构造思维导图的难点 (Difficulties in constructing a mind map) with text on memory and organization.
- 幻灯片9:** Introduction: 文章示例讲解-我的夏令营 (Text example analysis - My Summer Camp) with a sample paragraph.
- 幻灯片10:** Practice: 夏令营经历主题和子主题 (Summer camp experience theme and sub-themes) with a list of ideas.
- 幻灯片11:** Practice: 学生开始写作 (Students start writing) with a 50-minute timer and a note about topic conversion.
- 幻灯片12:** Discussion: 改进夏令营经历思维导图 (Improving the mind map) with a flowchart showing steps: 1. 头脑风暴, 2. 头脑风暴, 3. 头脑风暴.
- 幻灯片13:** Homework (课后作业) with a note about writing a paragraph.
- 幻灯片14:** Thank you slide: 感谢您的观看!

Clip Video

1. https://www.bilibili.com/video/BV1GK4y1k7xF/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
2. https://www.bilibili.com/video/BV1jt411177R/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
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Task for individual work:

1. The article's theme and sub-themes need to be clear. Consider the type and characteristics of the summer camp you attended, as well as your experiences and feelings during the camp.
2. Make a mind map with details and characteristics of the summer camp, such as activity names, locations, times, people, etc.
3. Based on the themes, sub-themes, and details listed in your mind map, start writing an article describing your summer camp experience.
4. After completing the initial draft, carefully read and revise your article. Check for grammar errors, spelling errors, and unclear expressions to ensure that the article is smooth, logical, and clear.

Assign after-class homework, students are required to further improve the mind map and article of "My Summer Camp Experience" based on the experience and learning content of this experiment.

Lesson Plan 4 (4 hours)

Teaching:

Based on the mind map teaching method , it refers to an integrated teaching model that is divided into 4 steps in the classroom :

Step 1 : Introduction (1 hour)

After the previous study, students have a preliminary understanding of the mind map writing method. On this basis, combined with the theme of "My Family Travel", teachers can guide students to recall the situation of family travel and encourage them to list the characteristics, itinerary and activities of family travel. Demonstrates the basic steps and structure of constructing a mind map of family travel experiences, emphasizing the role of each part. Explain an example of a family travel experience article constructed based on a mind map.

(1) Questions that teachers can ask in advance:

- ①Where is your family travel destination?
- ②What are the characteristics of this trip?
- ③What is your family’s most unforgettable experience during travel?
- ④What impact did this experience have on you?
- ⑤Who are the new friends you met during your travels? What's the story between you two?
- ⑥What impact did this family trip have on your growth?
- ⑦How would you represent various aspects of your family travel experience through mind mapping?

Project 1 : How to construct a mind map depicting “My Family Travel”

How to construct a mind map depicting “My Family Trip”

First, clearly describe the goals and perspective of My Family Trip. For example, do you want to show the overall feeling and experience of the trip, or emphasize personal growth and observations during the trip? Before building a mind map, identify the core topics and subtopics of your writing. Take advantage of mind mapping to organize and present information. In mind maps, elements such as color, shape, size, etc. can be used to highlight important information and subtopics to help readers better understand and remember. For example, different colored markers or icons can be used to represent different features or activities.

In addition, pay attention to details and descriptions of features. In describing "My Family Trip," details and characteristics are key to making the reader relate and leave a lasting impression. Therefore, list the details and characteristics of each aspect of the trip in your mind map and fully present them in your writing. For

example, you can describe the travel environment, activity arrangements, food and accommodation conditions, etc. Pay attention to the logic and coherence of your writing. When building a mind map, make sure the logical relationships between topics and subtopics are clear and clear. In the writing process, paragraph and sentence structures should be arranged appropriately to make the article smooth and smooth. For example, you can first describe the overall experience of the trip, then describe your personal experiences and feelings, and finally summarize the impact and gains from the trip.

Step 2 : Practical practice (1.5 hours)

Teachers guide students to build a mind map describing "My Family Travel" by themselves, using hand-drawn or electronic tools. Prompt students to list possible writing topics and subtopics in their mind map, such as the name of the trip, destination, time, activities, feelings, etc. Encourage students to describe family travel experiences from different perspectives and use graphics and text to express their ideas. For example, use color, shape, and size to highlight important information. Students begin writing based on the topics and subtopics in the mind map , trying to translate their ideas into words.

The writing assignment requirements

1.The article should be centered on the theme of "My Family Trip", and the content should be relevant to the theme, avoiding deviation from the theme or overly general descriptions. For example, it can describe the purpose, plan, experience, and feelings of the trip.

2.When describing a family trip, there should be a clear point of view or theme running through the entire text, such as the highlights, significance, and gains of the trip. The structure and content of the article should be centered around this point of view or theme, with logical relationships between paragraphs.

3.Use accurate grammar and rich vocabulary to describe family travel, avoiding grammatical errors and unclear expressions. Various types of sentences and tenses can be used to describe different stages and feelings of travel.

4.The article should be smooth and fluent, with varied sentence structures to avoid monotony. Appropriate use of rhetorical devices and descriptive techniques can enhance the expressiveness of the article. For example, vivid adjectives and adverbs can be used to describe the feelings and experiences of the trip.

5.When describing a family trip, it is important to have a unique perspective and novel expression methods, such as describing different attractions, activities, and experiences, to showcase your own unique style.

6.The description of family travel should have a certain depth and breadth, such as detailed descriptions of the attractions, activities, experiences, etc. during the trip, as well as your own feelings and thoughts.

Step 3 : Discussion (1 hour)

The teacher divided the students into groups and asked them to work together to refine and improve their mind maps and further refine the description of their family travel experiences. Organize students to share their experiences and gains from practical operations, and encourage them to exchange strategies and difficulties in building mind maps. Guide the group to discuss the differences, advantages and disadvantages of different mind maps in describing family travel experiences , and improve students' understanding and application ability of graphical thinking. Students revise and improve the article based on feedback from group discussions and teacher guidance.

Task group work:

1.Team members need to discuss and determine the core theme and sub-themes of the article together. For example, do you want to show the overall itinerary and scenic spot arrangement of the trip, or emphasize the interaction and experience of family members during the trip?

2.Team members need to work together to list the details and characteristics of each aspect of the trip, and list these details and characteristics in a mind map.

3.Team members need to discuss and determine how to maintain the logic and coherence of the article.

4.After completing the task, group members can present their mind maps of family travel experiences and corresponding articles, and share their experiences and gains throughout the process.

Step 4 : Evaluation (0.5 hours)

Students present their mind map and corresponding article describing "My Family Trip." Teachers provide personalized feedback, paying attention to the logic and creativity of students' mind maps, and the corresponding description level. Teachers conduct classroom observations, record students' performance and progress throughout the process, and provide timely praise and encouragement.

Materials:

- 1) Textbooks
- 2) Books on writing

Learning Resources:

- 1) Video about family travel

2) Relevant academic papers

Chinese Writing Topic PPT Picture

The image displays a series of 14 PPT slides for a Chinese writing topic titled "我的家庭旅行" (My Family Trip). The slides are arranged in a grid and include the following content:

- 幻灯片1 (Slide 1):** Title slide: "我的家庭旅行"的思维导图教学
- 幻灯片2 (Slide 2):** Table of Contents (CONTENTS) with steps: Step1: 引入, Step2: 选择, Step3: 讨论, Step4: 讨论
- 幻灯片3 (Slide 3):** Introduction: 回顾家庭旅行的情境 (Review the context of family travel) with images of a car and a beach.
- 幻灯片4 (Slide 4):** Introduction: 掌握旅行情境的导图内容 (Master the mind map content of the travel context) with bullet points.
- 幻灯片5 (Slide 5):** Introduction: 探讨的问题 (Explore the questions) with a list of questions.
- 幻灯片6 (Slide 6):** Introduction: 构建家庭旅行的思维导图 (Construct the mind map of family travel) with a central mind map diagram.
- 幻灯片7 (Slide 7):** Introduction: 构建家庭旅行思维导图要点 (Key points for constructing the mind map of family travel) with bullet points.
- 幻灯片8 (Slide 8):** Introduction: 构建家庭旅行思维导图要点 (Key points for constructing the mind map of family travel) with bullet points.
- 幻灯片9 (Slide 9):** Introduction: 文章例讲解-我的家庭旅行 (Text example explanation - My Family Trip) with a paragraph of text.
- 幻灯片10 (Slide 10):** Introduction: 我的家庭旅行主题 (My Family Trip Themes) with a list of themes.
- 幻灯片11 (Slide 11):** Practice: 学生开始写作 (1h) (Students start writing (1h)) with a writing prompt.
- 幻灯片12 (Slide 12):** Discussion: 改进家庭旅行思维导图 (Improving the mind map of family travel) with a diagram showing a transition from a simple mind map to a more detailed one.
- 幻灯片13 (Slide 13):** Homework (课后作业) with a paragraph of text.
- 幻灯片14 (Slide 14):** Thank you (谢谢观看)

Clip Video

1. https://www.bilibili.com/video/BV1Xm4y1z7PA/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
2. https://www.bilibili.com/video/BV19b4y1o7kQ/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
3. https://www.bilibili.com/video/BV1a5411n7zk/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
4. https://www.bilibili.com/video/BV1BY4y1v7R4/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
5. https://www.bilibili.com/video/BV1Tu411R79D/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
6. https://www.bilibili.com/video/BV1i14y117Md/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
7. https://www.bilibili.com/video/BV1Lx4y1X74Q/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe
8. https://www.bilibili.com/video/BV1UW41177CF/?spm_id_from=333.337.search-card.all.click&vd_source=f9073fb920ac435667862a9dc6ebd2fe

Task for individual work:

1. You need to clarify the theme and sub-themes of the article. Consider the destination, characteristics, and your experiences and feelings during the family trip.
2. List the details and characteristics of the trip in the mind map, such as the destination name, travel time, activities and attractions during the trip.
3. Based on the topics, sub-topics, and details listed in the mind map, start writing an article describing your family travel experience. In the writing process, pay attention to detail description and emotional expression, allowing readers to feel like they are present during your family travel experience.
4. After completing the first draft, carefully read and revise the article. Check for grammatical errors, spelling mistakes, and unclear expressions to ensure that the article is smooth and logical.

Assign after-class homework and require students to further improve the mind map and article of "My Family Travel" based on the experience and learning content of this experiment.

Appendix D
The Results of the Quality Analysis of Research
Instruments

IOC- Questionnaire for students

IOC- Questionnaire for lecturers

IOC- Validity of instructional model for lecturers

IOC- Lesson Plans

IOC- Scoring Rubric Form

**Table Appendix 1: Evaluation Results of IOC for Factor Analysis
(For Students)**

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
Section 1 Common data of the respondent									
1	rGende <input type="checkbox"/> A . Male <input type="checkbox"/> B . Female	+1	+1	+1	+1	+1	5	1.00	Valid
2	Grade4 students from three primary schools in Guilin A <input type="checkbox"/> . Guilin Huitong primary school B <input type="checkbox"/> . Guilin Yucai Primary School <input type="checkbox"/> C. Guilin Zhuoran primary schoo	+1	+1	+1	+1	+1	5	1.00	Valid
3	Age <input type="checkbox"/> <input type="checkbox"/> A. below 18 yrs. <input type="checkbox"/> <input type="checkbox"/> B. 18-20 yrs. <input type="checkbox"/> C.21-23yrs. <input type="checkbox"/> D. over 23 yrs.	+1	+1	+1	+1	+1	5	1.00	Valid
Section 2 Factors									
Internal factors (respondents)									
1	You knows that Chinese Writing course is an important compulsory course for students.	+1	+1	+1	+1	+1	5	1.00	Valid
2	You feels that	+1	+1	+1	+1	+1	5	1.00	Valid

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
	Chinese Writing course is the great significance to personal's Chinese writing ability.								
3	You believes that the good technique in teaching to improve Chinese writing ability in Chinese writing course.	+1	+1	+1	+1	+1	5	1.00	Valid
4	You believes that materials and learning resources to improve Chinese writing ability in Chinese writing course.	+1	+1	+1	+1	+1	5	1.00	Valid
5	You are very actively engaged in Chinese Writingactivities in the classroom.	+1	+1	+1	+1	+1	5	1.00	Valid
6	You feel that homework projects to give full play to own strengths in Chinese writing course.	+1	+1	+1	+1	+1	5	1.00	Valid
7	You feel that Chinese writing course is the great significance to personal growth and development in	+1	+1	+1	+1	+1	5	1.00	Valid

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
	future.								
8	You feel that the assignments assigned by the lecturers and the feedback can help students better apply what they have learned.	+1	+1	+1	+1	+1	5	1.00	Valid
9	You can master Chinese writing Ability by Mind Mapping Instructional process in Chinese writing course.	+1	+1	+1	+1	+1	5	1.00	Valid
10	You are satisfied with the friendly cooperation and interaction between students and teachers or peers in the Chinese writing course.	+1	+1	+1	+1	+1	5	1.00	Valid
11	You feel that homework or project work assigned by teachers and students can help students better apply the knowledge they have learned.	+1	+1	+1	+1	+1	5	1.00	Valid
12	You have new ideas based on their responses to learning	+1	+1	+1	+1	+1	5	1.00	Valid

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
	about Chinese writing ability in Chinese writing course.								
13	You can develop their sense of accomplishment and pride through different activities in Chinese writing course.	+1	+1	+1	+1	+1	5	1.00	Valid
External factors									
1	You think teachers have an impact on pupils' Chinese and writing ability.	+1	+1	+1	+1	+1	5	1.00	Valid
2	Teachers give enough writing guidance and feedback in Chinese writing course.	+1	+1	+1	+1	+1	5	1.00	Valid
3	Teachers regularly organize writing competitions and correct compositions to stimulate pupils' interest and motivation in writing.	+1	+1	+1	+1	+1	5	1.00	Valid
4	Teachers can provide writing instruction and practice tailored to the student's level and needs.	+1	+1	+1	+1	+1	5	1.00	Valid
5	Teachers can use a variety of teaching	+1	+1	+1	+1	+1	5	1.00	Valid

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
	methods to improve students' Chinese writing ability.								
6	Teachers use practical examples and hands-on activities to help students understand and apply writing ability.	+1	+1	+1	+1	+1	5	1.00	Valid
7	The teacher chooses appropriate teaching methods according to the characteristics of Chinese writing course and the tasks and goals of Chinese writing ability.	+1	+1	+1	+1	+1	5	1.00	Valid
8	The content of the textbook is combined with the students' actual life and experience.	+1	+1	+1	+1	+1	5	1.00	Valid
9	The textbook provides practical, interactive, and inspiring cases and materials to useful for students.	+1	+1	+1	+1	+1	5	1.00	Valid
10	Teachers can give students timely and specific feedback on writing.	+1	+1	+1	+1	+1	5	1.00	Valid

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
11	Teachers can make individual evaluation according to different ability levels of students.	+1	+1	+1	+1	+1	5	1.00	Valid
12	Teachers encourage students to improve their writing skills by evaluating each other.	+1	+1	+1	+1	+1	5	1.00	Valid
13	The availability of Mind Mapping Instructional Model can affect students interest in Chinese writing courses.	+1	+1	+1	+1	+1	5	1.00	Valid
14	The environments is clean and bright, with desks and chairs, blackboards, podiums, computers, projectors, large screens, loudspeakers and other multimedia facilities to facilitate the teaching process.	+1	+1	+1	+1	+1	5	1.00	Valid
15	The class size of students in Chinese writing class is appropriate.	+1	+1	+1	+1	+1	5	1.00	Valid
Total (In Overview)							155	31.00	Valid

Table Appendix 2: Evaluation Results of IOC for Factor Analysis
(For lecturers)

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
Section 1 Common data of the respondent									
1	Gender <input type="checkbox"/> A . Male <input type="checkbox"/> B . Female	+1	+1	+1	+1	+1	5	1.00	Valid
2	3 teachers who are teaching Chinese writing course Grade 4 from 3 primary schools in Guilin. <input type="checkbox"/> A. Guilin Huitong primary school <input type="checkbox"/> B. Guilin Yucai Primary School <input type="checkbox"/> C. Guilin Zhuoran primary school	+1	+1	+1	+1	+1	5	1.00	Valid
3	Teaching experience <input type="checkbox"/> A. Below 3 yrs. <input type="checkbox"/> B. 4-6 yrs. <input type="checkbox"/> C. 7- 9 yrs. <input type="checkbox"/> D. Over 9 yrs.	+1	+1	+1	+1	+1	5	1.00	Valid
4	Age <input type="checkbox"/> A. below 18 yrs. <input type="checkbox"/> B. 18-20 yrs. <input type="checkbox"/> C. 21-23 yrs. <input type="checkbox"/> D. over 23 yrs.	+1	+1	+1	+1	+1	5	1.00	Valid

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
5	Professional title <input type="checkbox"/> A. Professor <input type="checkbox"/> B. Associate Professor <input type="checkbox"/> C. Assistant Professor <input type="checkbox"/> D. Lecturer	+1	+1	+1	+1	+1	5	1.00	Valid
Section 2 Questions									
1	As a primary school Chinese teacher, what do you think is the most important factor affecting pupils' Chinese writing ability?	+1	+1	+1	+1	+1	5	1.00	Valid
2	What methods have you used in your teaching to improve students' writing skills? Please share some effective teaching methods.	+1	+1	+1	+1	+1	5	1.00	Valid
3	How do you think textbooks and books affect students' writing ability? What are your suggestions for making better use of textbooks and books to promote	+1	+1	+1	+1	+1	5	1.00	Valid

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
	students' writing development?								
4	In your classroom, how do you conduct instructional evaluations and feedback to help students improve their writing skills?	+1	+1	+1	+1	+1	5	1.00	Valid
5	How do you help students develop good writing habits and positive attitudes toward learning?	+1	+1	+1	+1	+1	5	1.00	Valid
6	For the choice of teaching materials, what kind of resources do you prefer to use?	+1	+1	+1	+1	+1	5	1.00	Valid
7	How do you think the teaching environment affects students' writing ability? How do you create a positive, encouraging teaching environment that inspires students' writing potential?	+1	+1	+1	+1	+1	5	1.00	Valid
8	What do you think	+1	+1	+1	+1	+1	5	1.00	Valid

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
	are the different effects of small class system and large class system on students' Chinese writing ability?								
9	Which aspects of your teaching need to be improved, or which aspects do you want the school to support you?	+1	+1	+1	+1	+1	5	1.00	Valid
10	In addition to teachers and teaching methods, how do you think the home environment affects students' writing ability? How do you work with parents to encourage students to continue developing their writing skills at home?	+1	+1	+1	+1	+1	5	1.00	Valid
Total (In Overview)							75	15.00	Valid

Table Appendix 3: Evaluation Results of IOC for instructional model

Item	Specialists' rating					Total	Mean	Results
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
Utility Standard								
1. Mind mapping instructional model is useful to lecturers to enhance learning achievement.	+1	+1	+1	+1	+1	5	1.00	Valid
2. Mind mapping instructional model is useful to students to enhance learning achievement.	+1	+1	+1	+1	+1	5	1.00	Valid
3. Mind mapping instructional model includes necessary and enough contents.	+1	+1	+1	+1	+1	5	1.00	Valid
4. Mind mapping instructional model promotes to enhance learning achievement more compared to traditional teaching.	+1	+1	+1	+1	+1	5	1.00	Valid
5. Mind mapping instructional model increases the learning achievement of students.	+1	+1	+1	+1	+1	5	1.00	Valid
Feasibility Standard								
1. The lecturer can apply mind mapping instructional model to	+1	+1	+1	+1	+1	5	1.00	Valid

Item	Specialists' rating					Total	Mean	Results
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
enhance learning achievement to their work and it is worth the time for actual use.								
2. The lecturer can develop the students to Mind mapping instructional model	+1	+1	+1	+1	+1	5	1.00	Valid
3. Mind mapping instructional model to students' Chinese writing ability is easy to use .	+1	+1	+1	+1	+1	5	1.00	Valid
4. The students always develop their learning all time by mind mapping instructional model to enhance students' Chinese writing ability.	+1	+1	+1	+1	+1	5	1.00	Valid
5. The students are comfortable in learning by themselves mind mapping instructional model to enhance students' Chinese writing ability.	+1	+1	+1	+1	+1	5	1.00	Valid
Standard Propriety								
1. Mind mapping instructional model to enhance learning achievement is appropriate for lecturers to use assessment	+1	+1	+1	+1	+1	5	1.00	Valid

Item	Specialists' rating					Total	Mean	Results
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
results to improve the students.								
2. Mind mapping instructional model to enhance learning achievement is appropriate for students to create knowledge by themselves.	+1	+1	+1	+1	+1	5	1.00	Valid
3. Mind mapping instructional model to enhance learning achievement is convenient to use.	+1	+1	+1	+1	+1	5	1.00	Valid
4. Mind mapping instructional model to enhance learning achievement is a systematic process to use.	+1	+1	+1	+1	+1	5	1.00	Valid
5. Mind mapping instructional model to enhance learning achievement is clear and suitable for use in learning and students development.	+1	+1	+1	+1	+1	5	1.00	Valid
Accuracy Standard								
1. Mind mapping instructional model to enhance learning achievement is	+1	+1	+1	+1	+1	5	1.00	Valid

Item	Specialists' rating					Total	Mean	Results
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
comprehensively analyzed from different contexts and sufficient for the synthesis of patterns.								
2. Mind mapping instructional model to enhance learning achievement has a clear process.	+1	+1	+1	+1	+1	5	1.00	Valid
3. Mind mapping instructional model to enhance learning achievement are described and the acquisition is clear.	+1	+1	+1	+1	+1	5	1.00	Valid
4. Mind mapping instructional model to enhance learning achievement use techniques and tools which acquires accurate information and communication.	+1	+1	+1	+1	+1	5	1.00	Valid
5. Mind mapping instructional model to enhance learning achievement is a correct and comprehensive learning system.	+1	+1	+1	+1	+1	5	1.00	Valid

Table Appendix 4: Evaluation Results of IOC for handout

Item	Specialists' rating					Total	Mean	Results
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
Utility Standard								
1. Mind mapping instructional model is useful to lecturers to enhance learning achievement.	+1	+1	+1	+1	+1	5	1.00	Valid
2. Mind mapping instructional model is useful to students to enhance learning achievement.	+1	+1	+1	+1	+1	5	1.00	Valid
3. Mind mapping instructional model includes necessary and enough contents.	+1	+1	+1	+1	+1	5	1.00	Valid
4. Mind mapping instructional model promotes to enhance learning achievement more compared to traditional teaching.	+1	+1	+1	+1	+1	5	1.00	Valid
5. Mind mapping instructional model increases the learning achievement of students.	+1	+1	+1	+1	+1	5	1.00	Valid
Feasibility Standard								
1. The lecturer can apply mind mapping instructional model to enhance learning	+1	+1	+1	+1	+1	5	1.00	Valid

Item	Specialists' rating					Total	Mean	Results
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
achievement to their work and it is worth the time for actual use.								
2. The lecturer can develop the students to Mind mapping instructional model	+1	+1	+1	+1	+1	5	1.00	Valid
3. Mind mapping instructional model to students' Chinese writing ability is easy to use .	+1	+1	+1	+1	+1	5	1.00	Valid
4. Students always help to develop their learning all time by mind mapping instructional model to enhance students' Chinese writing ability.	+1	+1	+1	+1	+1	5	1.00	Valid
5. The students are comfortable in learning by themselves mind mapping instructional model to enhance students' Chinese writing ability.	+1	+1	+1	+1	+1	5	1.00	Valid
Propriety Standard								
1. Mind mapping instructional model to enhance learning achievement is appropriate for lecturers to use assessment results to improve the students.	+1	+1	+1	+1	+1	5	1.00	Valid

Item	Specialists' rating					Total	Mean	Results
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
2. Mind mapping instructional model to enhance learning achievement is appropriateness for students to create knowledge by themselves.	+1	+1	+1	+1	+1	5	1.00	Valid
3. Mind mapping instructional model to enhance learning achievement is convenient to use.	+1	+1	+1	+1	+1	5	1.00	Valid
4. Mind mapping instructional model to enhance learning achievement is a systematic process to use.	+1	+1	+1	+1	+1	5	1.00	Valid
5. Mind mapping instructional model to enhance learning achievement is clear and suitable for use in learning and students development.	+1	+1	+1	+1	+1	5	1.00	Valid
Accuracy Standard								
1. Mind mapping instructional model to enhance learning achievement is comprehensively from different analyzed from	+1	+1	+1	+1	+1	5	1.00	Valid

Item	Specialists' rating					Total	Mean	Results
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
contexts and sufficient for the synthesis of patterns.								
2. Mind mapping instructional model to enhance learning achievement has a clear process.	+1	+1	+1	+1	+1	5	1.00	Valid
3. Mind mapping instructional model to enhance learning achievement are described and the acquisition is clear.	+1	+1	+1	+1	+1	5	1.00	Valid
4. Mind mapping instructional model to enhance learning achievement use techniques and tools which acquires accurate information and communication.	+1	+1	+1	+1	+1	5	1.00	Valid
5. Mind mapping instructional model to enhance learning achievement is a correct and comprehensive learning system.	+1	+1	+1	+1	+1	5	1.00	Valid

**Table Appendix 5: Evaluation Results of IOC
for Lesson Plan**

No.	Item	lists' ratingSpecia					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
Learning Objective									
1	Complying with content of the course	+1	+1	+1	+1	+1	5	1.00	Valid
2	Covering knowledge, process, and attitude	+1	+1	+1	+1	+1	5	1.00	Valid
3	Being measurable in knowledge, process, and attitude	+1	+1	+1	+1	+1	5	1.00	Valid
Contents									
4	Complying with learning objective	+1	+1	+1	+1	+1	5	1.00	Valid
5	Being appropriate in terms of time management	+1	+1	+1	+1	+1	5	1.00	Valid
6	Mind mapping instructional model Complying with the designed instructional model	+1	+1	+1	+1	+1	5	1.00	Valid
7	Supporting students' learning	+1	+1	+1	+1	+1	5	1.00	Valid
8	Including various activities	+1	+1	+1	+1	+1	5	1.00	Valid
Learning materials									
9	Complying with the learning objectives	+1	+1	+1	+1	+1	5	1.00	Valid
10	Complying with the contents	+1	+1	+1	+1	+1	5	1.00	Valid
Evaluation and Assessment									
11	Complying with the	+1	+1	+1	+1	+1	5	1.00	Valid

No.	Item	lists' ratingSpecia					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
	learning objectives								
12	Including various methods and instruments	+1	+1	+1	+1	+1	5	1.00	Valid

**Table Appendix 6: Evaluation Results of IOC
for Scoring Rubric Form**

No.	Item	Specialists' rating					Total	Mean	Results
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
Content of the article									
1	Standard 1: Topic clarity and relevance	+1	+1	+1	+1	+1	5	1.00	Valid
	Standard 2: Clarity and Logic of Viewpoints	+1	+1	+1	+1	+1	5	1.00	Valid
Linguistic expression of the article									
2	Standard 1: Grammatical Accuracy and Vocabulary	+1	+1	+1	+1	+1	5	1.00	Valid
	Standard 2: Fluency of expression and variety of sentence patterns	+1	+1	+1	+1	+1	5	1.00	Valid
The creativity of the article									
3	Standard 1: Uniqueness and Novelty	+1	+1	+1	+1	+1	5	1.00	Valid
	Standard 2: Depth and breadth	+1	+1	+1	+1	+1	5	1.00	Valid

Appendix E
Certificate of English

BSRU
BANSOMDEJCHAOPRAYA
RAJABHAT UNIVERSITY

This is to certify that

Mrs. Hu Xiaomin

Achieved BSRU English Proficiency Test (BSRU-TEP) level

B2

Given on 22nd August 2021



(Assistant Professor Dr Kulsirin Aphiratvoradej)

Director

Appendix F
The Document for Accept Research

MHESI 8038.1/38



**Mcu Ubonratchathani journal
of Buddhist Studies (TCL2)**
Mahachulalongkornrajavidyalaya
University, Ubon Ratchathani Campus

RESPONSE FOR PUBLICATION OF THE ARTICLE

1st November 2023

The Editorial Department of Mcu Ubonratchathani journal of Buddhist Studies (TCL2) MCU, Ubon Ratchathani Campus has considered the article

Title DEVELOPMENT OF MIND MAPPING INSTRUCTIONAL MODEL TO ENHANCE STUDENTS' CHINESE WRITING ABILITY

Writer Hu Xiaomin, Areewan Iamsa-ard, Jittawisut Wimutipanya and Suriya Phankosol

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Your article has been sent to 3 experts for peer review and found that its quality is at a "Good" level and academically useful.

Please be informed accordingly.

(Assoc. Prof. Dr. Phrakhruwutthidhampandit)
Editor of Mcu Ubonratchathani journal of Buddhist studies (TCL)
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Ubon Ratchathani Campus

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