

# Effective of Bubble Maps Oriented Scaffolding Instruction Teaching on the Reduction of English Speaking Anxiety on Chinese Undergraduates

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**Abstract:** Students in Chinese higher vocational colleges and universities have struggled with English speaking fluency, stuckness, test anxiety, and communication anxiety in recent years. Due to the importance of the mind map has become very popular in English language instruction, this paper carries out a study to investigate the effectiveness of Bubble Maps Oriented Scaffolding Instruction teaching in public English language teaching in one of the Chinese higher vocational colleges. Twenty five second year students majoring in English major students are selected as experimental group. The study uses mixed methods by combining quantitative and qualitative methods through students' English speaking anxiety tests before and after the treatment by using Horwitz's Foreign Language Classroom Anxiety Scale (FLCAS) and a semi-structured interview as a supplement to investigate its qualitative data. It turns out that the Bubble Maps Oriented Scaffolding Instruction teaching reduced students' English speaking anxiety.

**Keywords:** Bubble maps, Scaffolding instruction teaching, English speaking anxiety, Chinese undergraduates

## 1. Introduction

There has been some progress in the English speaking abilities of students in China after years of development and focus on teaching spoken English. Nonetheless, Chinese educators have embraced "grammar translation" in English classes and embraced the teacher-centered approach in an attempt to increase teaching effectiveness<sup>[1]</sup>. Studies have also shown that fear, a major affective factor, hinders language development<sup>[2]</sup>. All four language skills—speaking, listening, reading, and writing—are adversely impacted, with speaking being the most severely affected<sup>[3]</sup>. Despite studying English for an average of 12 years, a considerable percentage of Chinese students still experience anxiety when speaking the language<sup>[4]</sup>.

Bubble map is one of the eight types of mind maps. The mind map is just one method of teaching and learning English. Mind maps are a popular teaching tool for writing, reading, and speaking<sup>[5]</sup>. A mind map is a visual organizer, according to<sup>[6]</sup>, in which smaller thoughts are represented as branches of larger branches and the primary idea is derived from a core notion<sup>[7]</sup>. The concept behind mind maps is that learning ought to be an active process in which students take charge of their education rather than having their teachers do it for them<sup>[7]</sup>. As an instructional strategy, scaffolding is a thorough approach that combines a number of useful and astute tactics that enable the instructor to break up a task into smaller, easier-to-manage portions so that students can receive all the help they need<sup>[8]</sup>. To help students navigate their ZPD and extend their present knowledge and skills, teachers use scaffolding<sup>[9]</sup>.

### 1.1. Problem Statement

When EFL students struggle to communicate in the target language, they admit they are experiencing language anxiety<sup>[10]</sup>. In foreign language classes, some students may display symptoms of anxiousness<sup>[11]</sup>. Chinese higher vocational college students may feel nervous and frightened because they have limited opportunities to practice speaking English, which could eventually impair how well they speak English<sup>[12]</sup>. When students avoid verbal contact in FL classes, they become unwilling to participate<sup>[12]</sup>. Many students at higher vocational institutions experience communication phobia, also known as language anxiety<sup>[13]</sup>, which causes them to avoid speaking or interacting with people in English both

within and outside of the classroom<sup>[14]</sup>. The fear of making mistakes, often known as the fear of negative evaluation<sup>[13]</sup>, is the main reason why students hesitate to speak in English in class<sup>[15]</sup>.

### **1.2. Research Questions**

1) Does Bubble Maps Oriented Scaffolding Instruction teaching affect students' English Speaking Anxiety?

2) Is there any significant difference in English speaking anxiety between the pre-test and post-test of the experimental group?

### **1.3. Significance of the Study**

This study will provide crucial information about the effective of Bubble Maps Oriented Scaffolding Instruction teaching on English speaking anxiety in Chinese higher vocational college students. The findings are expected to guide future study on English taught as a foreign language, particularly for students in Chinese higher vocational colleges students in terms of public speaking anxiety.

## **2. Literature Review**

### **2.1. Scaffolding Instruction Teaching**

The social constructivism theory of<sup>[16]</sup> holds that students are more important than educators. When students actively build their own understanding through social contact with others, learning happens most effectively<sup>[17]</sup>. It is the responsibility of the instructor to help the pupils learn as much as they can about a certain subject. Students should be able to practice their knowledge-development skills through the planning and coordination of learning activities by instructors<sup>[18]</sup>. According to<sup>[16]</sup>, Social constructivism highlights how important other people are to each person's process of producing knowledge. According to this paradigm, social interaction is necessary for learning<sup>[19]</sup>. Social constructivism maintains that education is a dual-agent process in which the learner and the teacher collaborate to establish the sociocultural context. They thereby "scaffold" one another through their activities<sup>[20]</sup>. Social constructivist learning environments are discursive, which highlights the importance of giving kids time to talk, and the teacher's role as an observer and listener<sup>[21]</sup>.

Scaffolding is an aided learning method that helps each student's ZPD, or progressing to the next level of understanding, with the assistance of teachers, peers, or other adults<sup>[9]</sup>. Scaffolding is the procedure whereby "the adult controls those elements of the task that are initially beyond the learner's capacity," allowing the learner to focus on and finish the parts of the task that they are unable to perform on their own<sup>[9]</sup>. The following are the functions of scaffolding: (1) support; (2) tool; (3) extension of the learner's zone of influence; (4) accomplishment of an otherwise unachievable task; and (5) strategic application to help the student where needed. It is essential to comprehend the scaffolding principle, which is connected to the ZPD, for the objectives of this study, which looks at the teacher's scaffolded support during the mind maps integrated English speaking learning module in the Chinese HVC EFL classroom. Therefore, the metaphorical scaffolding was initially applied to explain how kids interact with adults in L1 scenarios, but it was later expanded to L2 contexts and situations including learning a foreign language<sup>[22]</sup>.

### **2.2. Bubble Maps**

A mind map is a type of pre-doing exercise that teachers commonly employ to help students generate ideas, take notes, and pick thoughts relevant to the subject of writing in a visual manner<sup>[23]</sup>. Furthermore, mind maps help students relate newly acquired knowledge to prior understanding<sup>[24]</sup>. This strategy can help students recognize facts, a subject's general structure, and its component pieces. It is well recognized that using a mind map as a tool assists students in organizing their ideas in order to absorb the content in a highly specialized manner and better understand concepts<sup>[25]</sup>. There are eight types of mind maps<sup>[26]</sup>. They are circle map, bubble map, double bubble map, tree map, brace map, flow map, multi-flow map, and bridge map<sup>[26]</sup>. The Bubble Map is typically used to explain anything (objects or things) using adjectival words or phrases. The Bubble Map is made up of multiple circles connected by lines. The center circle contains the issue, and the other circles related to it elaborate on it using appropriate vocabulary and phrases. In the pursuit of global progression, language acquisition becomes more

successful when multimedia is used since it conspicuously enhances pupils' progress and learning interest [27]. The utilization of technology creates an environment conducive to English language teaching and learning. The quality of English language instruction and student learning can be improved by making good use of technology and multimedia [27].

### **2.3. English Speaking Anxiety (ESA)**

Of the four components of learning a foreign language, speaking is the one that most frequently induces anxiety among learners [28]. This is because speaking involves speaking as well as listening, reading, and writing. [13] described language anxiety as a combination of exam anxiety, communicative anxiety, and the fear of negative evaluation. Communication apprehension in language learning is defined as "a type of shyness characterized by fear of or anxiety about communicating with people" [13] as well as the learner's unwillingness to talk. A feeling of tension and apprehension in which the individual learner has a unique relationship with the foreign language situation was described as foreign language anxiety by [29]. [13] defined foreign language anxiety as the apprehension and fear of self-consciousness, beliefs, sentiments, and behaviors associated with language learning in the classroom, which characterizes the learning process. [30] investigated Chinese first-year undergraduates who aren't majoring in English on their fear and unwillingness to talk. This issue usually comes up, according to [31] when students don't sufficiently prepare for what they want to say when speaking in English. According to Sugiarto's theory [32], one strategy that can be used to reduce the anxiety related to public speaking is the mental map. Pronunciation, prompt questions, mistakes-related worries, and unfavorable comments are additional elements that lead to EFL speaking anxiety [33]. The Foreign Language Classroom Anxiety Scale was developed by [13] and applied in empirical studies.

The purpose of building learning "scaffolding" at the proper height is to give students the chance to advance based on their initial developmental stage [34]. Thus, when teaching English speaking, the "facilitator" and "helper" roles of teachers, peers, and tools should be focused on helping pupils quickly reach their potential ability development level. Using "hinting, reminding, encouraging, breaking the problem into several steps, providing examples, or any way to enable students to grow into independent learners" are just a few examples of scaffolding teaching strategies that [34] noted. Teachers offer a range of scaffolding to support interactions between students and teachers, as noted by [34].

## **3. Research Methodology**

This work uses a mixed research method, which includes both qualitative and quantitative research. The experimental group consisted of thirty English majors from a public higher vocational institution (the institution) in Shaanxi Province, China. This study used a single experimental group with no reference group. Before beginning the experiment, the students were given a questionnaire containing 33 items from the widely known Foreign Language Classroom Anxiety Measurement Scale (FLCAS). Based on these responses, an anxiety data value for each student could be calculated and used as the starting point for the experiment.

After the experimental intervention, the students were assessed again using the Foreign Language Classroom Anxiety Scale (FLCAS). SPSS software was utilized. After the experimental intervention, the students were assessed again using the Foreign Language Classroom Anxiety Scale (FLCAS). SPSS software was used to compare the students' overall anxiety and anxiety scores on the three different dimensions between the pre- and post-program periods, in order to determine whether the experimental group of students experienced a decrease in their level of English anxiety throughout the program. Meanwhile, six students from the experimental group took part in a semi-structured interview to explore their perspectives on using mind mapping to incorporate project-based learning into this project.

## **4. Research Design**

### **4.1. Participants**

Thirty second-year students from the English major from one of the public higher vocational colleges in northwest China. They are between 19 and 22 years old. Six students from the experimental group are selected at random to take part in semi-structured interviews among these participants.

#### 4.2. Duration

The treatment is carried out within 10 weeks.

#### 4.3. Instrument

Horwitz's Foreign Language Classroom Anxiety Scale (FLCAS) is the instrument utilized for the speaking anxiety questionnaire in the study when conducting quantitative research. A list of five Likert scales, which include A. Strongly disagree, B. agree, C. grudgingly agree, D. disagree, and E. strongly disagree, follows each question. A is awarded one point, and B and E come in second and third, with two and five points, respectively. The scores from all 33 categories are added to determine the overall speaking anxiety value. With 30 valid questionnaires data returned, this study had a 100% validity rate. Semi-structured interview with seven questions is used as an instrument in qualitative research. After the treatment, six individuals will be selected at random to respond to questions during the semi-structured interview.

#### 4.4. Collecting and Analyzing Data

For quantitative data, which is collected through speaking anxiety questionnaire conducted before and after the treatment and will be analyzed using SPSS 28.0. For the qualitative information, the collected qualitative data are analyzed using semantic analysis.

For qualitative data, According to [35], theme analysis can be used to accurately find, characterize, and interpret patterns, or themes, within a data set. It works well with any qualitative study that seeks to address difficult research questions[36]. [35] provide a six-phase guidance that is a very useful structure for conducting thematic analysis (see figure 1).

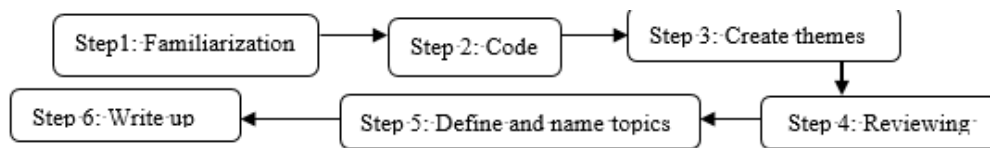


Figure 1: Braun and Clarke's six-phase methodology for doing thematic analysis.

### 5. Findings and Discussion

#### 5.1. Analysis

Before the treatment began, Thirty Foreign Language Speaking Anxiety Questionnaire were given to the participants. The instructor explained and the participants needed to finish it on given time. This data were collected as the pre-test data. After the treatment, thirty Foreign Language Speaking Anxiety Questionnaire were distributed to the participants again. The data were collected as the post-test data. The descriptive statistics was used to examine and analyze the information. According to Table 1, neither the mean scores of overall anxiety in the pre-test nor the mean scores of each variable in the post-test are significantly varied. There is noticeable difference between the two kinds of data in terms of their mean values for each variable and their overall speaking anxiety scores ( $p\text{-value}=0.000 < 0.05$ ). Overall, the speaking anxiety level of pre-test is much higher than the post-test, which indicates that the overall speaking anxiety is declined after the treatment.

Table 1: Descriptive Statistics

| Tests     | N  | Minumun | Maximun | Mean  | SD     |
|-----------|----|---------|---------|-------|--------|
| Pre-test  | 30 | 81      | 120     | 99.65 | 15.828 |
| Post-test | 30 | 48      | 102     | 77.30 | 15.569 |

After the treatment, the pre- and post-test data were analyzed using a Paired Sample T-test in Table 2. The findings showed that, on average, the post-test data had considerably lower speaking anxiety scores than the participants' pre-test ( $p = 0.000$ ), therefore, there is significance effects between the post-test and the post-test of the participants of the experimental group.

Table 2: Paired Sample T-test analysis of the pre-test and post-test

| Tests     | N  | Mean  | SD     | Std.Error Mean | Sig.  | t-value |
|-----------|----|-------|--------|----------------|-------|---------|
| Pre-test  | 30 | 99.65 | 15.828 | 1.936          | 0.000 | 11.541  |
| Post-test | 30 | 77.30 | 15.569 |                |       |         |

## 5.2. Semi-structured Interview Analysis

The results of a thematic analysis of the semi-structured interview recordings of the six participants showed that speaking anxiousness when speaking English was a problem shared by all of the students. By learning Bubble maps oriented scaffolding learning module, some students admitted that they found there's a scientific way of organizing your idea before you speak. "We can generate what we want to express in pre-speaking phrase and find the connections." "Now I am not afraid to speak English, what I need is more practice using bubble maps."

## 6. Conclusion

The purpose of this study was to implement the Bubble Maps Oriented Scaffolding Instruction teaching module in public English instruction at a Chinese higher vocational institution. The study specifically designed and developed a Bubble Maps Oriented Scaffolding Instruction teaching module with four units of different topics and themes, selecting students' preferred topics such as socialization, food, travel, and college life, to perform an 8-week instructional intervention among Chinese HVC students. The study chose 30 sophomore English majors as experimental participants. The experiment consisted of only one experimental group and no control group. The FLCAS scale was used to assess participants' English speaking anxiety before and after the treatment, and six of the participants were interviewed semi-structured. The quantitative data were analyzed by using SPSS 26 in paired sample T-test to compare the pre-test and post-test of the participants, the qualitative data were thematically content analyzed. The data analysis revealed that Bubble Maps Oriented Scaffolding Instruction teaching module was helpful in reducing participants' English speaking anxiety.

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