

Impacts of Tree-maps and Bubble-maps Integrated Storytelling Task-based Learning Module on English Speaking Skills among Chinese Undergraduates

Zhinan Li¹, Samah Ali Mohsen Mofreh², Sultan Salem³, Chen Jiao⁴

^{1,2}School of Educational Studies, Universiti Sains Malaysia, Penang, Malaysia, ³Department of Economics, Birmingham Business School, University of Birmingham, Edgbaston, Birmingham, UK, ⁴School of Languages, Literacies and Translation, Universiti Sains Malaysia, Penang, Malaysia

Email: dr.s.salem@outlook.com

Corresponding Author Email: samahmofreh@usm.my

To Link this Article: <http://dx.doi.org/10.6007/IJARPED/v13-i1/21079>

DOI:10.6007/IJARPED/v13-i1/21079

Published Online: 17 March 2024

Abstract

Poor English speaking skills have long plagued students at China's higher vocational colleges, as seen by their inability to explain what they say when speaking and their lack of accuracy and fluency. This study designed and developed a tree-maps and bubble-maps integrated storytelling task-based speaking learning module for Chinese higher vocational college students and made an intervention among students at two public higher vocational colleges in northwest China to see how this speaking learning module affects their English speaking skills. Twenty sophomore non-English major students were chosen as the experimental group, and another twenty counterparts were compared as the control group. This study used a mixed methodology, integrating quantitative and qualitative methods. The students' English speaking skills were tested before and after the intervention and scores collected from College English Test-Spoken English Test which held twice per year in Chinese colleges administrated by the Ministry of Education in China. Six students in the experimental group attended in the semi-structured interview and the qualitative data were semantically analyzed. The results demonstrate that the tree maps and bubble maps integrated storytelling task-based speaking learning module can help Chinese HVC students enhance their English speaking skills to a certain degree.

Keywords: Tree-Maps, Bubble-Maps, Storytelling, Task-Based Learning, Module, English Speaking Skills, Chinese HVC Students

Introduction

The necessity for good English speaking skills has expanded dramatically in China since China's increasing trade with the world (Zhang, 2011). English is regarded to be truly vital in the

Chinese educational system (Wright & Zheng, 2016). According to Zhang & Bournot-Trites (2021), students must pass three of the most important entrance exams in China if they need to enter a university or a college. Currently, English language teaching is required for course credit in primary, secondary, and college and university curricula. Chinese students are therefore instructed in English from an early age; this starts in kindergarten and lasts until grade three of primary school, or the age of ten (Yin, 2018). However, English has been taught as a foreign language in all forms of education in China Si (2019) consistently, Written exams still account for the majority of English assessments in China Zhang & Bournot-Trites (2021), English-speaking students are not given much consideration in any of China's largest and most competitive English examinations (Zhang & Bournot-Trites, 2021). The mainland Chinese IELTS test takers scored 5.97 on average in Category A (Academic) and 5.6 in Speaking, which is less than the total English language score, according to the 2022 IELTS website (IELTS, 2022). For English as a Foreign Language (EFL) students, speaking English can be especially challenging because of its inconsistent grammar, small vocabulary, and lack of consistency in a way that facilitates efficient interpersonal communication (Abrar et al., 2018). Students' English-speaking skills have somewhat improved in China after years of development and emphasis on teaching and learning the language (Wen, 2018). However, the current level of students' proficiency in speaking English is inadequate (Wen, 2020). In Chinese higher vocational colleges, there are still certain issues with teaching and studying English that need to be considered and resolved (Chien et al., 2020).

Chinese higher vocational college students still show speech fear when speaking, even with the stronger voice designed to increase speaking skills (Chew & Chen, 2021). The Ministry of Education of China's Higher Vocational Education College English Curriculum Standards (2021 Edition) outlines numerous requirements for English speaking in terms of fluency, correctness, and other factors (Wen, 2022). For an extended period, speaking enhancement was meant to help Chinese higher vocational college students who still have speech fear (Chew & Chen, 2021). Due to speaking expression hurdles, slow learning rates, and speaking expression challenges, many Chinese students still speak English inaccurately, stumble through entire sentences, and even find it difficult to communicate fluently with other group members during cooperative group tasks (Amoah & Yeboah, 2021).

A mind map is one kind of pre-doing exercise that instructors typically use (Nasution, 2020) to assist students in coming up with ideas, taking notes, and selecting thoughts (Hemmati & Khodabandeh, 2017). Buzan (2012) noted that mind mapping is an effective tool for brainstorming, creative thinking, issue solving, idea organization, and, of course, note-taking. Thus, mind mapping can be seen as a valuable method that enhances students' focus on the subject, which benefits students' performance while retelling stories (Saputra & Muntasir, 2021a). Among the eight types of mind maps, a tree-map resembles a large tree, with the trunk—the primary idea or subject—at the top. The category details and sub-arguments are located at the bottom, along with the root. Bubble-maps are widely used in education to help students investigate and find further information that enhances the core subject matter. (Peng, 2019). Bubble-maps can be used to help guide and record students' observations of substances and their attributes (Peng, 2019). Both kinds of mind maps can help students organize their ideas when they speak English. Storytelling is kind of English speaking activates and represent students' skills in a certain degree. Mello (2001) also revealed that storytelling can help children increase their fluency and vocabulary. Mallan (1992) demonstrated that storytelling helps kids learn to listen and participate in everyday communication. Zuhriyah (2017) agreed with Lucarevschi (2016), indicating that storytelling can assist students improve

their speaking skills by enhancing fluency, comprehension, vocabulary, and pronunciation. Storytelling also helps learners speak more accurately (Chalak & Hajian, 2013). Thus, this article designs and develops tree-map and bubble-map integrated storytelling task-based learning module and tests its impacts on English speaking skills among Chinese HVC students.

1.1 Statement of the Problem

Most Chinese higher vocational college (HVC) students are still struggling with their English speaking skills (Chen, 2018). The condition known as "mute English" which characterizes the scenario where students who speak English as a foreign language are not fluent speakers and have poor speaking comprehension has evolved in China as a result of teaching English exclusively as a topic using traditional English teaching methods (Luo & Saeheaw, 2022). Silence is a common occurrence in English classes at Chinese higher vocational colleges, owing to teacher-centered and textbook-centered English instruction. Chinese HVC students still cannot speak English smoothly when they need to express their ideas or thoughts to the teacher or classmates; they use more of a hesitation or the sound of "Er" or a long pause when they speak English (Yu, 2020). Many students are hesitant and often pause for long amounts of time when speaking Fang (2020), which demonstrates that students are not fluent in their speech. In terms of speaking correctness, 46% of students commonly make grammatical errors, while 20% mispronounce words. Incorrect grammar and pronunciation during oral English speaking have a negative impact on students' speaking accuracy. (Wang, 2014). Chinese HVC students found it difficult to employ the correct or proper phrases or language when talking, due to their low command of grammar and limited vocabulary in English (Yu, 2019). Unusual pauses during respondents' oral presentations might also be caused by vocabulary anonymity (Fang, 2015). Furthermore, some English teachers are so strict on faults that students are reluctant to speak English because they are so concerned on language terminology (Yu, 2019). Some HVC students frequently comment that it is harder for them to use grammar and vocabulary in English speaking lessons or practice than it is for native speakers because they are beginning English language learners Yu (2019), The vocabulary lists in the textbooks that they have committed to memory are unusable in everyday situations or for academic purposes, and the grammatical rules they have worked so hard to learn are expressed in a variety of ways by English native speakers; these seem especially abrupt, unnatural, and unlikelike (Wang, 2022). Some students struggle to piece sentences together using preexisting vocabulary and are not fluent in fundamental English grammar, making it difficult for them to express themselves in correct tenses while telling stories or describing events (Wang, 2022). They usually struggle with knowing when to use a word or phrase in a speech, which makes them reluctant to express themselves (Yu, 2019). Because of their passive participation in speaking class and lack of practice, their pronunciation is bad when they speak English, which makes them more terrified of being laughed at, causing them to dare speak again (Li, 2019). Although some Chinese students can occasionally use very difficult vocabulary in spoken English, they are still unable to mix these words into extended sentences and fluid clauses in an ordered manner (Yu, 2019). Even though some children can produce incredibly complex sentences, they fail to structure them into a coherent speech (Yu, 2019). Chinese HVC students use inaccurate cohesive devices and incoherent discourse because they don't understand the nuances of cohesion and coherence in foreign language communication (Chen, 2020). To summarize, students in Chinese higher vocational institutions continue to struggle with their English speaking skills in terms of fluency, accuracy (grammar, vocabulary, pronunciation), and coherence. Mind maps assist students organize their ideas and enhance their professional communication competencies in EFL classes by utilizing a variety of learning

materials (Farzaneh, n.d.). Setiyawan (2019) discovered that mind maps, which are superior than brainstorming, might assist students in coming up with ideas for speeches.

Students can use mind maps to better efficiently arrange their thoughts when they are practicing speaking (Darussalam & Ningrum, 2023). Peng (2019) used double and bubble maps to practice writing and speaking in English, but she didn't integrate any more mind maps in her topic presentations. Shobirin and Arifin (2022) argue that mind mapping helps students become more proficient English speakers in context. However, the study has significant limitations, such as a small sample size and no control group. Rahmiani (2021) proposes the Mind Map Model for online-based design using the Analysis-Design-Develop-Evaluation (ADDE) workflow; however, it does not clarify which types of mind maps are ideal for specific speaking activities. To bridge the gap and improve Chinese HVC students' English speaking skills, this study will investigate tree maps and bubble maps integrated storytelling task-based learning to solve the following research questions.

Research Questions

- 1) Does Tree-map and Bubble-map Integrated Storytelling Task-based Learning Module (TBSTM) affect Chinese HVC students' English speaking skills?
- 2) Are there any significant effects of Tree-maps and Bubble-maps Integrated Storytelling Task-based Learning Module (TBSTM) on English speaking skills among Chinese college students in the pre-test and post-test among experimental group?
- 3) Is there any significant difference in English speaking skills between the experimental group and the control group?

Significance of the Study

Important information from this study will be included into tree maps and bubble maps to illustrate how storytelling task-based learning affects students' English-speaking skills in Chinese higher vocational colleges. The study's findings might help guide future research on English as a foreign language, particularly when it comes to oral storytelling and retelling for Chinese HVC students. The application of tree maps and bubble maps integrated in storytelling used in primary school English instruction, particularly in the planning of speaking instruction, may also be influenced by the study's findings.

Literature Review

Mind Maps

The term "mind map" originated in the 1970s, when British psychologist and educationalist Tony Buzan introduced the concept and demonstrated its application in his 1974 book "Use Your Head" and television show on the British Broadcasting Corporation. In his neurophysiological works *Use Your Head* (1974) and *Using Both Sides of Your Brain* (1984), Buzan defines a mind map as a product of the human brain since it is a representation of intelligent thought. It's an excellent visual note-taking technique that provides a universal key to unlocking the brain's potential (Buzan, 1994). Hyerle (1995) coined the term mind maps. "Mind maps are the contemporary thinking skills movement in education, cognitive science research, and the connective paradigm, which provides an alternative perspective on thinking and knowing (Hyerle, 1995). Student Successes With Thinking Maps Davies (2011) divides mind maps into eight types: circle map, bubble map, double bubble map, tree map, and brace.

Tree-Map

A tree-map is similar to a big tree, with the main concept or topic at the top, referred to as the trunk. Its root is at the bottom, along with the category information and sub-arguments. Considering that it may list ideas or objects in a structured, categorized manner, it is the best method for practicing categorical thinking. Tree maps are a type of representation that allows humans to see complex traditional tree topologies (Shneiderman, 1992).

Bubble-Map

A bubble-map is composed of various bubbles, around which are numerous attribute bubbles that are commonly used to characterize a topic's qualities and attributes. The topic vocabulary is positioned in the middle of the map. Bubble maps can add depth, breadth, and variety to a child's depiction of items. Bubble-maps are widely used to assist students in exploring and discovering additional elements that supplement the main substance of a topic (Peng, 2019). Bubble maps can be utilized to direct and document the materials and characteristics that students observe. (Peng, 2019). For instance, in a month-long field trip unit, first-grade students in an American junior high school observed a variety of different types of animals, including reptiles, amphibians, and animals from different parts of the world. Students in an American kindergarten class were given several fruits to observe and were asked to look at the properties of each object, including color, texture, size, shape, and smell. After creating their own bubble maps, they described them in simple sentences. (Peng, 2019).

Storytelling Task-based learning

Maynard (2005:1) described stories as a means by which individuals express their experiences, comprehend those of others, free their imaginations, and make sense of the world and their place in it. Maynard (2005:2-3) argued that politics, education, and people all benefit from storytelling. People use stories to make sense of the world around them and themselves. Stories create a natural connection between concepts and events, according to Barzaq (2009: 7), who also defined storytelling as a knowledge management technique, a way of disseminating information targeted to audiences, and a sense of information. Lastly, she added that visual storytelling is a means of narrative through images. Julia (2015) emphasizes that storytelling can be used as a learner-centered technique to help students apply their knowledge and share the message to others. Zuhriyah (2017) concurred with Lucarevschi (2016), claiming that narrative can help students enhance their speaking skills by increasing fluency, understanding, vocabulary, and pronunciation. Task-based language teaching (TBLT) is one strategy for supporting this process of language acquisition in the classroom. TBLT enables teachers to employ interesting and useful tasks to motivate students to use language in conversation (Sumarsono et al., 2020). Task-based learning is considerably more beneficial for the student since it is more learner-centered, permits more meaningful communication, and frequently offers a practical opportunity to enhance extra-linguistic skills (Chen, 2018; East, 2019). With the task serving as a means of developing language use in a natural way, this method was learner-centered (Ellis, 2003). Storytelling task-based learning instruction are being used in the tree-maps and bubble-maps integrated storytelling task-based learning Module by using the Willis (1996) three phases.

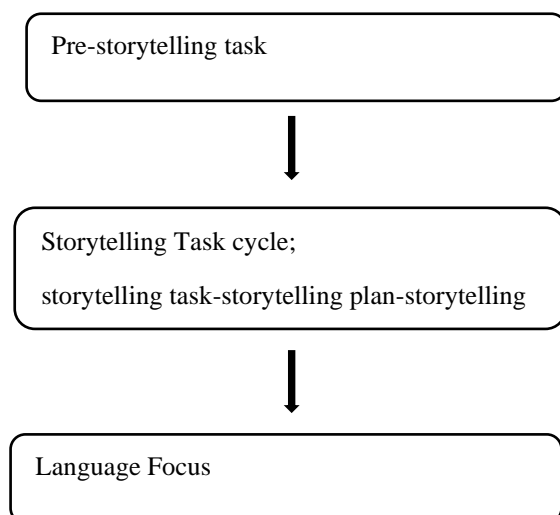


Figure 2.1 Storytelling task-based learning adapted from Willis (1996)

English Speaking Skills

Speaking, according to Nunan (2003), is a productive oral ability that requires conjuring up coherent sentences in order to express ideas. Speaking English well enough to convey ideas and concepts in a clear, coherent, and accurate manner, is a need for the English speaking skills tested in this study.

(a) Fluency: Fluency is basically comparable to speaking competency, according to the broadest definitions, but the tightest definitions only take into consideration a few features such as pauses, hesitations, and speech tempo (Luoma, 2009). Fluency in speaking English is defined in this study as the ability of pupils to speak a few phrases or a paragraph at a typical pace while pause-free or with very little hesitation.

(b) Accuracy: "The extent to which the language produced conforms to target language norms" is what is meant by speaking accuracy (Yuan & Ellis, 2003) and includes using grammar, vocabulary and pronunciation correctly. Speaking accuracy in this study is determined by how well the learner's bilingual output adheres to the target rules, as well as by the presence of grammatical errors, pronounceable speech, and accurate vocabulary use.

(c) Coherence is described as a semantic relationship between one element in the text and another element that is necessary for its understanding (Halliday & Hasan, 1976). Coherence in this study refers to students' ability to communicate in English in a way that is easy for listeners to understand.

Tree-maps and bubble-maps integrated storytelling task-based learning Module

The tree-maps and bubble-maps integrated storytelling task-based learning module was designed according to ADDID, which is Analyze, Design, Development, Implement and Evaluate (Branch, 2009). In the analyze phase, two different sampling methods are used: (a) 200 non-major students are sampled for the students need analysis; (b) eight English teachers are sampled for the teacher suitability analysis of the module development. In the student group, 80 males and 120 females make up the 200 participants in the sampling. Within the English teacher group, there are four male teachers and lecturers and four female instructors. The Need Analysis was designed according to the target needs of Hutchinson and Waters' (1987) model. The Design and Development phases are designed based on the results of the

Need Analysis. The content of the module are in the following table. Storytelling task-based learning instruction is designed and developed in this module. Contents of the module is illustrated in Table 2.1.

Table 2.1
Contents of the module

Contents	
No.	Units of MSM
Unit 1	Meeting People and College Life
Unit 2	Social Media and Food
Unit 3	Time and Travel
Unit 4	Planning and Career

Table 2.2 shows the example of coherence practice in form of storytelling in Unit 3 Time and Travel.

Table 2.2
Coherence practice in form of Storytelling in Unit 3 Time and Travel

Activities	Teachers	Students(individual)	Students(group)
Brainstorming	Say morning to students and discuss the weekend plans.	Discuss plans in general.	Talk the travel stories
Pre-storytelling task	Encourage students to come up with ideas by thinking of potential travel narratives, phrases, sentences, and other components.	While examining the pictures, pay attention to the specifics of the characters' movements and interactions.	Talk about the pictures while paying attention to the specifics of the characters' movements and interactions.
Storytelling circle: storytelling task- storytelling plan- storytelling report	Displays the pictures to the children and helps them understand what the characters are doing and how challenging it is. Use a mind map to help you understand the idea.	Organise and collect words to expand your knowledge.	Talk, discuss and educate yourself on synonym substitution, another oral topic briefing technique.
Language Focus Analysis and practice	The logical structure of the story is linked by the points listed in the mind map. Optimise words and phrases and finish the story task.	Refer to the hints in the textbook and fill in the details.	Exercise and evaluate one another.

Research Methodology

A mixed research method is chosen in this study. The qualitative research approach serves as an auxiliary supplement to the quantitative research method, which is the primary focus. Two public higher vocational colleges (referred to as “College A and College B”) in Shaanxi Province, Northwest China, are chosen due to they have almost synchronized lesson plans and college English textbooks, comparable student populations, and identical admission scores. In the quasi-experiment, twenty sophomore students majoring in elementary education from College A consisted of the experiment group, and another twenty elementary education majors sophomore students from College B, made up the control group. A large-scale College English Test-Spoken English Test known as the CET-SET 4 is administered to college students twice a year in May and November, respectively, in accordance with rules set forth by the Chinese Ministry of Education. The exam consists of two sessions of written and oral tests. The pre-test results for this experiment were derived from the oral English scores obtained by the students during their May CET-SET4 speaking examination. The experimental intervention of this instructional design will begin after the CET-SET4 in May and run for ten weeks. After the completion of the module intervention, students will take the CET-SET4 speaking examination in November, with the results of this exam serving as their post-test results.

To determine whether the module intervention improved the students’ English speaking skills, SPSS 28 was used to compare the pre-test and post-test of speaking scores of the experimental group as well as the post-test scores of the control group and the experimental group. Six experimental group students engaged in a semi-structured interview about their opinions regarding the use of tree-maps and bubble-maps integrated storytelling task-based leaning module during a semi-structured interview.

The two colleges were selected from thirty public higher vocational colleges in Shaanxi province, northwest of China for the purpose of quasi-experiment design. The number of students majoring in elementary English education, the outcomes of admission tests, the college English textbooks utilized, and the students’ English speaking skill are all nearly identical among all colleges. Furthermore, the same provincial department of education is in charge of both schools. Therefore, the two are been chosen.

Research Design and Procedure

Participants

The experimental group in this study consisted of 20 sophomore elementary education majors from College A’s School of Elementary Education. Twenty counterparts from College B who were majoring in the same subject were chosen as the control group because the proportion of sophomores in both colleges—roughly 26% of the total number of students in each college—and the number of students majoring in elementary education are comparable. They were between the ages of 19 and 21. As previously indicated, six students from the experimental group were chosen randomly to take part in semi-structured interviews.

Duration

The intervention is carried out within 10 weeks.

Instrument

The measurement instrument utilized in this study is the College English Test-Spoken English Test (CET4) speaking examinations held by the Ministry of Education in China since 1999,

which has been extensively researched and is appropriate for higher vocational students due to its validity and reliability. The speaking test students attended in the China CET 4 speaking test in June and December has a pretty high validity due to it is widely and compulsory national college English test in speaking test.

Table 4.1

The format, content and time of the CET-SET 4

Parts	Task	Process	Time
Warm-up	Self-introduction	Participants make a short self-introduction according to the examiner's order.	20 seconds No points, but in the recording
Part 1	Reading aloud	Prepare and read a text of 120 words within 2 minutes	1 minute
Part 2	Q&A	Participants need to answer 2 questions related to the text raised by the examiner .	40 seconds
Part 3	Statement	Participant present on the given topic.	1 minute
Part 4	Interaction	Participant has longer discussion with the examiner.	3 minutes

Collecting and analyzing data

Two types of data were gathered for this study: quantitative data, which came from the two CET4-SET 4speaking examination that the two student groups took both before and after the experimental intervention, the pre-test and post- test scores, totaling 80 scores on English speaking test results from the experimental group and the control group; and for the qualitative data, which came from semi-structured interviews with six students who were chosen at random from the experimental group. Prior to the start of the experiment, students in both groups took the May CET-SET 4 speaking examination, with the first score serving as the pre-test score. Prior to the start of the intervention, students in both groups took the May CET-SET 4 speaking examination, with the first examination scores serving as the pre-test results After the completion of ten weeks of experimental teaching for the experimental group and traditional teaching method for the control group regarding speaking lessons, the two groups students simultaneously took the November CET-SET 4 speaking examination. The post-test results will be collected from the CET-SET 4 speaking examination in November. When the experiment is over, SPSS 28.0 will be used to statistically evaluate all of the quantitative data that was obtained, and semantic analysis will be used to examine the data from the semi-structured interviews with the six students.

Conduct of Semi-structured Interviews

After the intervention, six students in the experimental group were chosen as the participants in the semi-structured interview. The data gathered from the interviews was utilized to examine if the tree-maps and bubble-maps integrated storytelling task-based leaning module can assist students in enhancing their fluency, accuracy and coherence of their English speaking skills.

Findings and Discussion

Data Analysis

Paired Sample T-test between the pre-test and post-test of the experimental group

After the experimental intervention, students in both the experimental group and the control group took the CET-SET4 in November of the same year, with the results serving as post-test scores. Pre-test and post-test results of the experimental group were performed and analyzed using a Paired Sample T-test in SPSS 28 to see if there are any significant effects of tree-maps and bubble-maps integrated storytelling task-based learning module on English speaking skills among Chinese college students in the pre-test and post-test among experimental group in terms of fluency, accuracy and coherence and to validate the hypothesis is true or not. The findings indicated that pre-test results of the experimental group outperformed the post-test results of the experimental group in the CET-SET4 ($p = 0.000$) in Table 5.1.

Table 5.1

Paired Sample T-test Analysis of the pre-test and post-test among the experimental group

	Mean	N	Std.Deviation	Std.Error Mean	Sig.	Correlation	T
Pair 1 Pre-test of E	7.45	20	1.504	.336			
Post-test of E	9.7	20	1.525	.341			
Pre-test of E & Post-test of E	-		1.118	.250	.000	.728	-9.000

By conducting the paired sample t-test, the null hypothesis failed to be rejected, $t = -9.000$, ($p < .05$). as detailed in Table 5.1. There were statistically significant difference between the pre-test scores and the post-test scores of the experimental group. The mean scores of post-test in the experimental group were higher than the mean scores of the pre-test results of the experimental group.

ANCOVA test between the pre-test and post-test of the experimental group

Both the post-test results of the experimental group and the control group and they were performed and analyzed using ANCOVA test in SPSS 28 to see if there are any significant differences of students' means scores of English speaking skills between the experimental group and control group and to validate the hypothesis is true or not. The findings indicated that post-test results of the experimental group outperformed the post-test results of the control group in the CET-SET4 in the table 5.2. Given the assumption of normal distribution, the research should proceed testing the assumptions underlying the Analysis of Variance (ANOVA) (The assumption of Homogeneity of Variance). Levene test results in Table 5.2. were significant ($p < .05$). This implies there were statistically significant difference between the post-test results of the experimental group and the post-test results of the control group. The mean scores of post-test in the experimental group were higher than the mean scores of the post-test results of the control group. Regarding the three speaking skill-related variables, due to there's no subpoints under each sub-variables, which would be collected from the six participants in the semi-structured interview.

Table 5.2

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
1.917	5	34	.117

Table 5.3

Analysis of the post-test and post-test between the experimental group and the control group

Source	Sum of Squares	df	Mean Squares	F	Sig.
Between Groups	29.906	5	5.981	3.041	.022
Within Groups	66.869	34	1.967		
Total	96.775	39			

Semi-structured Interview Analysis

Six students from the experimental group took part in semi-structured interviews following the experimental intervention. With the help of their own words, the measurements and semi-structured interviews with the six students showed that, when it came to tree-maps and bubble maps integrated storytelling task-based learning module, all of the students felt that there's actual quick way to organize ideas when speaking English and that they had improved their English speaking generating and organizational skills, speaking skills in particular, fluency and coherence in speaking. "I like bubble-maps very much which makes me knowing how to generate my ideas". "Tree-maps make English speaking much easier and especially when used in storytelling organization".

Conclusion

This study investigated tree-maps and bubble-maps integrated storytelling task-based learning module on Chinese higher vocational colleges students to test its impacts on their English speaking skills. Mixed methodology was adopted in this study with quasi-experiment as the quantitative method and semi-structured interview as the means of qualitative method, with the qualitative method as supplement. Forty sophomore students majoring in elementary education from two higher vocational colleges and universities were chosen. Twenty of them comprised the experimental group, and the remaining twenty constituted the control group. Two Speaking Tests Scores of College English Test Band 4 (CET 4) held in China colleges issued by Ministry of Education of China were collected as the pre-test and post-test. The Paired T Test results in SPSS show that, in terms of fluency, accuracy and coherence, the post-test scores of the experimental group's students are higher overall than the pre-test values. As analyzed by ANCOVA in SPSS, the post-test overall speaking skill scores and fluency, accuracy and coherence of the experimental group students were higher than the post-test scores of the control group students. By analyzing semantically semi-structured interviews data collected from six of the participants in the experiment group, the students consented that tree-maps and bubble-maps integrated storytelling task-based learning module improved their English speaking skills in terms of fluency, accuracy and coherence, they learned how to organize their ideas when they retell what happened in English. The data analysis results demonstrated that non-English major students in Chinese higher vocational colleges had a discernible improvement in their English speaking skills by using tree maps and bubble maps integrated storytelling task-based learning module.

Contribution

Beyond its immediate implications for language learning, this study makes significant theoretical and contextual contributions to the field. By integrating tree-maps and bubble-maps into storytelling task-based learning, this study advances our knowledge of effective pedagogical approaches to scaffold language acquisition. It builds upon existing theories such as task-based learning by demonstrating how visual aids like tree maps and bubble maps can enhance speaking skills among Chinese undergraduates. Furthermore, this research extends the contextual understanding of language education in China, where English speaking skills is increasingly important for academic and professional success. By addressing the specific needs of Chinese undergraduates and leveraging culturally relevant storytelling techniques, this study provides insights into the role of contextual factors and visual aids in language learning.

Conflict of Interest

The authors declare that they have no conflict of interest.

Reference

- Amoah, S., & Yeboah, J. (2021). The speaking difficulties of Chinese EFL learners and their motivation towards speaking the English language. *Journal of Language and Linguistic Studies*, 17(1), 56–69. <https://doi.org/10.52462/jlls.4>
- Chew, S. Y., & Chen, Y. (2021). Speaking Performance and Anxiety Levels of Chinese EFL Learners in Face-to-Face and Synchronous Voice-based Chat. *Journal of Language and Education*, 7(3), 43–57. <https://doi.org/10.17323/jle.2021.11878>
- Darussalam, G. M., & Ningrum, A. S. B. (2023). Improving Students' Speaking Skill in Descriptive Text Using Mind Mapping Method at Seventh Grade Junior High School. *IREELL: Indonesian Review of English Education, Linguistics, and Literature*, 1(1), 34–44. <https://doi.org/10.30762/ireell.v1i1.1100>
- Jupri, J., Mismardiana, Muslim, & Haerazi, H. (2022). Teaching English Using Two Stay Two Stray in Improving Students' English Speaking Skills Integrated with Foreign Language Anxiety. *Journal of Language and Literature Studies*, 2(1), 33–42. <https://doi.org/10.36312/jolls.v2i1.719>
- Kashinathan, S., & Abdul Aziz, A. (2021). ESL Learners' Challenges in Speaking English in Malaysian Classroom. *International Journal of Academic Research in Progressive Education and Development*, 10(2), Pages 983-991. <https://doi.org/10.6007/IJARPED/v10-i2/10355>
- Luo, Z., & Saeheaw, T. (2022). Dynamic English Immersion Model to Enhance Primary School Students' Speaking Performance. *2022 Joint International Conference on Digital Arts, Media and Technology with ECTI Northern Section Conference on Electrical, Electronics, Computer and Telecommunications Engineering (ECTI DAMT & NCON)*, 63–68. <https://doi.org/10.1109/ECTIDAMTCON53731.2022.9720421>
- Saputra, N., & Muntasir, M. (2021). The Integration of Mind Mapping Technique in Storytelling to Assist EFL students in Mastering Speaking Skill. *International Journal of Education, Language, and Religion*, 3(2), 49. <https://doi.org/10.35308/ijelr.v3i2.4460>
- Shneiderman, B. (1992). Tree visualization with tree-maps: 2-d space-filling approach. *ACM Transactions on Graphics*, 11(1), 92–99. <https://doi.org/10.1145/102377.115768>
- Wang, Z. (2014). Developing Accuracy and Fluency in Spoken English of Chinese EFL Learners. *English Language Teaching*, 7(2), p110. <https://doi.org/10.5539/elt.v7n2p110>
- Wright, S., & Zheng, L. (2016). English in Chinese higher education: Past difficulties, current initiatives and future challenges. *Journal of World Languages*, 3(3), 167–183. <https://doi.org/10.1080/21698252.2017.1292989>
- Zhang, H., & Bournot-Trites, M. (2021). The long-term washback effects of the National Matriculation English Test on college English learning in China: Tertiary student perspectives. *Studies in Educational Evaluation*, 68, 100977. <https://doi.org/10.1016/j.stueduc.2021.100977>