



Using Hierarchical Teaching Method to Improve Middle School Students English Reading Comprehension Abilities

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Abstract

The objectives of this study were 1) to development of English reading comprehension ability using Hierarchical teaching method of middle school students and 2) to compare students' English reading comprehension before and after the implementation Hierarchical teaching method. The simple group of this study consisted of 30 samples from the first-year middle school students of the middle school affiliated to Yunnan College of Business Management. The research instruments included 1) lesson plans and 2) English reading comprehension ability test. The assessment questions aim to assess five sub-variables within the dependent variable including: comprehension ability, reading ability, language knowledge, decoding ability, cultural awareness. The data were analyzed by mean, standard deviation and t-test for dependent sample. The results were found that 1) by employing the hierarchical teaching method to improve middle school students' English reading comprehension, their academic performance showed marked improvement. This suggests that the hierarchical teaching method effectively tailors instruction to meet the varying levels and needs of students, thereby significantly enhancing their English reading comprehension. In other words, the hierarchical teaching approach aids teachers in better addressing the individualized needs of students, ultimately leading to improved learning outcomes. 2) Before and after the implementation of the hierarchical teaching method, the pre-test average score for English reading comprehension ability was 67.80 points, while the post-test average was 75.07 points, showing an average difference of 7.27 points. Post-study scores were higher than pre-study and statistically significant at the 0.1 level. This aligns with the research hypothesis.

Keywords: Hierarchical Teaching Method, English Reading Comprehension Ability, Middle School Students



Introduction

The advent of globalization, English, as the most widely used language in the world, plays an important role in communication among people worldwide, learning English has profound practical significance. The Chinese government attaches great importance to English education and teaching, and English teaching begins at the primary school stage. English is also an important part of the middle school, high school, and university curriculums (Yao YanRu, 2019). For most Chinese middle school students, English reading is one of the main ways to learn English, and reading comprehension is also a significant part of English tests, which requires students to have a high level of English vocabulary accumulation, reading comprehension ability, and spoken English proficiency. It can be said that cultivating English reading ability is the key to improving and cultivating students' overall English proficiency (Zhao ZhiLing, 2017).

Hierarchical teaching is a teaching method that makes school education adapt to the differences of students and fully embodies the subjectivity of students by constructing a diversified curriculum and teaching, Is a strategy to provide students with suitable teaching materials and methods to help them develop better (Hallam, 2016). Hierarchical teaching is a teaching method, which emphasizes the combination of students' learning and teachers' teaching, the concept of Hierarchical teaching: teachers divide classes into two or three layers according to students' intelligence level and different grades, and set teaching objectives in Hierarchical teaching, consider students' different needs in teaching and try to strengthen the cooperation between teachers and students, many schools in China have gradually begun to implement Hierarchical teaching(Hua Guodong, 2017).

Hierarchical teaching aligns with the differentiated instruction theory, which emphasizes that students learn differently and therefore require varied teaching approaches. By catering to individual learning styles, hierarchical teaching can significantly improve students' reading comprehension abilities. Introduced by Lev Vygotsky, the ZPD refers to the gap between what a learner can do independently and what they can do with assistance. Hierarchical teaching aims to bridge this gap by providing scaffolded support, gradually releasing responsibility to the student as their comprehension skills improve. In the classroom, hierarchical teaching can be implemented through grouped reading sessions, where students are grouped based on their reading levels. Each group can then work on texts and activities tailored to their abilities, ensuring optimal learning and comprehension. Teachers can also use tiered assignments, providing different levels of challenge and complexity based on students' reading proficiency.

Numerous studies have shown the effectiveness of hierarchical teaching in enhancing reading comprehension. For instance, a study conducted by Johnson and colleagues (2016) found that students who received differentiated instruction in reading



showed significant improvements in their comprehension skills compared to those who did not. Another study by Smith and Brown (2018) concluded that hierarchical teaching not only improves reading comprehension but also boosts students' confidence and engagement in reading activities.

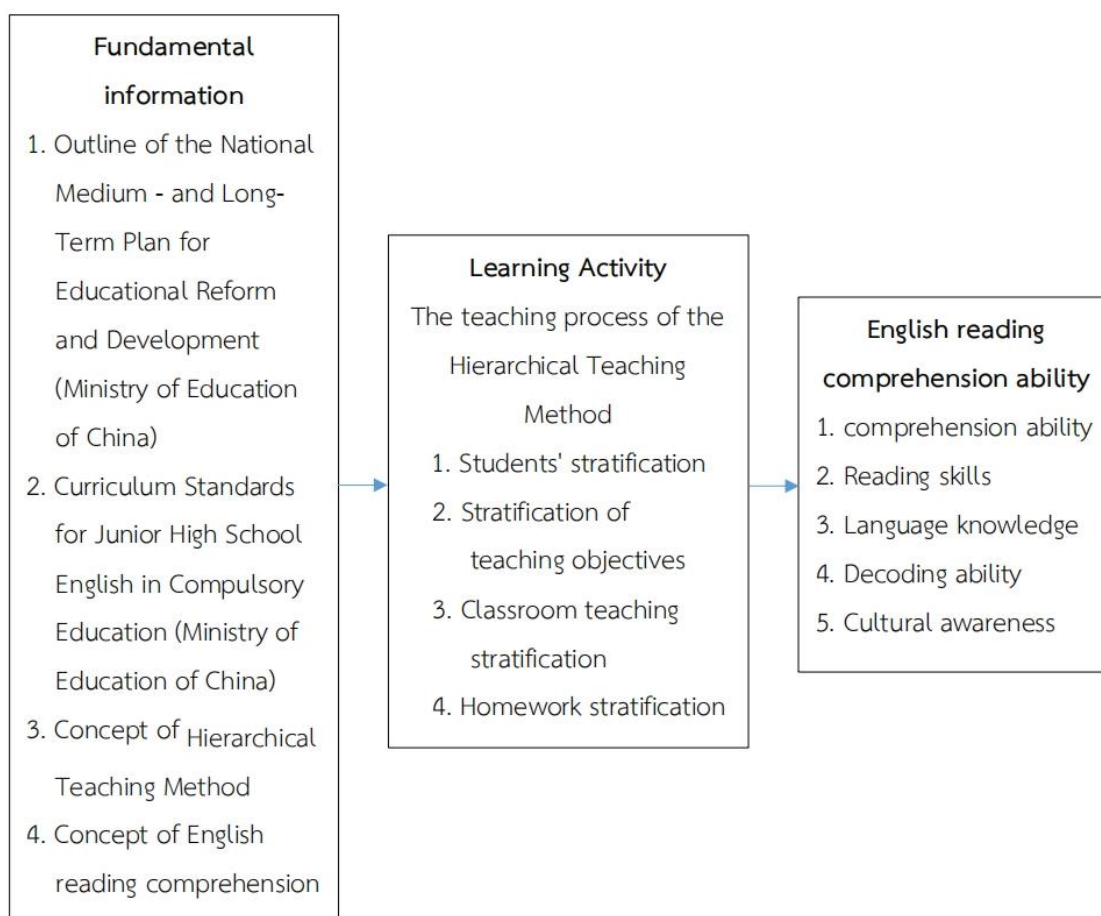
In summary, the hierarchical teaching strategy aligns with differentiated instruction theories and the concept of the Zone of Proximal Development. Relevant studies have demonstrated its effectiveness in improving reading comprehension abilities, making it a valuable tool for educators seeking to enhance their students' reading skills.

Objectives

1. To develop of English reading comprehension ability using hierarchical teaching method of middle school students.
2. To compare students' English reading comprehension ability before and after the implementation hierarchical teaching method.

Concept theory framework

The conceptual framework of the study, the development of English Reading comprehension Ability using Hierarchical Teaching Method of middle school students, was as follows:



Materials and Methods

The development of English reading comprehension ability using Hierarchical teaching method of middle school students, the research Instruments were as follows:

1. Lesson plan according to the Hierarchical Teaching Method.

The purpose of lesson plans was to improve the English reading comprehension ability by applying the Hierarchical teaching method. The lesson plan was divided into the following four learning units. spanning a total of 12 hours:

- (1). Unit 1: Usage of modal verb “can” (3 hours)
- (2). Unit 2: Correct expression of time (3 hours)
- (3). Unit 3: The Time and Cultural Differences between China and the West (3 hours)
- (4). Unit 4: Accurately describe the weather (3 hours)

The development process of creating Lesson plan according to the Hierarchical teaching method and assessment form for validity of lesson plan were followed as.

1.1 Studying the principles of creating Lesson plan according to the Hierarchical teaching method and assessment form for validity of lesson plan from books, textbooks, articles, and related research.



1.2 Creating a Lesson plan according to the Hierarchical teaching method and assessment form for validity of lesson plan, 4 plans as this above.

1.3 Drafting the assessment form for validity of lesson plan at the end of each section, there was a space for experts to write suggestions that could be helpful in improving students' English reading comprehension ability.

1.4 Taking the instruments to 3 experts to verify the validity. The test consistency the index of congruency was between 0.60-1.00, the level of consideration was as follows:

Rating was +1 There was an opinion that "Corresponds to definition/measurement objectives."

Rating was 0 There was an opinion that "Not sure it corresponds to definition/measurement objectives."

Rating was -1 There was an opinion that "Inconsistent with definition/measurement objectives."

1.5 Modifying assessment form for validity of lesson plan according to suggestion.

1.6 Taking the research instruments to collect data with the research samples.

2. English Reading comprehension Ability test

In this research, the English reading comprehension ability was achievement of knowledge that divided into five sub-competencies, including: 1) comprehension ability 2) reading ability 3) language knowledge 4) decoding ability 5) cultural awareness.

The test questions were designed for these five sub-competencies to assess students' English Reading comprehension. The paper consists of 20 subjective questions, with each question worth 5 points, for a total of 100 points.

The development process of creating English Reading comprehension Ability test and assessment form for validity of the test of English Reading comprehension were followed as.

2.1 Studying the principles of the test of English Reading comprehension Ability and assessment form for validity of the test of English Reading comprehension Ability from books, textbooks, articles, and related research.

2.2 Creating English Reading comprehension test and assessment form for validity of the test of English Reading comprehension Ability.

2.3 Taking the instruments to 3 experts to verify the content validity and index of items objective congruence (IOC) of the assessment form English Reading comprehension Ability test consistency the index of congruency was between 0.67-1.00.

2.4 Modifying assessment form for validity of lesson plan according to suggestion.

2.5 Taking research instrument to English reading comprehension ability test and the result of reliability was 0.96.

2.6 Taking the research instruments to collect data with the research samples.



Results

Symbol and Abbreviations

Represent data analysis results based on symbols and semantics. The details are as follows:

\bar{X}	means	average value
SD.	means	standard deviation
n	means	number of students
D	means	scores of differences between pre and post test
df	means	degree of freedom
t	means	statistical data for t-test value
**	means	statistical significance at level .01

This study concluded through experimental design that the English Reading comprehension Ability based on the Hierarchical Teaching Method is reasonable and effective, and the following conclusions were drawn:

Table 1: English Reading comprehension Ability score between before and after learning

English Reading comprehension Ability	n	Full Scores	Pre-test		Post-test		D
			\bar{X}	SD.	\bar{X}	SD.	
1. Comprehension ability	30	25	17.17	2.63	19.60	2.69	2.43
2. Reading skills	30	25	16.73	2.63	18.80	2.86	2.07
3. Language knowledge	30	20	12.57	2.30	13.70	2.73	1.13
4. Decoding ability	30	15	10.90	1.37	11.50	1.41	0.6
5. Cultural awareness	30	15	10.43	1.17	11.23	1.41	0.8
total		100	67.8	10.1	74.83	11.1	7.03

As can be seen from Table 1, the scores of the five sub-abilities of middle school students who adopt the hierarchical teaching method change as follows: 1) Comprehension ability: the average score before study is 17.1, and the average score after study is 19.6 with an average difference of 2.43. 2) Reading skills: the average score before school is 16.7 points, and the average score after school is 18.80 points, with an average difference of 2.07 points. 3) Language knowledge: the average score before school is 12.57, and after school it is 13.70, with an average difference of 2. 4) Decoding ability: the average score before learning is 10.90, and the average score after learning is 11.50, with an average difference of 0.6 points. 5) Cultural awareness: the average score before study is 10.43



points, and the average score after study is 11.23 points, with an average difference of 0.8 point. After stratified teaching, the scores of students' comprehension, reading skills, language knowledge, decoding ability and cultural awareness are higher than those before learning. Therefore, the hierarchical teaching method can improve the reading comprehension ability of middle school students and achieve the research purpose.

Table 2: Comparison of English Reading comprehension Ability before and after class by implementing the Hierarchical teaching

English Reading comprehension Ability		n	Full Point	\bar{X}	SD.	t	p
Total score	Pre-test	30	100	67.8	9.32	-11.267	0.000
	Post-test	30	100	75.07	10.22		

From Table 2, it could be observed that the students' post-learning scores were higher than their pre-learning scores, which was statistically significant at the 0.01 level. The average score of students before employing the hierarchical teaching method was 67.80 points, and after the implementation, it increased to an average of 75.07 points, with an average difference of 7.27 points. The results indicate that after adopting the hierarchical teaching method, students' learning achievement has improved compared to before. The findings were statistically significant.

Table 3: Comparison of learning achievement before and after Using Hierarchical Teaching Method to improve English Reading comprehension Ability of middle school students

Student id	Pre-School score (Pre-Test)	After school score (Post-Test)	Difference between points(D)
1	62	72	10
2	70	75	5
3	67	69	2
4	82	90	8
5	65	68	3
6	58	65	7



7	73	78	5
8	69	80	11
9	73	75	2
10	55	63	8
11	60	67	7
12	71	79	8
13	68	69	1
14	63	75	12
15	66	73	7
16	75	84	9
17	85	93	8
18	64	70	6
19	59	60	1
20	53	61	8
21	64	70	6
22	77	89	12
23	74	85	11
24	57	67	10
25	80	94	14
26	69	73	4
27	86	95	9
28	79	83	4
29	53	60	7



30	57	70	13
\bar{x}	67.80	75.06	7.26

Conclusions and Discussion

Conclusion

According to the research topic, the research on the development of middle school students' academic performance in English courses by using hierarchical teaching mode is summarized as follows:

1. Results of developing of English reading comprehension ability using hierarchical teaching method of middle school students. after stratified teaching, the scores of students' comprehension, reading skills, language knowledge, decoding ability and cultural awareness are higher than those before learning. Therefore, the hierarchical teaching method can improve the reading comprehension ability of middle school students and achieve the research purpose.

2. Results of comparing students' English reading comprehension ability before and after the implementation hierarchical teaching method. students' post-learning scores were higher than their pre-learning scores, which was statistically significant at the 0.01 level. The average score of students before employing the hierarchical teaching method was 67.80 points, and after the implementation, it increased to an average of 75.07 points, with an average difference of 7.27 points. The results indicate that after adopting the hierarchical teaching method, students' learning achievement has improved compared to before. The findings were statistically significant.

Discussion

Research on development of English reading comprehension ability using hierarchical teaching method of middle school students was conducted in the second semester of the 2023 academic year. It involved the study of academic performance cultivation for 30 first-year of class 3 middle school students of Yunnan University of Economics and Management using hierarchical teaching method. This research can be discussed from two aspects:

1. The developing of English reading comprehension ability using hierarchical teaching method of middle school students, the researchers divided the lesson plan writing into four steps according to hierarchical teaching method: 1) Students' stratification, 2) Stratification of teaching objectives, 3) Classroom teaching stratification, 4) Homework stratification. The assessment of learning achievement performance was tested through five sub-skills: 1) comprehension ability 2) reading ability 3) language knowledge 4) decoding ability 5) cultural awareness. Data analysis was conducted by three experts who



evaluated the quality of lesson plans based on hierarchical teaching method, with the results presented by experts evaluating the lesson plan quality. Using hierarchical teaching method to improve English reading comprehension ability was necessary. Through the analysis of students' reading scores before and after hierarchical reading teaching, this study finds that hierarchical teaching has a positive impact on students' reading scores. Specifically, after the implementation of hierarchical teaching, students' reading scores before and after the test are significantly different, and their reading scores are obviously improved. At the same time, hierarchical teaching has a significant effect on improving students' English reading scores at all levels, which is conducive to narrowing the polarization of students' reading scores. This result is consistent with that of Huang Weiqiang (2019) and Chen Danping (2020). This study adopts the hierarchical reading teaching based on the theory of teaching students in accordance with their aptitude, the nearest development area and the optimization of teaching. Zhao Dongping (2018) believes that teaching is the most effective and promotes students' development to the maximum extent only when teaching happens to fall into the students' nearest development area. The hierarchical teaching method's success in enhancing students' English reading comprehension abilities can be attributed to several factors: Tailored Instruction: The hierarchical approach respects individual differences and tailors instruction to students' specific needs and abilities. This ensures that students are challenged appropriately, fostering greater engagement and achievement. Differentiation of Learning Goals: By setting differentiated learning goals for students at various levels, hierarchical teaching ensures that each student has a clear path to improvement, tailored to their individual capabilities. Encouragement of Higher-Order Thinking: Hierarchical teaching encourages students to engage in critical thinking and problem-solving, not just rote memorization. This cultivates a deeper understanding of the material. Cultivation of Learning Habits: By focusing on reading comprehension strategies and techniques, hierarchical teaching fosters good reading habits that benefit students beyond the classroom. Promotion of Cooperative Learning: The heterogeneous grouping of students encourages cooperation and collaboration, leading to knowledge sharing and mutual support among peers. Zhao Dongping (2018) believes that teaching is the most effective and promotes students' development to the maximum extent only when teaching happens to fall into the students' nearest development area. In the process of stratified teaching, students' individual differences are respected, and students' recent development areas are attached importance. According to students' reading scores and their non-intellectual factors, students are divided into three levels: basic level, improvement level and development level. Set a reading teaching goal for students at each level that is suitable for the nearest development zone. At the same time, the arrangement of reading



tasks in teaching activities also meets the needs of students at each level in the nearest development zone. The design and selection of reading objectives, reading tasks and extracurricular reading materials are always higher than the learners' knowledge level, but not too high, so that students at different levels can get further development through their own efforts or with the help of teachers and peers, so as to stimulate their curiosity, mobilize their enthusiasm for participating in classroom activities, and enable students to gain a sense of accomplishment, self-confidence and improve their reading performance. Reading objectives, reading activities or tasks, reading materials, etc. are no longer limited to meeting the needs of some students. Instead, they are designed in layers considering the individual differences of students, giving students at different levels the same attention. I believe that students at each level have the potential for development, so that students at each level can develop on the original basis. Combine the hierarchical evaluation, formative evaluation and summative evaluation of students, and give feedback in time. At the same time, students at three levels, A, B and C, are combined in a heterogeneous way, and cooperative learning is carried out in groups to make common progress, so as to mobilize students' subjective initiative and cultivate their team spirit and sense of responsibility. In summary, the hierarchical teaching method's effectiveness in improving middle school students' English reading comprehension abilities lies in its ability to tailor instruction to individual students' needs, providing appropriate challenges and support, and fostering a learning environment that encourages critical thinking, cooperation, and the development of lifelong learning habits.

2. The comparing students' English reading comprehension ability before and after the implementation hierarchical teaching method. Researchers studied many literatures and research related to the hierarchical teaching method and conducted research based on the middle school students hierarchical teaching method. According to the research results, adopting the hierarchical teaching method can promote middle school students to improve their English reading comprehension ability. The results showed that the average score before learning was 67.8 points, and the average score after learning was 75.07 points, with an average difference of 7.27 points. The results show that, the average score of undergraduate students in pre-class assessments was 67.8 (SD = 9.32), and in post-class assessments, it was 75.07 (SD = 10.22). The post-class assessment scores were significantly higher than pre-class assessment scores at a statistical significance level of 0.01. This result is consistent with the results of "Applied Research on Stratified Teaching of English Reading in Junior Middle School" conducted by Zhao Danqi (2021). Zhao Danqi believes that after a period of stratified reading teaching, the English reading learning effect of junior middle school students has been optimized. According to the average results of students' scores in the first and second tests and the results of paired sample T-test, the



average scores in the two tests are 29.52 points and 32.07 points respectively. The T distribution value of post-test and pre-test paired samples was 3.854, which reached the significance level. This shows that after four months of stratified reading teaching, students' reading learning effect has been greatly improved. The experimental research of layered reading teaching shows that layered reading teaching can indeed promote the improvement of students' reading performance, and in the long run, it can promote a virtuous cycle, so that students' interest in reading can be gradually improved, so that students gradually love reading. The results show that using hierarchical teaching method can improve middle school students English reading comprehension ability, achieving the research objective.

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