

**THE PAD CLASS INTERACTIVE TEACHING MODE
IN UNDERGRADUATE ORAL ENGLISH COURSE:
A CASE STUDY IN LANZHOU UNIVERSITY OF ARTS AND SCIENCES**

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
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Thesis Title THE PAD CLASS INTERACTIVE TEACHING MODE IN UNDERGRADUATE ORAL ENGLISH COURSE: A CASE STUDY IN LANZHOU UNIVERSITY OF ARTS AND SCIENCES

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ABSTRACT

Taking "Undergraduate oral English course" as an example, this study adopted online and offline teaching methods combined with PAD class interactive mode to explore the teaching methods suitable for undergraduate students' English ability cultivation, to promote the development of students' oral English application proficiency ability.

The experimental research method was adopted. The participants were the second-year pre-school education major of university students in Lanzhou University of Arts and Sciences, China, who were randomly divided into experimental group (n=30) using PAD teaching method and control group (N=30) using CLT teaching method.

The study compared the final exam scores, key chapter tests, teaching evaluation scores, course evaluation questionnaires, learning attitude questionnaires, and independent learning ability scales of two groups of students, and used SPSS 26.0 for statistical analysis. A t-test was used to compare the two groups, and the results showed that there was no statistical significance of students' scores in the pre-test between the experimental group and the control group ($t=-0.480$, $df=29$, $Sig=0.642$, $p>0.05$). For the post-test analysis showing, the students' oral English test scores increased from 10.470 to 12.650; The difference between the two groups was statistically significant ($t=7.610$, $df=28$, $Sig=0.000$, $p<0.05$).

The data confirm that the PAD teaching method in the experimental group has a positive impact on language accuracy, complexity, and fluency.

Keywords: PAD class; CLT class; Undergraduate Oral English Course

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LIST OF ABBREVIATIONS

CET 4	College English Test--Band Four
CET 6	College English Test-- Band Six
CLT	Communicative Language Teaching
CNKI	China National Knowledge Infrastructure
EFL	English as a Foreign Language
ELT	English Language Teaching
ESL	English as a Second Language
L1	First Language
L2	Second Language
MIT	Multi- Interactive Teaching Mode
MNIT	Multi-Negotiated Interactive (Interaction) Teaching Mode
NNS	Non-native Speaker
NS	Native Speaker
NOF	Negotiation of Form
NOM	Negotiation of Meaning
PAD	Presentation-Assimilation-Discussion
SCT	Sociocultural Theory
SLA	Second Language Acquisition
ZPD	Zone of Proximal Development
R	Recruitment
S	Simplifying the task
DM	Direction Maintenance
D	Demonstration
F	Feedback

CHAPTER 1

INTRODUCTION

1.1 Research Background and Problems

1.1.1 Research Background

In this study, the teacher-student interaction PAD class teaching mode of university English course was studied under the environment of information technology and the network, using a Chinese university English class as an example, two aspects are involved: foreign language teaching education technology developing and university English teaching reform. In several rounds of university English teaching reform, Lanzhou University of Arts and Sciences, as one of the members of the reform, has deeply realized the changes brought by the reform and the necessity of further optimization of university English classroom teaching under the network environment.

The discussion about teaching methods has a long history. The following is the development of teaching methods. At the end of the 18th century, Herbart (1806) proposed the famous four-paragraph teaching mode: clear -- association -- system -- method which was later developed into a five-paragraph teaching mode: preparation -- hint -- connection -- integration -- application (Cao, 2003).

In the 20th century, Kelev of the former Soviet Union reformed Herbart's "five-paragraph theory" and put forward a "new five-paragraph theory", that is, to stimulate learning motivation, review old lessons, teach new lessons, consolidating the application and checking the effect (Chen, 2010). In the 1960s, the teaching under the guided by Bloom's (1956) "mastery learning theory" theory includes three steps: before the unit teaching begins, the students will be clearly informed of the objectives to be mastered, each mode is taught in the usual classroom teaching method and a summative test and evaluation should be conducted after the unit study or all the teaching materials are learned, and necessary corrections and supplements are made.

At the end of the 19th century and the beginning of the 20th century, a trend of "new education" appeared in Europe and America. Dewey, an American pragmatist educator (Bernstein, 1966), Dewey's theory, he advocated "learn by doing" and believed that it is meaningless to require children to obtain knowledge from lectures and reading instead of activities, because children's interest cultivation was mainly realized through activities - "Learning by doing" - is the expression of children's nature, which helps children acquire knowledge and exercise their ability. From the epistemology of empiricism and the teaching view of child centrism, he put forward a five-step teaching method: Difficulties -- determining problems -- putting forward assumptions -- inference -- verification.

Dewey's teaching mode overcame the shortcomings of Herbart's teaching mode, and emphasized that teaching should start from children's experience and interest in learning, and cultivate students' learning initiative, enthusiasm and creativity in learning. It had a great influence on the later foreign language teaching mode.

After World War II, Bruner (1960) advocated the "discovery method" of learning. According to Bruner, the purpose of education was to develop students' understanding and cognitive skills and strategies. Teaching was not only to enable students to obtain ready-made information about facts, but to teach them how to learn in accordance with their physical and mental development. In Bruner's view, discovery was not limited to human beings seeking unknown things, but also included all methods for people to

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obtain knowledge in their own minds. If teachers adopted a guiding approach in teaching and let students take the initiative to learn, they will be happy and satisfied with their discoveries, which will make learning more dynamic, and the knowledge gained will be more profound and less easy to forget. The "Discovery method" emphasized the active participation of students and encouraged students to become "discoverers" first.

1.1.2 English Language Teaching and the Challenges

English was first introduced into China in the 19th century as a school subject (Gao, 2011). However, it was not until the 20th century that the changing status of English as a school subject was witnessed together with the educational reform and the changing role of China in the international arena. Since the founding of the People's Republic of China in 1949, English language teaching (ELT) in China was influenced by both political and economic changes as China went through in past years (Gao, 2011). Formal English teaching in China only started about 30 years ago, when universities resumed enrolling students in 1978. For many years, the classroom teaching in China was regarded as the transmission of knowledge from the teacher to the passive learner (Chaudron, 1988). In classroom teaching, there were few teacher-student interactions and the classroom activities were dominated by the teacher. Given the spread of foreign language learning around the world today, it may come as a surprise to many "futurologists" of the 19th century who had failed to predict the importance of foreign language learning and its unprecedented growth since the second half of the 20th century (Graddol, 2000). After all, the European Union identified proficiency in foreign languages as one of several keys competencies, "considered vital for a lifetime of successful participation in society" (Eurydice, 2002). Therefore, China gave priority to ELT and reformed it in the early 1980s. The purpose of such reform was to solve the conflict between the two teaching methods, that is, traditional teaching method with a focus on knowledge transmission and the more liberal teaching method with a focus on language learners and language use. The latter was represented by the widespread teaching method of communicative language teaching (CLT).

Over the past century, the language pedagogy evolved from a grammar-translation method to a direct, audiolingual method and CLT in the 1970s and early 1980s (Schmitt, 2002). The popularity of CLT has been witnessed in every level of ELT in China in recent years. According to Sauvignon (1983), teaching for communicative competence must: focus on meaning in addition to form and ensure spontaneity of expression.

On this premise, CLT was built around three main themes: CLT is "a post-method approach, in which the principles underlying the use of different classroom procedures were of paramount importance, rather than a package of teaching materials"; the most fundamental element was "its explicit emphasis on the role of authentic communication within classroom context" and the measure of effectiveness was "the ability to use language accurately and appropriately in communicative contexts" (Bygate et al., 2001).

Teachers followed these themes to transform their form-focused exercises into meaning-rich activities, such as personalized questions, role-plays in which students simulated routines of everyday life in the target culture and interactive conversational activities in which students and their classmates exchange information about their own lives. Through these activities, CLT attempted to emulate a target-culture environment and "to create in the classroom the conditions, which exist in 'natural' language

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learning” (Hughes, 1983). CLT had a major influence on language teaching practice, including syllabus design, textbook compilation and in the methodology of ELT. For undergraduate English teaching, the University English Curriculum Requirements (2007) opened a greater scope to encourage the implementation of a learner-centered teaching approach in this language program. It viewed language proficiency as a whole and especially stressed cultivating learner oral ability. The requirement was practical and useful and helped solve the “dumb-and-deaf English” problem. It demonstrated a stronger determination and showed greater encouragement to develop a learner-centered curriculum than ever before. But the present university English teaching is far from satisfactory, especially in the aspects of English listening and speaking abilities (Wang, 2011).

As mentioned above, it is obvious that more efforts were needed in dealing with the challenges for ELT. The ideal way to begin this endeavor is to find solid evidence from empirical studies carrying out at higher education from different theoretical perspectives. In accordance with this idea, the current study attempts to explore the nature of teacher-student PAD (Presentation-Assimilation-Discussion) class mode interaction in an oral English class from Generally speaking, this kind of class process is single and rigid, the class process is:

- (1) At the beginning of the new lesson, the teacher reads the new text and points out new vocabulary.
- (2) Students read the text aloud.
- (3) The teacher explains the usage of new words and the grammatical features in the text.
- (4) After class, students memorize new words and do homework of corresponding grammar exercises, and teachers check students' homework to find errors.
- (5) In the next lesson, the teacher checks whether the students have memorized the words and explains the grammatical mistakes that the students made in the homework again.
- (6) Next new lesson.....

Then Ellis (2000), Brown (2001) found that learner motivation and learning strategies had a direct impact on learners' acquisition of speech. As time went on, a succession of new perspective of oral English proficiency through group work (Bassano, 2003) presented. These studies indicated that language researchers had come to attach greater importance to oral English by means of various measures in language teaching than before (Xu, 2021).

1.1.3 PAD class mode

The PAD class mode was a new teaching approach in China, originally created by Chinese educators. The PAD class mode comprises

‘Presentation’, ‘Assimilation’, and ‘Discussion’.

It advocated allocating part of the class time to students for independent learning and cooperation with peers, usually in groups, after the teacher's presentation (Zhang, 2016). From 2014 to 2016, with the help of the Internet and word-of-mouth from practitioners, the PAD class continued to develop in practice (Zhang, 2016). It is worth noting that unlike the Quality Education and the Curriculum Reform in Basic Education, that were previously implemented at the national level, the PAD class was not officially promoted by the national education department, but the founder and proponents actively promoted it through lectures and training programs (Zhang, 2017). Therefore, there were no mandatory policies and measures in the implementation 实施 process, but the acceptance of the PAD class among local education bureaus, school leaders and

front-line teachers continued to increase (Zhang, 2017). At present, from latest statistics obtained from CNKI, the PAD class approach was implemented in more than 1000 schools, and more than 3,400 papers and studies on the PAD class were published in China (Ding, Sitthiworachart., & Joy, 2021).

1.2 Research Objective

(1) To describe the process of PAD class mode how the teacher provides scaffoldings and how students respond to the scaffoldings.

(2) To investigate how the PAD class mode to improve students' oral proficiency by fluency, accuracy, and complexity.

(3) To summarize the strategies the teacher used scaffoldings in PAD class mode.

1.3 Research Questions

According to hypothesis theory, the design of independent and dependent variables in this study is shown in Figure 1.1.

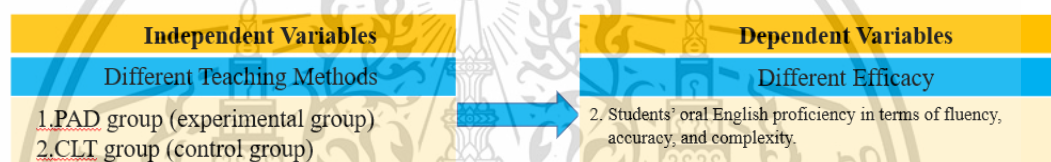


Figure 1.1 Conceptual Framework

Three research questions were drawn and guided this research:

RQ1: What are the scaffolding effects of PAD class?

RQ2: How does PAD class influence students' oral English proficiency in terms of fluency, accuracy, and complexity?

RQ3: What strategies have teachers adopted in the PAD class mode?

1.4 Scope

In this study, the relationship between independent variables and dependent variables is shown in Figure 1.2.



Figure 1.2 Relationship between IV and DV

It focused on three research questions, according to dependent variables and independent variables, forming the following research scope:

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1.4.1 Theoretical Scope

The present study ventures to examine scaffolding during the teacher-student negotiated interaction process in the oral English classroom and its effect on the improvement of students' oral English proficiency from a Vygotskian sociocultural perspective. The details are as follows:

(1) It explored the micro-processes of teacher-student PAD class mode interaction with a special focus on the scaffolded assistance provided by the teacher and student response to the scaffolded assistance.

(2) And studied further investigate how PAD class mode interaction influences students' oral English proficiency, which is measured by accuracy, complexity and fluency.

(3) It draws on research into classroom discourse and studies within Vygotskian SCT.

1.4.2 Practical scope

In 2014, I attended a academic conference held in Zhengzhou, China, sponsored by Foreign Language Teaching and Research Press, Professor Zhang Xuexin, from Fudan University in China, he presented and introduced in detail of the PAD class mode, which drew my attention and reflection on my own teaching method. Since then, I have consciously collected more relevant literature on oral English teaching methods, and oral proficiency measurement. And I have often studied from the team and communicated with the experts, finally I was lucky to become a member of the PAD class research team in 2015.

Since the PAD Class multi-interaction teaching mode was put forward in 2014, many followers and practitioners of the PAD interactive teaching mode have emerged in China. PAD Class multi-interaction teaching mode can integrate teachers, students, teaching content, teaching methods and other teaching elements, and it is of great practical value to apply the "PAD class multi-interaction" teaching mode to English teaching. This new teaching method shows the following practical benefits:

(1) It provides an example for the application of PAD class multi-interaction mode in English teaching;

(2) It is conducive to the reform and development of English teaching and exploring new ideas of English teaching;

(3) It improves and enriches English classroom teaching methods and improves its efficiency.

In the teaching of English as a foreign language, the concept of PAD class mode conversational interaction is based on the following theoretical scope:

(1) interaction enables learners to analyze the foreign language structure, to make and test hypotheses about it and to negotiate meaning in order to make sense of classroom events (Swain, 1985; Schachter, 1984, 1986);

(2) interaction provides learners with opportunities to make use of scaffolding (Hatch, 1978), and in this way, incorporate foreign language structures and vocabulary items into their own speech;

(3) the degree to which classroom talk has been jointly constructed between the teacher and learners will determine learner understanding of classroom events (Allwright, 1984; Breen, 1985).

1.5 Research Ethics

Ethics has been defined as a matter of principled sensitivity to the rights of others (Cohen, Manion & Morrison, 2000).

Research ethics are very important because: first, research ethics prevent, for instance, fabricating, falsifying or misrepresenting research data to promote the truth and avoid error; second, ethics norms help to ensure that researchers can be held accountable to the public; third, research ethics help to build public support for research; finally, many norms of research promote a variety of other important moral and social values.

Ethical issues were considered in this study which investigated the teacher-student interaction in the PAD class mode and its influences on student oral English proficiency. The research involved interviews, classroom observation and recording, pre-test, post-test, and questionnaires. First, the data collection required that every participant was willing to take part in the research. The classes involved in the study were informed that their participation in the research was voluntary, and their decision of whether or not to participate would in no way affect the grade that they would receive in the class. Since the purpose of this study was not to test or evaluate student performance or behavior in the class, but to investigate the teacher-student interaction in the PAD class in the class. To prevent and minimize this concern, the research tape-recording was not reviewed until after grading had finished, so as to help students feel more confident that their participation in the study would not affect their grades.

Confidentiality was also considered: all were told that lessons would be audio-recorded and transcribed into words anonymously and would be used only as a part of the data in this study. All participants were told that this study was for my doctoral degree and findings may be published in academic papers. The audio files would kept in a secure locations with password for my personal access and use only and would not be transferred to others.

Besides the two factors above, attitudes of the participants toward the study and toward each other could cause subject expectancy, or researcher subjectivity (Brown, 2001:37).

They were only informed that their classes would be recorded for research purpose on classroom interaction in an EFL class, and that no changes would be made in their lessons.

1.6 Limitation of the study

(1) This study confirmed the effect of PAD class teaching mode on improving teaching quality to a extent, but it was limited by objective conditions, the research still has some deficiencies. See details in part of 5.2.

(2) In order to make students better cooperate with the teaching, this study trained and mobilized the experimental class before the experiment, clearly explained to the experimental class that the new mode would be used for teaching, and introduced the form and application process of the new mode in detail. Therefore, it may have had some psychological implications to the students in the experimental class.

1.7 Definition of terms

Important Terms	Abbreviation	Definitions
Zone of Proximal Development	ZPD	It is the distance between the learner's actual level and potential level of development. (Lantolf & Appel, 1994). It is the cognitive gap between what the learner can do alone and what he can do with the help of others. Moving from one level to another may require assistance from adults or other capable peers.
PAD class	PAD	It is a new teaching approach in China, which was originally created by Chinese educators. Its process comprises 'Presentation', 'Assimilation', and 'Discussion'.
Scaffolding	/	Scaffolding refers to as a metaphor for the process by which an adult helps a child to learn how to perform a task that the child could not master alone. These scaffolding features are Recruitment(R), Simplifying the task(S), Direction maintenance (DM), Demonstration(D) and Feedback(F).
Vygotsky's SCT	SCT	Sociocultural Theory: Vygotsky's sociocultural theory of human learning describes learning as a social process and the origination of human intelligence in society or culture. The major theme of Vygotsky's theoretical framework is that social interaction plays a fundamental role in the development of cognition.
Negotiation of Meaning	NOM	It refers to negotiation of meaning.
Negotiation of Form	NOF	It refers to negotiation of form.
Communicative language teaching	CLT	It is one of the communicative teaching approaches for teaching EFL, which emphasis on the learners 'communication and the interaction between teachers and students.
Interactive PAD Teaching Mode	/	In this study PAD class combined multi-interactive mode, and increases more negotiated interactive chances based on teacher-student interaction and student-student interaction.

CHAPTER 2

LITERATURE REVIEW

2.1 Literature Review

The literature related to curriculum reform is massive in China, a large-scale reform began in 2001, it was top-down reform carried out at the national level (Feng, 2006). The obvious change in English is it becomes a major subject from the third grade of primary school with the language knowledge and skills, emotions and attitudes towards language learning, independent and collaborative learning, effective learning strategies, awareness of cross-cultural approaches (Hu, 2005; Wang and Lam, 2009; Zhu, 2007). This reform encourages teachers to learn and to innovate in teaching, with a view to moving from traditional teacher-centered, grammatical knowledge-oriented teaching methods to student-centered, communication-oriented ones (Qian & Walker, 2013; Yan, 2018). However, it was reported that the Basic Educational Curriculum Reform had not been as successful as expected, despite huge investments, diverse policies, and initiatives (Xu & Wong, 2011; Yan, 2012; Yan & He, 2012). Whether it is a developed region or a rural area, teacher-centered teaching methods still prevail. As Fullan (1999) pointed out, educational change is a complex process full of multiple factors, including diversity, conflict, unpredictability, and instability (Fullan, 2005). In almost all reforms undertaken in the context of educational culture, what happens in the classroom is often affected by a complex external and internal environment, including a series of interdependent geopolitical and socio-cultural backgrounds (Fullan, 2000; Louis and Miles, 1990; Wedell, 2003, 2005).

In addition, some literature focuses on the innovative introduction of specific teaching methods. Mainland China and other East Asian regions, including Hong Kong, South Korea, and Japan, have made efforts to apply CLT and TBLT in the EFL classroom in order to increase the number of people who can communicate effectively in English (Littlewood, 2007). Some challenges in the implementation processing have been reported in these regions (Ding, Sitthiworachart., & Joy, 2021)

The first challenge is related to the English ability of the students and teachers. Students may not use English as much as possible in group communication. In Li (2003)'s study, some teachers in Mainland China emphasized that low English proficiency hinders students from communicating in English. Li (1998) pointed out that primary school students in South Korea sometimes depend excessively on their mother tongue when communicating in English, which reduces the chance of students listening and speaking in English. Carless (2004) reported a similar situation, with the most prominent difficulty identified by teachers being that students use Cantonese in activities or tasks, which contradicts the teacher's goal of students using English. In many cases, teachers themselves lack confidence in communicating in English because they believe that their proficiency is insufficient to deal with communication and help students. Kam (2002) conducted a survey on English teaching in 15 East Asian countries and found that teachers' uncertainty about English is an important factor hindering the adoption of communication methods. This factor has been reported in studies from Mainland China (Rao, 1996), Hong Kong (Morris et al., 1996), South Korea (Li, 1998), and Japan (Kobayashi, 2004).

The second challenge comes from the pressure of the examination system and the uniqueness of educational culture. GaoKao (高考 in China, the National Higher

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Education Entrance Examination) is the most important examination in the basic education stage of China, as it determines whether students can enter university. Halstead and Zhu (2009) reported that it is difficult to achieve learner autonomy in high school English classes because of restrictions on due to GaoKao (高考) requirements. Students in colleges and universities also have to prepare for CET-4 (College English Test Band 4) and CET-6 (College English Test Band 6). Therefore, the content of English teaching is often determined by the content of the test. AsHird (1995) stated, 'the test has been identified as the single most powerful influence in the resistance to innovation in educational practice in China'. CLT and TBL are not considered suitable to prepare students for a grammatical or formal exam. For example, the teachers in a survey conducted by D. Li (1998) stated that 'grammar-based examinations' restricted the use of CLT in South Korea. Most Taiwanese teachers also tend to teach, and practice skills related to the exam (Liu, 2009). Similarly, the emphasis on vocabulary, grammar and reading comprehension in the Japanese university entrance examination means that teaching tends not to focus on English communication skills (Gorsuch 2000; Kobayashi 2004; Butler & Iino 2005). Additionally, the culture of learning in China is the one in which 'education is conceived more as a process of knowledge accumulation than as a process of using knowledge for immediate purposes, and the preferred mode of teaching is a mimetic or epistemic one that emphasizes knowledge transmission' (Hu, 2005d).

Such a learning culture, which is completely different from that of the West, conflicts with the implementation of CLT. Nor has the practice and evaluation mode of teaching methods in secondary schools played a positive role in learners' & Higa, 1981; Gass & Varonis, 1985; Larsen-Freeman & Long, 1991). Negotiated interaction, as they pointed out, is used to characterize the modification and restricting of interaction that occurs when learners and their interlocutors anticipate, perceive, or experience difficulties in message and comprehensibility (Pica, 1994). Besides, Scarcella and Higa (1981) also offer an insightful definition of negotiated interaction. They write: When participating in face-to-face interaction, conversationalists cooperate to sustain the conversation and establish understanding (Goffman, 1974). As Garfinkel (1967) points out, this is an ongoing negotiation process. it is the "work" involved in helping one another to communicate, for example, by jointly expressing message, filling in lapses in the conversation, indicating gaps in understanding, and repairing communication breakdowns.

In such conversations defined above, the teacher and learners collaborate to produce a meaningful and acceptable piece of discourse, with the learner relying on the strategy of "scaffolding" (Hatch, 1978; Slobin, 1982; Chaudron, 1988, Larsen-Freeman & Long, 1991) building his/her utterances on those of the teacher or another learner. This implies that in the EFL classroom context, most instances of negotiated interaction are sequences specifically involve the interlocutors in the negotiation of EFL classroom events.

Moreover, negotiated interaction originally had been used to refer to the negotiation of meaning (NOM). According to Pica (1994), NOM characterizes interaction in which two people interact to attain mutual understanding when communication breakdowns take place. It includes the modification and restricting that occurs when learners and native speaker (NS) experience difficulties in message comprehensibility. Lyster and Ranta (1997) extended the term, using the phrase negotiation of form (NOF) to denote negotiation more didactic sense focusing less on conversation. The primary difference between NOM and NOF is not prompted primarily by problems in communication. In NOF, one interlocutor intentionally draws

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the other's attention to specific incorrect forms in the previous utterances, even though mutual understanding has been achieved.实现 Thus, while NOM is meaning-oriented, NOF is primarily didactic (van Lier, 1988). Because of the intentionality 意向性 behind the interaction, NOF can be initiated strategically by teachers as one of the pedagogical interventions for specific errors.

In this study, negotiated interaction includes contents as follows:

(1) In the EFL classroom, negotiated interaction may be initiated for two main purposes: to resolve an interactional problem or to sustain the conversation;

(2) During the process of negotiated interaction, it is scaffolding that promotes and extends a learner's ZPD or production of those linguistic structures or associated forms;

(3) Negotiated interaction does not only refer to NOM, in this study, it also involves NOF.

2.1.1 PAD class operations

It is a combination of traditional lecturing-oriented, teacher-centered methods and discussion-oriented, learner-centered one (Zhang & Zheng, 2019; Chen, 2017) presented by the teacher individually and independently with their unique learning style (Liu et al., 2016).

There are three forms of the PAD class mode: the brief version is called in-class PAD mode (Figure 2.1), which means that all sections of the PAD class are completed in one class, while the complex version is called the cross-class PAD mode (Figure 2.2) which refers to the sections of PAD teaching method being completed in more than two classes. The teachers can also apply the 'mini in-class PAD' mode (Figure 2.3) flexibly, which means the PAD class teaching process can be implemented in 3 or several minutes, one-minute presentation, one-minute assimilation, and one-minute discussion.



Figure 2.1 The in-class PAD



Figure 2.2 An example of the cross-class



Figure 2.3 Three minutes PAD class

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The followings are classified description of the connotation of PAD class mode including basic framework, objectives, benefits, network technology assistant tools and core theory.

2.1.2 Basic framework of PAD class mode

Basic framework of PAD class mode is shown in Figure 2.4:

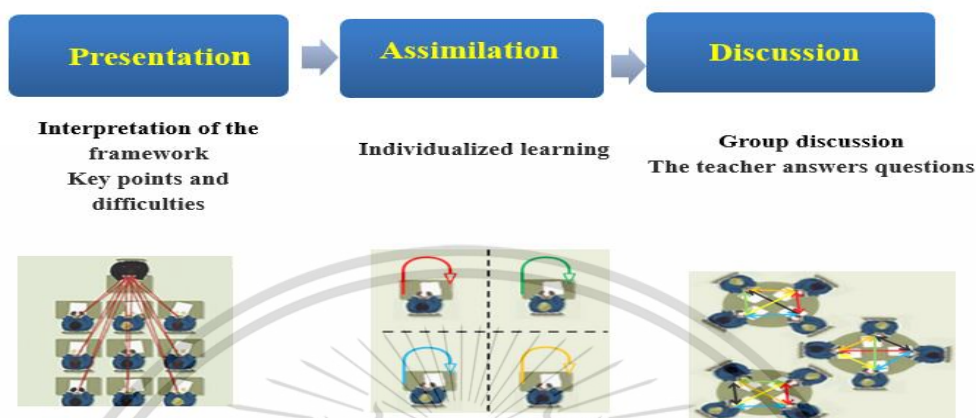


Figure 2.4 Basic framework of PAD class mode

2.1.3 PAD class mode objectives

Figure 2.5 shows the core idea of a PAD class and PAD class mode teaching follows the steps in Figure 2. 6.

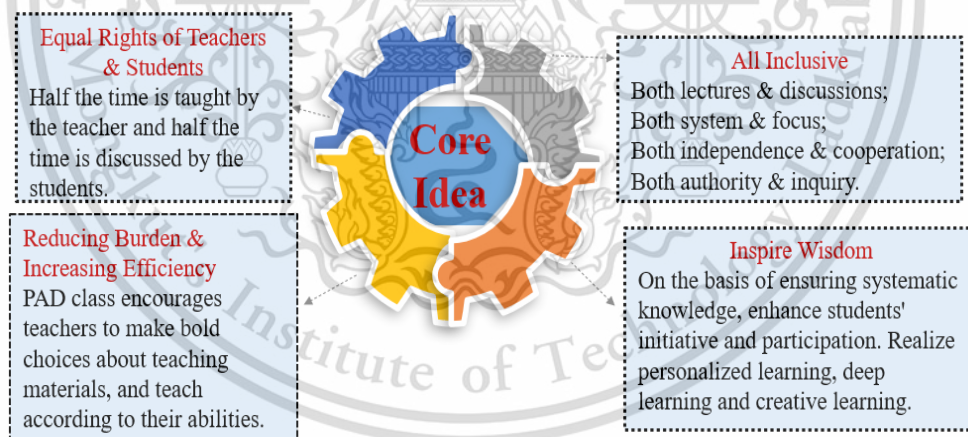


Figure 2.5 Core Idea of the PAD class (Zhang & Zheng, 2019)



Figure 2.6 Four steps teaching in PAD class mode (Zhang, 2017)

2.1.4 PAD teaching method can bring the following benefits to the classroom:

The multiple interactive teaching mode is mainly manifested in two aspects: explicit or implicit interactive teaching. Explicit interaction is interactive teaching methods, that are easy to observe and measure, include teacher presentations in classroom teaching, teacher-student interaction in the form of game task in classroom teaching, student-student interaction in and out of classroom and teaching environment interaction. Implicit interaction refers to the interactive teaching form, that is not easy to observe and measure, which is manifested in the selection of specific teaching methods and strategies according to learners' learning styles, learning strategies, learning motivation, cultural background, and interests.
















The multi-interactive teaching mode reflects the relationship between teachers and students in the teaching implementation. The characteristics are the correlation and interaction of teaching strategies and teaching methods, and the respect for student learning needs and student-centered characteristics.

2.1.5 PAD class teaching mode of the Network technology assistant tools

When using PAD class mode for teaching, teachers can use the "PAD class APP" teaching platform (<https://www.duifene.com/>) to manage and assist teaching: it is a network teaching platform, specially designed for PAD class mode. Now it has been widely used in teaching of various disciplines all over China and is popular by both teachers and students.

The WeChat mobile app version has two interfaces: one for the teacher and one for students. The main capabilities are listed in Table 2.1 along with simple translations of the original menu items. The interfaces have many common functions, making for convenience in teaching (Ding, Sitthiworachart., & Morris, 2022).

Table 2.1 PAD class app interface (Ding, et al., 2022)

Teacher Interface			Student Interface
Icon	Chinese	English	Included
	班级	Class	Yes
	云资源	Cloud Resources	Yes
	作业	Homework	Yes
	微信	WeChat	Yes
	出勤	Attendance	Only individual
	讨论	Discussion	Only in own group
	结果	Results	No
	在线练习	Online practice	Yes
	课堂提问	Class questions	Yes
	调查问卷	Questionnaire (statistics)	Only answer
	投票	Vote (census)	Yes
	课堂活动	Activity	Yes
	教学评价	Teaching evaluation (results)	Yes (input)
	电脑端	Connect to computer	Yes
	退出	Log out	No

As shown in the table, the main functions of the "PAD class APP" platform include managing student information, teaching grouping, managing attendance, sharing course resources, arranging and submitting homework, online question and answer, etc. The functions of the teacher side and the student side correspond one by one, which makes the teachers and students of the whole class closely coupled, and provides convenience for classroom teaching. Through the digital management, teachers are more convenient and fast statistics of student school status information, classroom attendance management and classroom grouping, reducing the pressure on teachers to organize teaching; the use of network course resources has realized resource sharing and expanded teaching. Students can study anytime what they have been given and anywhere, increasing the possibility of personalized learning. The discussion forum allows students to communicate with teachers and students through the platform, which expands the channels of interaction between teachers and students, students and students. Online practice and student peer tests make it easier for students to monitor themselves with feedback and improve learning. The setting of questionnaires, voting and teaching evaluation makes more teaching activities possible. Moreover, the "PAD class APP" platform can be operated directly on the WeChat public platform through mobile phones, without relying on computers, making it more convenient to use. In short, the "PAD Class APP" teaching platform can realize the interconnection between teachers and students, teaching resources sharing, digital management and personalized learning. It is a platform integrating technology and teaching, which provides powerful help for PAD Class teaching (Jin, 2021).

2.1.6 Rationale of the PAD class mode

In the initial stage of oral output, simple language imitation was trained, because only when the words or phrases to be learned were clearly spoken, they could be remembered and used, such as the role of implicit learning, the meaning of comprehensible input, the impact of chunk learning on fluency, the importance of scaffolding techniques on language output, and so on. From the perspective of linguistics, it includes the following theories, shown in Figure 2.7:

The Oral Method will re-awaken and re-educate those spontaneous capacities for language study which are inherent in the human race; those innate powers manifested in the earliest years of childhood (from Palmer, 1936)

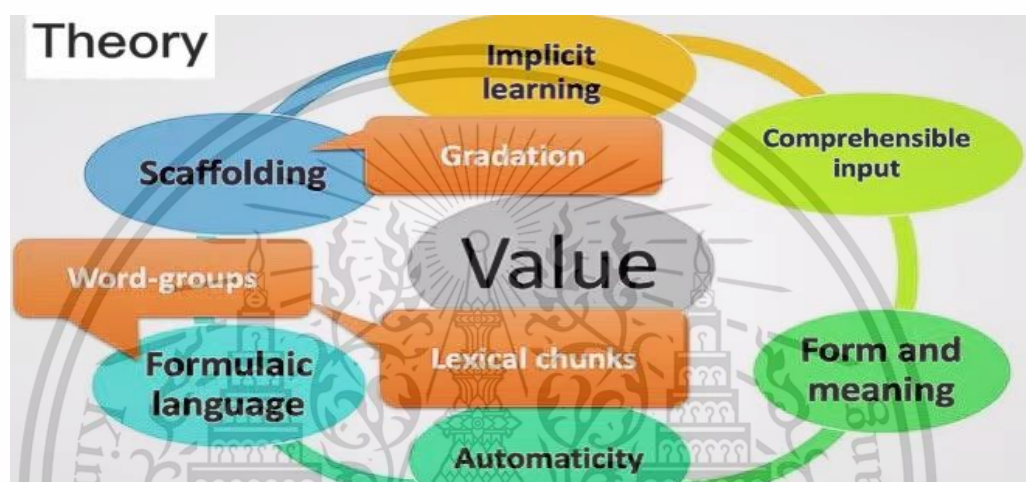


Figure 2.7 Language learning theory (Palmer, 1936)

2.1.6.1 Presentation stage in PAD class mode

The primary principle of the PAD class is to teach before learning (Jing, 2017), because the long history of Confucian culture has had a strong influence on aspects of education (Scollon, 1999). The teacher is thus seen as a person who passes down the truth, imparts knowledge and solves doubt. Teachers in EFL classrooms are more regarded as holders and transmitters of knowledge (Leng, 1997; Qi, 2018), because for most students, English teachers and textbooks are the main and effective resource of English knowledge and information (Cunningsworth, 1995). Hence the presentation based on the textbook is very important for students learning in the classroom.

‘What’, ‘Why’ and ‘How’ to learn’

‘What to learn’ obviously means the learning content of a specific lesson, whereas ‘why to learn’ points out the value and significance of the content, and the function in the knowledge system while ‘how to learn’ refers to providing learning strategies and tactics for students to learn more efficiently in the next steps. ‘Leaving blank’ in presentation means not giving students all the information directly, but to stimulate students’ imagination and the spirit of exploration through questions, prompts, and suspense.

These tasks need to directly connect with the content of the presentation and are characterized by Zhang, (2016):

Pertinence—— there should be a direct correlation between the tasks and the content of teachers’ presentations. Tasks should guide students to review the

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framework, fully understand the main concept, fill the blank left by teacher, and, form a complete understanding of the knowledge structure eventually.

Stepladder — task list should reflect the level of knowledge difficulty, from simple to complex and from easy to difficult.

Fundamentality — basic section should be included in the tasks and this part should be complete by all students confidently.

Challenging — tasks should also include difficult parts to stimulate students' desire to explore.

Selectivity — tasks should be optional and completed by students according to their understanding of the teacher's presentation.

Openness — the questions set in the tasks should not have rigid answers but should be flexible and varied.

Individualization — tasks should try to meet the characteristic of individual students and expect personalized interpretations should be expected in order to have unique contributions in the following group discussion.

2.1.6.2 Assimilation stage in PAD class mode

Assimilation in the PAD class is a period of time for students to think and explore quietly on their own with clear goals, i.e., complete the tasks assigned by the teacher after the presentation. It is an undisturbed process of thinking and learning individually and independently to fully understand and comprehend the content presented by the teacher. The assimilation stage is achieved by completing tasks silently. In traditional education concepts in China, thinking and learning were regarded as complementary and inseparable. Confucius said that 'learning without deep thinking leads to confusion, thinking without practicing in learning leads to peril'. Waiting time between teachers' talk and students' response provided more thinking time for teachers and students, which helped to improve cognitive level (Tobin, 1987). In the EFL context, teacher interference and limited waiting time can hinder student participation and learning opportunities to a extent (Yataganbaba & Yildirim, 2016), while giving students more time to think will increase their willingness to communicate in the target language (Kamdideh & Barjesteh, 2019). Therefore, it is necessary that adequate time is allowed in the classroom for learners to engage in an appropriate way to ensure that students think fully. Nevertheless, the thinking process that exists in the brain is difficult to observe directly, because 'thinking does not have any behavioral indices' (Astington & Olson, 1995). The teacher can only infer the way students think by understanding their actions and speech, for example, observing how they participate in the activities, listening to their response to a question and discussions with their peers, as well as judging the student learning outcomes, for example writing, reports, and the task sheets in the classroom (McGregor, 2007).

2.1.6.3 Discussion stage in PAD class mode

The last section of the PAD class is discussion, which generally includes two steps: students' discussion within the group and whole-class communication (Zhang, 2016). At the beginning of the discussion, teachers should quickly review the previous content and the requirement of the tasks in several sentences as an introduction to the discussion, and then students should be encouraged to discuss within groups of 3-5 members based on the task sheets. After the discussion stage, teachers initiate whole-class communication.

Firstly, the teacher can sample 3-5 groups in the whole class to check the results of the group discussions, and the chosen speaker in each group shares the ideas and identifies the confusion.

Secondly, the teacher nominates students from the remaining groups to answer questions occurring often in the class.

Thirdly, the teacher collects the questions and lets the students in other groups who can provide answers to answer them.

In this way, the teacher encourages the students in each group to share, help and challenge. If there are still problems unsolved after the next step, the teacher will explain and summarize at the end. So far, the whole PAD process has been completed. It is important that in the discussion, when learners can provide evidence to support their ideas, students' opinions will be challenged by group members, and teachers' opinions will also be questioned, which can promote the formation of students' critical thinking and lead students to deep learning and thinking. (Engle & Ochoa, 1988). This is beneficial for creating a democratic and free classroom atmosphere, which is an opportunity to teach the principles of democracy by engaging learners in democratic practices (Wilén, 2004). Further, it is an effective way to encourage learners to explore controversial issues and solve problems and make decisions (Parker and Hess, 2001). Moreover, the advantages of the discussion are not just limited to these. Indeed, discussion in the PAD class is different from that in the traditional classroom: the former is called 'delayed discussion' while the latter is called 'instant discussion' (Zhang, 2016; Chen, 2017). The initial form of discussion is information exchange, so in order to form a prerequisite for exchange, learners who participate in the discussion should have basic information and opinions before they can communicate, which is why the PAD class advocates 'delayed discussion'. Whereas in 'instant discussion', students have not constructed their own opinions, so it is difficult to effectively exchange with their peers, and there is no obvious boundary, so that the discussion easily wanders, which lengthens it and degrades its quality. In delayed discussion, the students are operating on the same task sheet, and this task sheet is closely connected with the teacher's presentation. Therefore, the views, ideas, confusion, and troubles obtained by the students in the assimilation stage are more likely interrelated or even the same, so that the delayed discussion will be more effective and save time as, especially for some simple and easy questions, students will soon come to a consistent solution.

2.1.7 Multi-interactive Teaching Mode (MIT)

The multiple interactive teaching mode is mainly manifested in two aspects: explicit or implicit interactive teaching. Explicit interaction is interactive teaching methods, that are easy to observe and measure, include teacher presentations in classroom teaching, teacher-student interaction in the form of game task in classroom teaching, student-student interaction in and out of classroom and teaching environment interaction. Implicit interaction refers to the interactive teaching form, that is not easy to observe and measure, which is manifested in the selection of specific teaching methods and strategies according to learners' learning styles, learning strategies, learning motivation, cultural background, and interests.

The multi-interactive teaching mode reflects the relationship between teachers and students in the teaching implementation. The characteristics are the correlation and interaction of teaching strategies and teaching methods, and the respect for student learning needs and student-centered characteristics.

2.1.8 PAD and MIT in an undergraduate English course

"Interaction is the norm of education, is the eternal theme of education." Chen & Jia (2017) believed that , the ideal information technology teaching environment should

contain three elements: situational, cooperative and open learning. Is a teaching structure of "teacher-dominated and student-dominated". The teacher-first guide means that the teacher provides a resource-rich learning environment for students to guide them to participate in learning activities, and the main body of the students follows the "student-centered" learning method to make students become more active and active in learning activities.

In order to explore more efficient teaching methods and combine the scientific PAD teaching mode with the multiple interactive MIT teaching mode combined with information technology, PAD and MIT teaching mode was put forward and adopted and practiced in the experimental group.

In this new teaching mode , effective interaction was one of the decisive factors to improve teaching performance. All research on the PAD teaching method in this thesis is based on this teacher-student multiple interactive PAD teaching method (MIT).

2.1.9 Theoretical basis

The teaching modes of the PAD class is based on the four categories, including information processing, personal development, social interaction and behavior modification modes (Joyce et al. 2003). The PAD approach focuses on presentation, which reflects the characteristics of the information processing modes and emphasizes the systematic nature of knowledge. Students are required to learn independently in the assimilation stage, which reflects the characteristics of the personal development mode and emphasizes self-responsibility and self-realization. The discussion stage cultivates student cooperative learning ability, which reflects the social interaction mode and emphasizes information exchange and interpersonal interaction. The PAD approach pays attention to the display and expression of worksheets and learning outcomes, which reflects the characteristics of the behavior modification mode and emphasizes the monitoring of the internalization and absorption process through the external behavior of students (Zhang, 2016).

The learning theory of the PAD paradigm is mainly derived from social constructivism, which emphasizes the internalization of knowledge or psychological construction through social interaction.

In the PAD class paradigm, learners actively engage with learning and are exposed to comprehensible input about the target language. In the teaching of PAD class, there is four steps (Presentation-Assimilation-Discussion-Dialogue): each process has a scaffold, that is Highlight - Test - Help. See Figure 2.8.

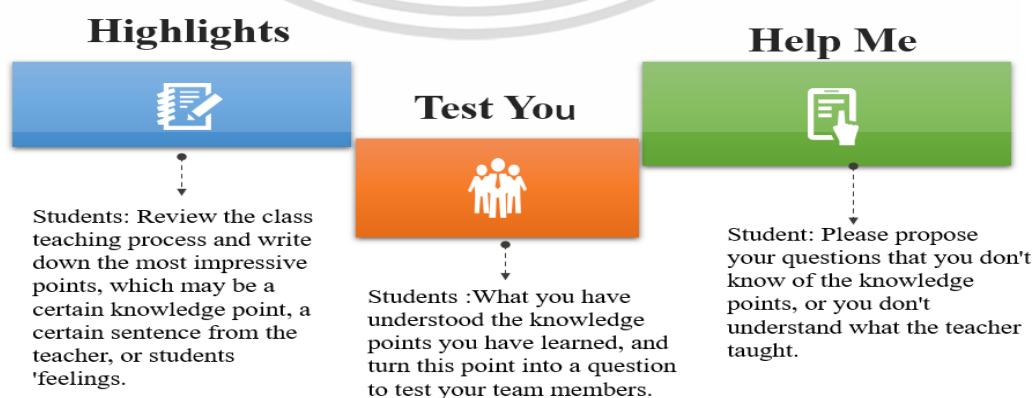


Figure 2.8 PAD Class Mode Scaffolds

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Moreover, the theory of scaffolding and the cultivation of student independent learning is not contradictory, because independent learning does not simply mean that students learn alone. Instead, it involves 'more capable people' (teachers and peers) guiding students to become more independent in their learning (Bullock & Muschamp, 2006). They believe that teachers provide students with explicit information to promote a relationship of trust and responsibility-sharing between teachers and students. This relationship is one of the essential elements of independent learning (Galton et al., 1998; Boekaerts, 1997; Williams, 2003). Another primary element is the 'enabling environment' (see Figure 2.9). MacBeath (1993) proposed a hierarchy of environment support, which is needed for learning independently. The most basic environment is the 'physical environment', which refers to the place where independent learning occurs, such as a classroom or library. The next, 'time environment', refers to the amount of time that the teacher allocates to the students to complete specific tasks. This is closely followed by the 'peer environment' and then 'materials resources' and 'tutor resources', which refer to the books and materials used for learning and the teachers' knowledge and skills, respectively. The strong relationship between teachers and students and the 'enabling environment' is available in the PAD classroom, which creates good conditions for cultivating students' independent learning.

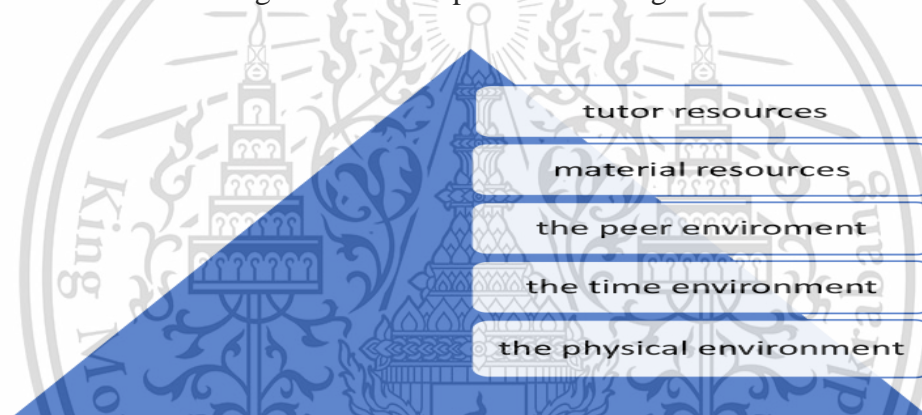


Figure 2.9 Hierarchy of environment support

This study was founded on the following theories: constructivist learning, social constructivism, metacognitive learning strategy, autonomous learning and communication theories. See Figure 2.10.



Figure 2.10 Theoretical basis

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2.1.9.1 Constructivism learning

Constructivist learning theory holds that learning is a process of learners' active construction, which requires them to change from passive recipients of knowledge to active constructors and information processors. The teaching projects guided by this theory pay attention to the central position of learners, advocate real situational teaching and pay attention to group cooperative learning. Under the guidance of constructivist learning theory, Jean Piaget's cognitive development stage theory, led Vygotsky's recent development zone theory and scaffolding teaching theory provide a theoretical basis for the multi-interactive PAD teaching mode in designing the teaching process, formulating the teaching content, establishing the guiding position of teachers and paying attention to the interaction in teaching practice. The multi-interactive teaching mode is based on the knowledge view, learning view and teaching view of constructivism theory, follows the learner centered principle, emphasizes the teaching strategy of intensive teaching and more practice, and encourages students to participate in activities in the form of group cooperation in class teaching and extracurricular practice.

Constructivism holds that knowledge is a process of constant cognition, experience and construction and is a tool to solve problems: learning is knowledge construction and interpretation of the world. Therefore, the role of teachers is to drive students to participate in exploration and interaction, guide students to build knowledge to improve thinking quality, application ability and innovative spirit and create the necessary environment and conditions to encourage students to take the initiative to construct meaning. As the "entry point" of the multi-interactive PAD teaching mode of English, meets the basic requirements of constructivism teaching view.

2.1.9.2 Social constructivism

which emphasizes the internalization of knowledge or psychological construction through social interaction. The prominent concepts are the zone of proximal development (ZPD), mediation, and scaffolding (Vygotsky, 1980). The learning process is considered to involve problem-solving and task completion through social interaction between the experts (teachers, excellent students) and novices (students) (McGregor, 2007). Teacher presentation in the PAD class is a 'scaffolding' to provide a clear explanation and interpretation of new knowledge to develop and advance the ZPD of individual learners. Additionally, scaffolding not only comes from teachers, but also comes from peers and group mates and students are expected to mediate the ZPD with each other in discussion and negotiation. Learners have the opportunity to review and reconstruct their understanding of knowledge through form-oriented task sheets in the assimilation section and are better prepared to enter the group discussion stage to verify their understanding. Learners are exposed to the target language and involved in the negotiation of meaning (Long, 1981) when discussing different topics. Therefore, they learn how to work with others and receive help and correction from expert peers.

2.1.9.3 Cognitive learning strategy theory

The main goal of university English teaching is to cultivate student comprehensive ability to apply English. The comprehensive application ability of English is a kind of intercultural communication ability. From the perspective of language culture, intercultural communication competence is closely related to metacognitive strategy competence and learning strategy.

2.1.9.4 Autonomous learning theory

The concept of autonomous learning originally belongs in the domain of educational philosophy. The starting point of constructing the multi-interaction PAD teaching mode of undergraduate English in the information and technology

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environment was to create many opportunities for students to contact with the "real" language environment, and to make learning plans match learning requirements, select learning strategies appropriate for learning tasks, monitor individual learning processes, adjust learning strategies and evaluate self-learning effect.

Therefore, teachers need to change their roles more, guide, encourage and supervise students to consciously create after class, take advantage of various opportunities to use the target language to actively communicate with others in various forms.

2.1.9.5 Communication theory

The theory of communicative approach states that language learning must be through use of language communication. Emphasis should be on the interdependence and coexistence of language and communication (Long, 1983). He divided "communicative competence" into four aspects:

- (1) grammatical;
- (2) the feasibility or acceptability of the language; ③
- (3) appropriateness of language means that the language used is suitable for the occasion, purpose, degree of formality, social status, identity, gender and psychological state of the people present;
- (4) Know the probability of a form of language, whether it is a common idiom or a rare personal habit.

2.2 Some important related concepts

2.2.1 Sociocultural perspective of Vygotskian theory

Vygotsky's assumption that the understanding of individual mental functioning begins with the understanding of social life is central to all his work (Wertsch, 1991). Fundamental to Vygotskian theory (Vygotsky, 1978, 1987) is the thesis that the development of human cognitive functions proceeds from the social, or interpsychological plane, to the individual. Furthermore, this development is gained using symbolic, socioculturally developed tools, the most important of which is language. As Lucy (1988) pointed out, language stands at the center of Vygotsky's psychology as the mediational means by which developmental transformations occur. Vygotsky aimed to show that individual functions emerge from social life (Vygotsky, 1978, 1987; Wertsch, 1979).

The two important notions of Vygotskian theory, namely ZPD and scaffolding, are central in discussing the nature of teacher-student negotiated interaction from the sociocultural perspective.

2.2.2 Role of ZPD

Vygotskian theory and especially Vygotsky's notion of ZPD have received considerable attention. As Alanen (2004) notes, this interest in Vygotskian thinking may be due to Vygotsky's optimistic ideas about an individual's learning potential and the close-knit relationship between the individual and society.

According to Vygotsky (1978), "learning and development are interrelated from the child's very first day of life" and thus he asserted that to discover the relations between learning and development two levels must be determined. The former characterized a novice's ability to perform different tasks independently and fundamentally referred to a novice's level of mental development, "that has been established as a result of already completed development cycles". The latter level of development characterizes those functions that a novice can perform with the help of,

or in collaboration with, a more experienced member of society. Consequently, he asserted that it is important to take the level of potential development into account, as it varies independently from actual development. Furthermore, the potential level of development indicates a novice's mental development more accurately than the actual development level. The distance between these two levels, namely, a novice's individual capacity and the capacity to perform with assistance, forms the boundaries of the ZPD. he defined the ZPD as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers".

Moll (1990) reported the ZPD represents a holistic approach to problems of child development and instruction. The ZPD is not designed to develop isolated skills, but to solve larger educational or developmental problems, for example, development of thinking, and so forth. It is within this line of thinking that educators might favor the whole-language method over traditional grammar learning. Moll maintained that it was important to reject conceptualizing the zone as the teaching or assessment of discrete, separable, skills or sub-skills. The problem with this view is that "applying the concept of the zone to the analysis of classroom instruction, — that is a definition of the zone emphasizing the knowledge, and especially of skills, by those knowing more to those knowing less, may characterize virtually any instructional practice" (Moll, 1990). Further, he provided the characteristics of the zone:

- (1) Establishing a level of difficulty. This level, assumed to be the proximal level, must be somewhat challenging for the student but not too difficult.
- (2) Providing assisted performance. The adult provided guided practice to the child with a clear sense of the goal or outcome of the child's performance.
- (3) Evaluating independent performance. The most logical outcome of a is the child performing independently.

It is misleading, concluded by Moll, to assume that classroom activities containing these characteristics represent the ZPD. On the contrary, it is necessary to interpret the zone more broadly as "a characteristic not solely of the child or of the teaching but of the child engaged in a collaborative activity within specific social environments" (Moll, 1990). The emphasis was placed on the notion of social system within which children learn and which is mutually and actively created by teacher and students.

As a developmental space, the ZPD is intrinsically relevant to instructional design and effectiveness; it is a part of all human learning that cannot be excluded, whatever the instructional conditions (Ohta, 2000). The notion of ZPD has been interpreted in the literature as applying not only to child-adult, face-to-face interactions, but also any type of expert-novice, peer-peer or adult-adult relationship, where potential cognitive development and internalization of social modes of thinking may occur (de Guerrero, 2005). In this study, the scaffolding, which occurred during the negotiated interaction process, helped students realize their knowledge gap in the target language and extended their level of the target language. It is through this kind of help that student ZPD were extended to the potential level, since the ZPD was developed through scaffolding.

2.2.3 Role of Scaffolding

Here, the concept of scaffolding, as defined by Wood, Bruner and Ross (1976), was adapted. Scaffolding was seen as strategies the teacher used in interactions with students, when different oral tasks were solved in cooperation.

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The concept of scaffolding had its origins in cognitive psychology and early language research (Donato, 1994). The concept was associated with the ZPD and was already mentioned by Vygotsky and Luria, when they referred to adults introducing children to cultural norms (van der Veer & Valsiner, 1991), thus anticipating later research by several decades. The concept was later used by Bruner (1978) as a metaphor for a mother's verbal assistance in maintaining conversation with a child and indirectly in promoting language learning. The concept was also introduced in the context of tutorial interactions, where a tutor helps someone less skilled to solve a problem. Wood et al. (1976) used the term as a metaphor for the process by which an adult helps a child to learn how to perform a task that the child could not master alone. These scholars described scaffolding as consisting of "the adult's controlling those elements of the task, that are initially beyond the learner's capacity", thus enabling a learner to concentrate on and complete those elements of the task that he or she was incapable of doing without help.

The metaphor was later applied to investigations, where knowledge was constructed between people, who have a common first language. Although the metaphor was thus originally coined to describe child development in interaction with adults in first language situations, it was later adapted to second language or foreign language learning situations as well. Here, scaffolding implied the strategies the teacher used in the interactions with the students.

The significance of scaffolding is that mediation was appropriated by the individuals and enhanced their ability to regulate their own behavior, including language use and learning.

2.2.4 PAD class teaching mode-based research on negotiated interaction

In Hatch's seminal work in the late 1970s, it was assumed that learners learn the structure of a language through interaction rather than learning grammar to interact (Hatch, 1978). Since then, the relationship between interaction and language learning has been a focal point for researchers. A central claim resulting from this research was that, though interaction may not be strictly necessary, it nevertheless constituted the primary means by which language learners obtain data for language learning. Not only because interaction is how most learners receive input, but also the input obtained through interaction was more effectively acquired than input received in other ways. In this study, input obtained via interaction was conceptualized and studied in terms of "comprehensible input" (Krashen, 1981), "NOM" (Long, 1983), and "comprehensible output" (Swain, 1985, 1995, 2005).

2.2.5 Scaffolding in the PAD class

Teacher presentation in the PAD class was a 'scaffold' to provide a clear explanation and interpretation of new knowledge to develop and advance the ZPD of individual students. Additionally, scaffolding comes - not only from teachers - but also from peers who are expected to mediate the ZPD with each other in discussion and negotiation. Students reviewed and reconstructed their understanding through task sheets in the assimilation section and were better prepared to enter the group discussion stage to verify their understanding. Students were exposed to the target language and involved in the negotiation of meaning (Long, 1981), when discussing different topics. They, therefore, learnt how to work with others and received help and correction from outstanding peers. In the PAD class, students actively engaged with learning and were exposed to comprehensible input about the target language.

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Many researchers have linked English teaching and peer assessment or English teaching and scaffolding, but no research to date has linked PAD teaching with peer review and scaffolding (Ding, Sitthiworachart. , & Morris, 2023).

2.2.6 Communicative language teaching (CLT) class

Communicative language teaching (CLT) has been an influential approach for at least two decades. The very term ‘communicative’ carries an obvious ring of truth: we ‘learn to communicate by communicating’ (Larsen-Freeman, 1986). CLT advocated learning a language through use. CLT stressed teacher classroom dominance and a very detailed study of grammar, extensive use of paraphrase and the translation and memorization of structural patterns and vocabulary, further CLT emphasized competence in using language for communication. Learning was regarded as a process of natural growth, rather than acquiring isolated items of language. As learners have their own active mechanisms for making sense of language input and constructing their own systems, while receiving linguistic input, teachers need to help them operate these natural mechanisms, by providing them with “triggers”. In lessons, teachers can facilitate acquisition by assisting students to practice, so that they can learn to use language actively for real communication. CLT had some common features of practice that derived from its basic principles. First, classrooms were learner-oriented. Second, opportunities were provided through developing a wide list of activities. Third, the teacher’s roles are multiple. Instead of imparting knowledge and skills to learners, he or she acted as animator, co-communicator or counselor in the classroom. Fourth, authentic materials were used in teaching. (Nunan, 1991, 1993; Mey, 1998)

2.3 Multiple Interactive development of PAD Class mode

2.3.1 Characteristics of PAD teaching method

The emergence and development of information technology have brought information-based learning methods, from e-learning (electronic learning), to m-learning (mobile learning), and then to U-Learning (ubiquitous learning). PAD class mode combined with these three methods, which are mainly reflected in terms of:

- 1) information acquisition - obtained not only from textbooks or paper materials, but also from APPs, such as, Duifen Yi;
- 2) time and place - not only in the class, but also by mobile and computers online at any time;
- 3) resource volume - rich and unlimited (Chen & Jia, 2017).

2.3.2 Interactive and effective PAD class teaching mode

In Zhang’s book “PAD Class: New Wisdom of Chinese Education”, he systematically expounded the theoretical basis and operating principles of the PAD class, discussed the integration and reference of the PAD and other teaching modes, and also expounded promotion and development of the PAD class for basic and higher education and scientific research, and finally demonstrated the inner connection between the PAD class and education culture in China (Zhang, 2017). He initially implemented a PAD class in his psychology classes. After achieving good results, he and his research team began to promote it, from the university classroom to basic education and vocational education, from psychology classes to other disciplines, and gradually, it became accepted by more front-line teachers. Some teachers and scholars have these ideas and thoughts in articles after implementing the PAD class. Jing (2017)

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explored designing ‘study subjects’ guides, basic tasks and learning activities to guide students to think and discuss effectively in the PAD class. Qian’s (2019) research is based on the PAD framework, through the mechanism of ‘Guidance, Inspiration and Competition’, to achieve ‘generative classroom instruction’ in a university classroom. Compared with traditional classrooms, Luan (2017) found that students actively participated in group discussions, and their learning interest increased significantly in the PAD mode of Business English Translation class. Evidence showed that the PAD class mode improved student participation and could also be used in conjunction with flipped classrooms (Li & Li, 2017; Liu, et al., 2016). Moreover, teachers were key players in teaching innovation (Waters, 2009; Wedell, 2003), whose ideas, choices, and experiences deserve attention and analysis.

2.3.3 Language Proficiency - Accuracy, Complexity and Fluency

The study of accuracy, complexity and fluency in oral production is of both theoretical and practical interest. Theoretically, it serves to test claims regarding the nature of variability in learner language and the validity of models of speaking for example, Levelt (1989) applied it to second language production (De Bot, 1992; Kormos, 2006).

Foster and Skehan (1996) used personal information exchange, narrative, and decision-making tasks with 16 pairs of participants with English as the medium; they recorded the interactions between participants and calculated the participants’ accuracy, complexity and fluency for each task. They hypothesized that the personal information exchange task (i.e., tell your partner how to open your house and then to turn off the gas) would be the easiest task to do, what was the most difficult, and somewhere in-between. However, this hypothesis was only partially supported by the results. They found that the personal information exchange task generated the highest degree of accuracy, but little complexity. A narrative task generated the highest level of complexity, but little accuracy. Whereas a decision-making task did not gain the highest scores for any of the three task categories, but occupied a level somewhere in-between the other two. Often, a trade-off between accuracy and complexity was found, depending on the difficulty of a task (Skehan & Foster, 1999). Skehan (2007) termed this the trade-off hypothesis, as attention was allocated to different performance areas under different conditions.

However, according to Foster and Skehan (1996), the personal task produced much more fluent discourse than the narrative and the decision-making tasks. Relating his concept of task complexity with these three task performance characteristics, Wendel (1997) invited 40 Japanese learners of English in a junior university to participate in an experiment: learners were asked to watch two films and then retell them under two conditions: unguided and guided planning. He found that guided planning led to more syllables per minute and shorter pauses, but not increased complexity. Accordingly, Yuan and Ellis (2003) investigated 42 undergraduate student (English majors) oral performance: students were given an oral narrative picture task under careful guidance and no guidance and the results showed that students under careful guidance produced more fluent English. Moreover, Mochizuki and Ortega (2008) explored the effect of guiding learners to attend to a specific grammatical feature had on performance of this feature in a task. 56 first-year high school students in Japan, who worked in pairs, participated in this study to finish the task of picture story re-telling with audio narrative stimulus. Students in the study were grouped into guided and unguided conditions. This study indicated that there was no statistical significance between the two groups

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regarding complexity, whereas students under the guided condition produced more fluent and accurate speech.

In China, Zhang (2000) invited 12 freshmen of English majors to tell stories and repeat the task one semester later to test students' improvement in fluency. Based on same data, Zhang and Wu (2001) conducted a quantitative analysis, which indicated that the participants tended to develop more fluent and complex speech, at the expense of accuracy. Though based on the same data, the qualitative and quantitative analyses did not match. The process has a profound impact on language output, which corresponded to what learners did in interaction in foreign language learning, thus leading to the empirical studies in China (Sun & Wang, 2003; Zhou, 2005). Besides, Wu (1996, 1997) regarded interaction between the teacher and the learners in the classroom as one of the essential factors in determining learners' oral ability development.

From an interactive view, Ma (2002) investigated the role that group work played in language learning and found that group work provided learners with more opportunities to use the target language and pay more attention to their errors. However, Ma's study did not provide a clear connection between error-correction from others and self-correction and it was not clear in what aspects learners improved in their oral English by interacting.

In summary, this showed that many scholars investigated the variables in task-based activity and its influence on accuracy, fluency and complexity. My study explored the effectiveness of negotiated interaction on oral English proficiency, in accuracy, fluency and complexity metrics. Variables in the task-based activity were minimized to control the variable and increase reliability.

2.4 Related work

2.4.1 Status of foreign language teaching in the context of PAD class

In the "Internet and education" era, education has started to use information technology extensively to support teaching. Traditional modes of information flow have changed with the ease of production and release of information. The development of school education assisted by network teaching can supplement the functions and forms of traditional education. To evaluate the impact of the PAD class in recent years, I searched the China National Knowledge Infrastructure (CNKI) with "PAD Class" as the key word (Sep 25, 2022). Figure 2.11 shows that interest in this technique has grown rapidly in China with 3,236 papers discussing it in a short six years span from 2016 to 2022. After an initial rapid growth, it retained an active research focus, with more than 600 papers per annum for the last five years.

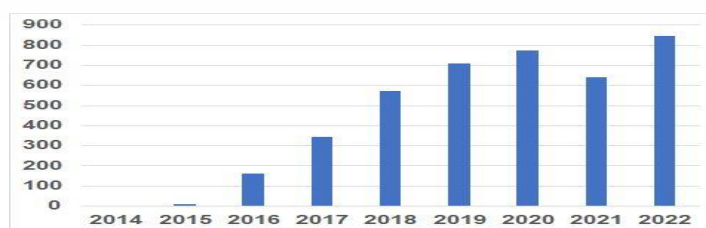


Figure 2.11 Annual number of papers discussing PAD Class (data from CNKI database, 25 Sep, 2022)

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PAD teaching has been practiced in Lanzhou University of Arts and Sciences for more than three years. Teachers in many subjects have used it, including more than 50 teachers in English courses.

Learning effectiveness is measured from three dimensions - academic achievement, self-efficacy and satisfaction. The influencing factors are divided into two dimensions. The human dimension includes teachers and students. Teachers' attitude towards technology, technical level, teaching style and self-efficacy are influencing variables, Students' learning motivation, attitude towards technology, online learning experience and computer anxiety are influencing variables. The design dimension includes learning mode, technology, course content, interaction and learner control.

Peltier, Drago & Schibrowsky (2003) proposed a mode for the effectiveness of online learning (Figure 2.12), which contained six dimensions: course content, teacher support and guidance, course structure, learning resources, student-student interaction, and teacher-student interaction. The results of the questionnaire survey show that these six dimensions affect students' evaluation of the overall effectiveness, and the influence of each dimension is shown in the order described above.

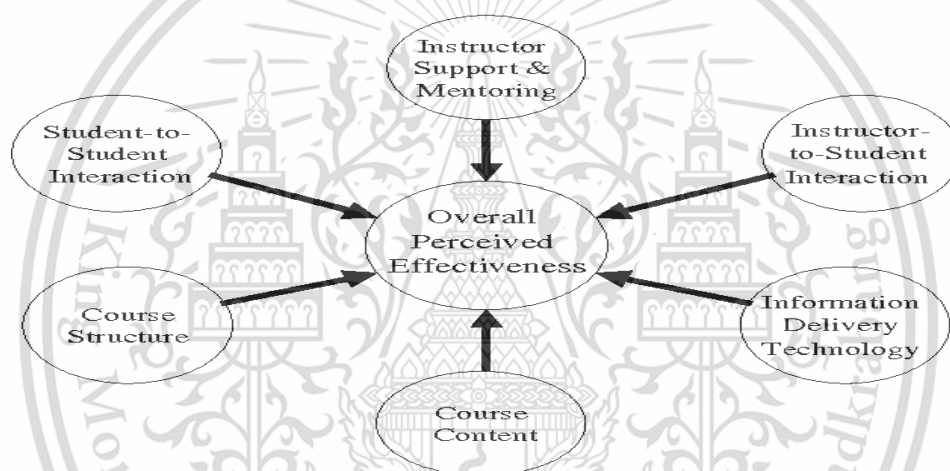


Figure 2.12 Proposed Online Education Model (Peltier et.al., 2003)

2.4.2 Status of foreign language teaching in the context of CLT class

Due to the development of English-speaking countries, the influence of English has been increasing in the world. As Richards (2017) pointed out, language teachers asked for more effective approaches worldwide. CLT was developed to satisfy English teacher and student demand for communicative teaching and communication activities in classes. Koosha & Yakhabi (2012) stated that CLT was the result of many communicative approaches in 1970s, based on audio-lingual teaching methods.

CLT encouraged the use of second languages to provide opportunities for meaningful communication and to explain the target language based on the level of the learners (Brown, 2014). CLT was based on the idea of “communicative competence” first proposed by Hymes (1972), who defined “communicative competence” as “the most general term for the capabilities of a person”. He argues that the ability to communicate meaningfully in a specific context to produce a language can be used appropriately and accordingly. This appropriateness to the context emerged as a response to the ideal speaker-listener proposed in Chomsky’s theory. Chomsky (1965) argued that language is created through “universal grammar”. Universal grammar is a device that exists in every mind and people use it to create language. Chomsky’s

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(Chomsky, 1965) theory emphasizes that language is ideally acquired through this innate device regardless of the context. He argues:

Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors random or characteristic in applying his knowledge of the language in actual performance (Chomsky, 196)

He divided this innate ability into two aspects: competence and performance. Competence in Chomsky's theory is the innate ability that is a response to producing language. Performance is the production of this innate ability to use the ideal language.

However, Hymes (1972)'s "communicative competence" goes against the above, as "appropriateness" was missing from Chomsky's theory. Language does not work ideally; instead, language works depending on who is speaking, what they are doing, when they need to talk and when they need to stay silent (Hymes, 1972). This appropriateness is the basis of the CLT principle. CLT applies this philosophy of appropriateness, suggesting that it is also the way language can be learned in the classroom (Brown, 2014). CLT is thus a broad approach that highlights specific principles and philosophies:

- (1) The first is that the language has to be authentic: such authenticity refers to the real text that the users can apply. Authenticity must be provided in the classroom, so students can see meaning in the language.
- (2) The second is that the language being taught must be meaningful: the language must be used within a context that can make meaning for the student, thereby illustrating the purpose, and what and how to speak in the context.
- (3) The third is that the language to be used by the students has to be productive. The fourth principle is that accuracy and fluency are essential.
- (4) Finally, all skills related to communicative competence are important (Brown, 2014).

I searched the China National Knowledge Infrastructure (CNKI) with "CLT Class" as the key word (March 5th, 2023). Figure 2.13 shows that, from 1986 to 2023, 1592 academic papers were published over 37 years, with 130 papers at the peak in 2008. However, from 2020 to 2022, only 6 papers were published, thus fewer and fewer scholars were studying CLT.

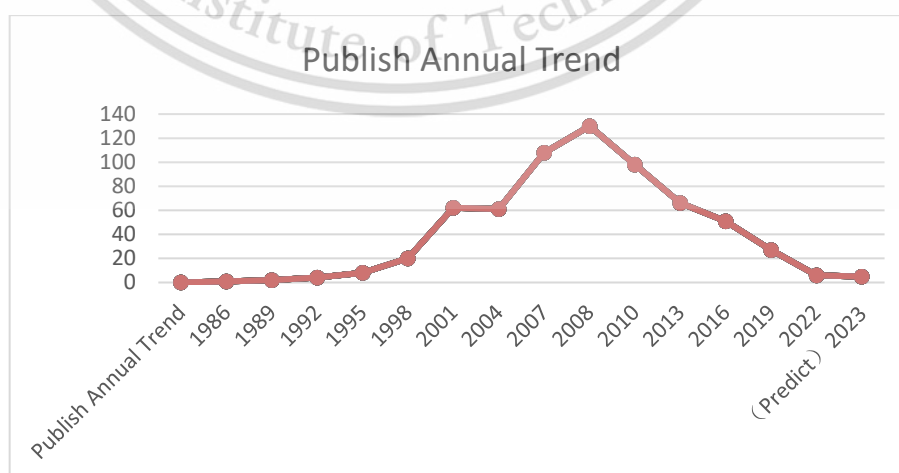


Figure 2.13 Related CLT papers Publish Annual Trend

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CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduces the research methodology used in this study, and it covers research design, participants, research instruments, and methods for data collection and analysis. This study has two independent variables, they are different teaching methods for ELF: PAD class mode and CLT teaching method. The main objectives focus on:

- (1) To describe the process of PAD class mode how the teacher provides scaffoldings and how students respond to the scaffoldings.
- (2) To investigate how the PAD class mode to improve students' oral proficiency by fluency, accuracy, and complexity.
- (3) To summarize the strategies the teacher used scaffoldings in PAD class mode.

3.2 Research Design

3.2.1. Research Stages

This study is divided into three research stages as shown in Figure 3.1:

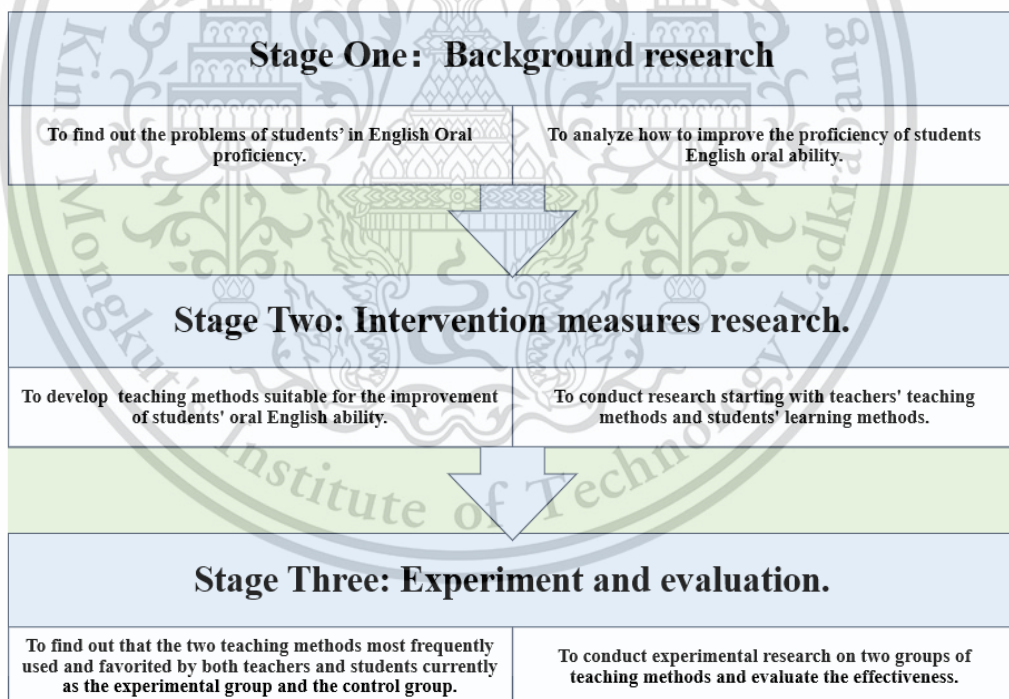


Figure 3.1 Research Stages

3.2.2 Research Procedure

This research is divided into six experimental procedures as shown in Figure 3.2:



Figure 3.2 Experimental procedures

In each research stage, the related research procedures are completed, as shown in Table 3.1.

Table 3.1 Research stages and procedures

Stages	Stage One: Background research	Stage Two: Intervention measures	Stage Three: Experiment and evaluation
Procedures	1. Background Research	2. Problem Statement A Background Study of Two Teaching Methods	3. Tests with Experiments 4. Data Collection 5. Analysis 6. Conclusion
Methods	Systematic Literature Review; Survey	Systematic Literature Review; Survey	Experimental Research
Instruments	CNKI database; IOC	CNKI database; IOC	Pre-Test; Interview; Observation; Post-Test; Questionnaire

3.3 Stage One: Background research

3.3.1 Participants

Since most research questions cannot be tested using very large numbers of people or circumstances which would usually be too expensive, time-consuming, and complicated to organize.

Instead, surveys and research projects rely on selected samples. A representative sample is one which gives due consideration to the potential factors. The population of this study includes 60 non-English majors and two ELT teachers. According to the nature of the research questions in this study, different criteria were used to select the participants.

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3.3.1.1 Participants of Students

The study population comprised Non-English Major second year undergraduates in Lanzhou University of Arts and Sciences in China 60 students included in the study were divided into the two groups: experimental (n = 30) and control (n= 30) groups. Two English Language Teaching (ELT) teachers were selected through sampling to participate: one teacher taught using PAD class style in the experimental group and the other teacher used a communicative language teaching (CLT) method in the control group. The subjects, classes, and majors involved are shown in Table 3.2.

Table 3.2 Demographics

University	Lanzhou University of Arts and Sciences					
City	Lanzhou City, Gansu Province, China (36.06516°N, 103.89595°E)					
Groups	Experimental Group	Gender		Control Group	Gender	
		Male	Female		Male	Female
Number	30	15	15	30	10	20
Age range	18-21					
Majors	Pre-school Education					

3.3.1.2 Participants of Teachers

Because I conducted this experiment, to ensure research objectivity and accuracy, the two different teachers were chosen to teach, see Table 3.3. Both Ms. Luo and Mr. Han were experienced and excellent teachers. If the researcher, the experimental class teacher, and the control class teacher was the same person, some inaccurate results might be seen.

Table 3.3 Background Information of Teachers

Teachers	Gender	Age	Teaching Experience	Major	Degree	Professional Title	Overseas Experience	Teaching Classes
Ms. Luo	Female	42	20	Applied Linguistics	Master	Associate Professor	Yes	Experimental PAD Class
Mr. Han	Male	38	13	Applied Linguistics	Master	Associate Professor	Yes	Control Class

3.3.2 Research Instruments

3.3.2.1 Questionnaire (IOC)

To figure out the students' needs in English oral expression and critical thinking skills, questionnaire surveys was conducted before research experiment. The questionnaires were sent to 60 undergraduate second year students by Wenjuanxing (2022) platform. The questionnaire items are on a five-point Likert scale from strongly agree to strongly disagree. The validity and reliability of the questionnaires were checked before the questionnaires were sent to the students.

For the validity, the content of the questionnaire items was assessed by five experts. They were asked to judge each item - whether it really measure the expected attribute? An Item Objective Congruence (IOC) index was the basis for checking item quality. In each item, the experts were asked to determine a content validity score: score = 1, if the expert was sure that this item really measured the attribute; score = -1, if the expert is sure that this item did not measure the attribute and score = 0, if the

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expert was not sure. The experts are listed in Table 3.8; they came from different disciplines of Lanzhou University of Arts and Sciences. If the IOC value is more than 0.5, the questionnaire item is acceptable (See Appendix 1 for IOC questionnaire design).

Table 3.4 Test expert identity information

Expert No.	Name	Gender	Age	Qualification	Positional Title	Research Field
1	Luo Hongxia	Female	42	Master	Associate Prof.	Undergraduate English teaching
2	Han Qiang	Male	38	Master	Associate Prof.	Undergraduate English teaching
3	Guo Jinghua	Female	45	PhD	Associate Prof.	Educational Technology
4	Yang Lin	Female	45	Master	Assistant Prof.	Educational Technology
5	Wang Chengde	Male	51	PhD	Professor	Psychology

The five experts judged the questionnaire's four items as reasonable, thus the questionnaire had high structural validity - see Table 3.5.

Table 3.5 Index of Congruency Items (IOC)

Survey sequence	Appendix	Survey Dimension	Question Items	Experts					ΣR	IOC	Result
				1	2	3	4	5			
Before Experiment	2.1	Students Demographics	4	+1	+1	+1	+1	+1	5	1	Used
	2.2	Students' Interests in English Learning	29	+1	+1	+1	+1	+1	5	1	Used
	2.3	Student Perspective on teacher's teaching Methods	20	+1	+1	+1	+1	+1	5	1	Used
After Experiment	3.1	Student reflections and evaluations on the teaching methods (CLT Class)	15	+1	+1	+1	+1	+1	5	1	Used
	3.2	Student reflections and evaluations on the teaching methods (PAD Class)	15	+1	+1	+1	+1	+1	5	1	Used

Reliability (ΣR) refers to the consistency of an assessment's results under different conditions. Here, the IOC values of the five experts were all +1, so the questionnaire could be used - see Appendix 1.

3.3.2.2 Students Questionnaire

This study includes two sets of questionnaires, one for use before the experiment (see Appendix 2), to understand the difficulties encountered by students in oral English learning, identify problems, and seek ways to solve them.

The other set (see Appendix 3 for details) is used after the experiment to find the satisfaction survey after the experiment.

Students Questionnaire 1 (Appendix 2.2) includes the three dimensions: students' personal information (4 questions); interest in English learning (29 questions); teaching methods (20 questions). Using Likert five-point agreement scale, students are required to respond to each of the statement by clicking the letter that most closely

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corresponded to their performance on a scale from strongly disagree to strongly agree (See Table 3.6).

Table 3.6 Likert five-point scale (Likert, 1932)

Appendix	Survey Dimension	Question Items	Scoring Criteria				
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree
2.2	Students' interests in English learning	29					
2.3	Student Perspective on teacher's teaching Methods	20					
3.1	Student reflections and evaluations on the teaching methods (CLT Class)	15	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
3.2	Student reflections and evaluations on the teaching methods (PAD Class)	15					
Points			5	4	3	2	1

Students' questionnaire 2 (Appendix 3.1; Appendix 3.2) was given to the participants after the experiment: its purpose was to seek student reflections and evaluations on the teaching methods. See Table 3.7 for specific implementation.

Table 3.7 Questionnaire implementation

Survey sequence	Appendix	Survey Dimension	Question Items	Scoring Criteria	Data analysis	Analysis Detail
Before Experiment	2.1	Students' demographics	4	no	qualitative	Using SPSS 26.0 software. Descriptive qualitative analysis was adopted.
	2.2	Students' interests in English learning	29	Likert five-point scale	quantitative	
	2.3	Student Perspective on teacher's teaching Methods	20	Likert five-point scale	quantitative	
After Experiment	3.1	Student reflections and evaluations on the teaching methods (CLT Class)	15	Likert five-point scale	quantitative	
	3.2	Student reflections and evaluations on the teaching methods (PAD Class)	15	Likert five-point scale	quantitative	

3.3.2.3 CNKI database

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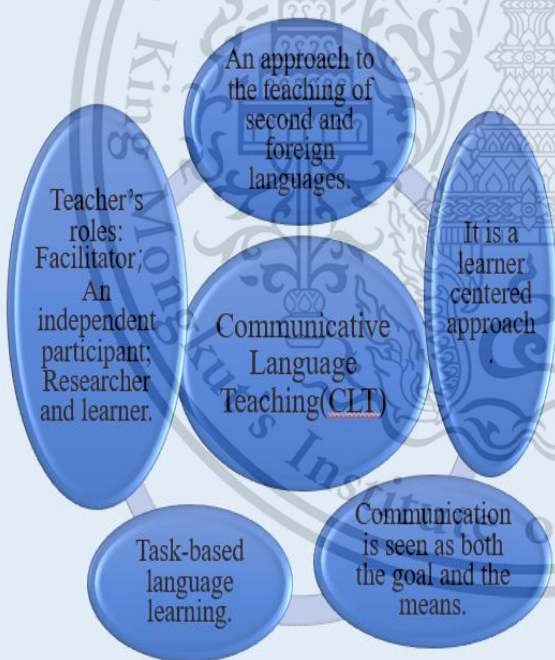
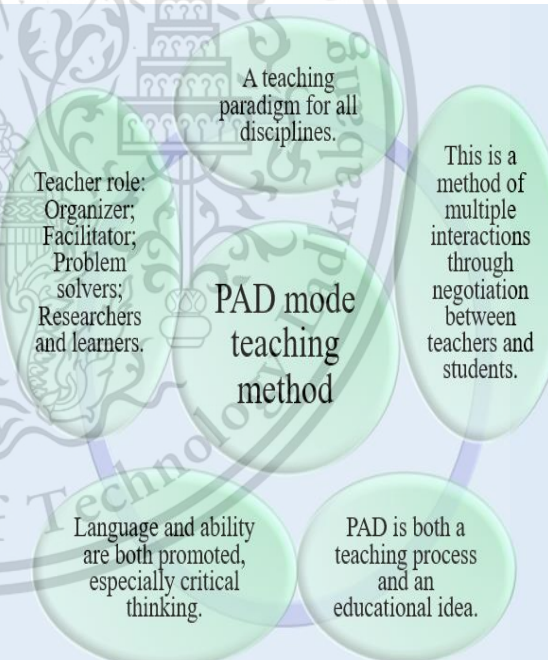
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CNKI is China National Knowledge Infrastructure (CNKI), launched in 1988, is an electronic platform created to integrate significant Chinese knowledge-based information resources. It owns a system called "China Integrated Knowledge Resources System," including journals, doctoral dissertations, masters' theses, proceedings, newspapers, yearbooks, statistical yearbooks, e-books, patents, and standards. Most of the literature resources in this study were obtained from CNKI databases. The literature analysis was provided by the CNKI system.

3.4 Stage Two: Intervention measures

At this stage, the researcher continues the literature resources obtained in the stage one to explore two teaching methods that are most frequently used at the current stage and have the greatest impact on students' oral English proficiency. The two teaching methods were used in the class to improve students' oral English expression abilities, and prepared for the research stage three. The features of these two teaching methods are shown in Table 3.8. After analysis, comparison, and research, these two teaching methods were selected as the experimental group and the control group in the stage three.

Table 3.8 The features of two teaching methods

CLT teaching method	PAD mode
 <p>The diagram for CLT teaching method features includes: <ul style="list-style-type: none"> An approach to the teaching of second and foreign languages. Teacher's roles: Facilitator; An independent participant; Researcher and learner. Communicative Language Teaching (CLT) It is a learner centered approach Task-based language learning. Communication is seen as both the goal and the means. </p>	 <p>The diagram for PAD mode features includes: <ul style="list-style-type: none"> A teaching paradigm for all disciplines. Teacher role: Organizer; Facilitator; Problem solvers; Researchers and learners. PAD mode teaching method This is a method of multiple interactions through negotiation between teachers and students. Language and ability are both promoted, especially critical thinking. PAD is both a teaching process and an educational idea. </p>

3.5 Stage Three: Experiment and Evaluation

3.5.1 Experiment Design

3.5.1.1 Participants

The participants in this study are 60 university students from 2 classes participated in the experiment, and two English teachers. The detailed information has been described in Section 3.3.1.1 (Participants of Students) and Section 3.3.1.2 (Participants of Teachers) of the Stage One.

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Two classes were randomly selected from 25 second year classes at Lanzhou University of Arts and Sciences in Gansu Province, China. They are divided into two groups with 30 students each. The sample size is determined using the central limit theorem which is based on the sample size $n \geq 30$, regardless of the population (Chang et al., 2008). He added that the sample size $n \geq 30$ requirement has been recognized by statisticians and academics to presume a distribution of sample mean that is close to the normal distribution.

To select teacher participants, purposive sampling was used. “In purposive sampling, researchers handpick the cases to be included in the sample on the basis of their judgement as typical teachers” (Cohen et al., 2000). As noted earlier, there was a reform of oral English teaching in this university and Ms. Luo participated in this reform. In order to make sure that all the teachers fully understood the interaction PAD class teaching method and implemented it in the oral English class, the teachers involved in this reform were required to make classroom observations, take down notes and discuss the teaching procedure with other teachers. At first, I made observed four teachers, who adopted interactive PAD class mode. In addition to the classroom observation of the negotiated interaction teaching method, I also observed other oral English classes which used the CLT teaching method.

Other factors such as age, length of teaching experience, academic title, educational background and the class setting were also minimized to increase the validity and reliability of the study.

3.5.1.2 Experimental Procedure

The procedure of this experiment is shown in Figure 3.3 below.

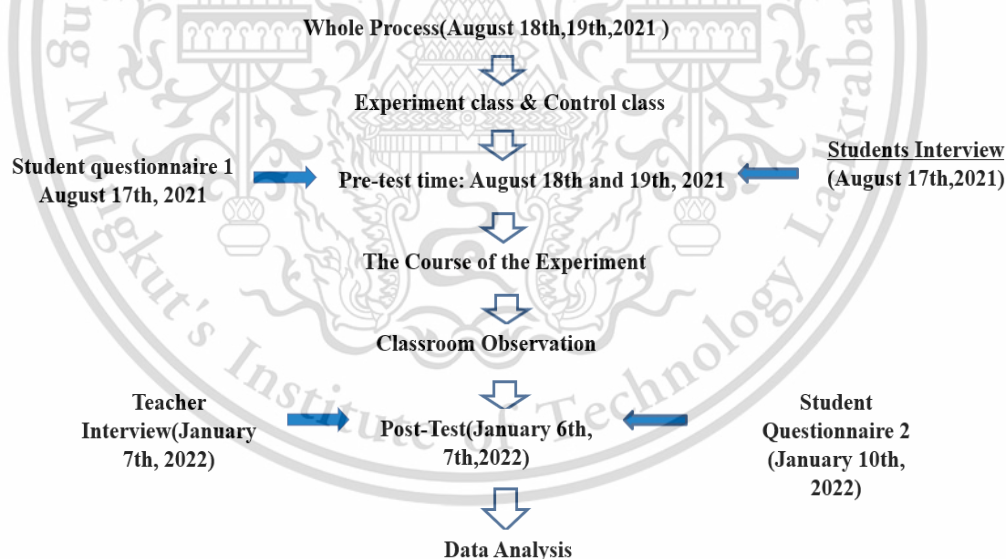


Figure 3.3 Experimental Procedure

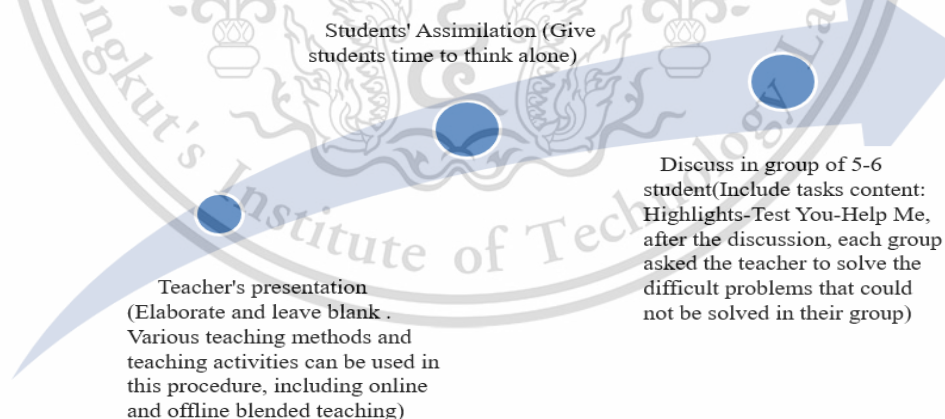
3.5.1.3 Teaching activities in experiments

Mr. Han, an experienced teacher of CLT in the university was selected as the teacher of the control group. Ms. Luo's class adopted the PAD class teaching method for the experimental class. The experiment has lasted 18 weeks. Ms. Luo's PAD class and Mr. Han's CLT class were used as the research objects. The main activities and conceptual framework are shown in Table 3.9.

Table 3.9 Main experimental activities

Completion time	Experimental group -PAD	Control group- CLT	Test time
Week 1	Through PAD class interaction teaching mode	Through CLT class	No class
	Complete the test and the pre-questionnaire (Include contents of Learning motivation, Learning strategy and Self-monitoring ability.)		
	Understand the outline and intended learning outcomes of the course		
Week 2-17	Presentation: Design well-structured lessons. Assimilation: Organize Students to absorb the contents (Give the students 5-10 minutes to read and understand what the teacher presented) Discussion: Organize students to do practice and share their opinions.	Listen to the notes, watch videos on line& complete talking tasks related the contents.	Before class
	1. Make adjustment to practice. 2. Meet diverse needs by making appropriate interaction accommodations. 3. Create a peaceful and happy teaching atmosphere.	Receive feedback and input from teachers.	In class
	Engage in reflective practice by discussion.	Discuss in groups & communicate with others	
	To talk freely online and mobile phones by QR platform	Self-complied content to chat with others	
Week 18	Submit works by diaries, blogs, tweets, WeChat comments, notes etc., and complete the post-questionnaire (Include contents of Learning motivation, Learning strategy and Self-monitoring & communication ability.)		After class

Figures 3.4 (experimental group) and 3.5 (control group) show some teaching process.

**Figure 3.4** Teaching process (experimental group)

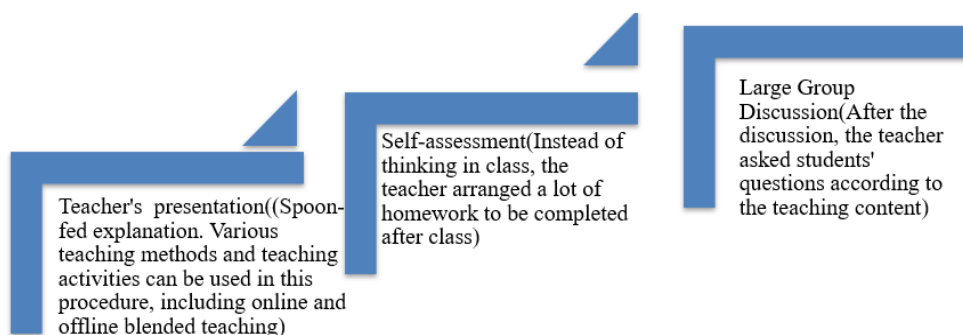


Figure 3.5 Teaching process (control group)

3.5.1.4 Teaching Contents

During the one-semester experiment, two teachers prepared their lessons separately and adopted different teaching methods according to their own teaching idea. Ms. Luo, the teacher of the experimental group, paid special attention to providing scaffolding, like P-presentation (teacher), A-assimilation (students), D-discussion (teacher and students), whereas Mr. Han instructed the whole class using the CLT teaching method, which mainly focused on how to impart the linguistic points, i.e., just “presentation, practice, and further practice” (Ellis, 1993).

The “Undergraduate Oral English” course had 4 class hours per week, 72 class hours over 18 weeks of one semester. The class schedule and teaching materials of the two groups of students were consistent, and the functions of pre class preview, student attendance, homework, questions, evaluation and so on were easy to be carried out on the online teaching platform, to ensure that teachers and students can communicate and answer questions at any time. The course description is shown in table 3.10 and Appendix 11 has a detailed content distribution.

The textbook, *New Vision University English One* (Ji, Wu, & Chen, 2021, audio decomposition version, 2nd edition) was adopted for this course.

Table 3.10 Description of Teaching Content

Week 1—18 (Units 1 to 5 were taken from Ji et al., (2021).

Period	Teaching period allocation	Teaching	Quiz	Assessment mode	Test
72		68	4	Credit	3
Teaching Content	Unit 1 Festival and Celebration	Unit 2 Friendship	Unit 3 Understanding Science	Unit 4 The American Dream	Unit 5 Work to Live or Live to work

3.5.1.5 Research Implementation

(1) Control group

The control group teacher mainly used the CLT teaching method. According to the undergraduate training program syllabus, the key and difficult points of each chapter are listed according to the teaching content, and the introduction and discussion of typical cases are designed. Each class was taught for 2 class hours. The teacher of the control class counted the progress, time and test scores of students in each chapter, using the online teaching platform before class, and evaluated the students’ learning situation.

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In class, about the teaching contents, teachers mainly taught according to the teaching plan, focusing on the key and difficult points of each chapter and the common problems;

In teaching methods, CLT teaching method was integrated including flipped classroom, case discussion and other teaching forms according to the contents of the chapter, for example, digital check-in, questions, answers, voting, quizzes, etc. were set up in the online platform to improve student participation enthusiasm and interest in learning.

After class, uploaded chapter related materials were uploaded on the online platform for students to find out and fill in gaps, and answer online or offline questions about personal learning problems that were not solved in class.

(2) Experimental group

The experimental class teacher adopted the PAD class combined with multi-interactive teaching mode (MIT), in which there are four basic links to form the PAD class mode, also known as the four elements teaching factors, which are: Concise presentation & leave blank space (P); independent learning & assimilation (A); group discussion (D); question and answer with teacher & students interactive (I). The detailed teaching process was:

Step One: Concise presentation and leave blank space (P)

In the first-class hour, the teacher gave concise lectures and instructions according to the teaching objectives and teaching contents of each chapter, and sorted out the main difficult knowledge, errors and confusion. The lecture no longer emphasized the comprehensive coverage of knowledge content, but did a guiding and framework lecture, focusing on the intensive lecture of highly concentrating and accurately grasping the knowledge of various disciplines; And paid attention to leave the simple content and detailed knowledge blank for students to summarize and study by themselves, to stimulate students' interest in learning and desire for knowledge exploration. According to the key points of teaching, arrange the internalization links of independent learning, reference cases, knowledge links and "Highlight -Test -Help" ("highlight" means "shining", which feeds back the students' achievements in class; "test" means "test you", which emphasizes the highlights of individual students' learning achievements; "help" means "help me") and thinking deeply. Which are the three elements of scaffolding guidance in the each progress, called 亮-考-帮 that can avoid aimless learning of students and focus on the learning & extension of teaching content.

Step Two: Independent learning & assimilation (A)

After 10~15 minutes in the second class, students were arranged to summarize the teaching content independently. Taking "Highlight -Test -Help" as scaffold of task framework.

Step Three: Group discussion (D)

The discussion session was set for 10 ~ 20 minutes according to the discussion content. According to the investigation of students' academic performance and enthusiasm before the course, the students were divided into groups randomly or manually according to the principle of equal distribution of good and bad on the PAD online platform, with 3-5 students in each group, and a team leader was set to ensure that each student has to speak. The discussion contented in the group focused on the "Highlight -Test -Help" "problem of each class, shared learning experience or answered questions to each other. "Highlight -Test -Help" "is a form of support in constructivism theory. During the discussion, students were given support and arrangement, so that the discussion content of students is guided by the support. At the beginning of the

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discussion, students no longer had nothing to say, and at the later stage, students properly organized group discussions and challenges after in-depth discussion. For difficult problems, students could post them in the online discussion area to solve, or discuss them in the message board. The teacher was responsible for praising and adding bonus points to improve students' participation.

Step Four: Question and answer with teacher & students interactive(I).

Question & answering was the last step of classroom learning, and it was also a link for students to share and strengthen their learning achievements. The teacher randomly checked 3~5 groups and organized students to ask questions freely, and students could share their harvest and feelings. They also raised unsolved puzzles or problems in the group discussion. According to the content of the problem, the teacher solved the problems in class or online after class, and summarized the key content.

3.5.2 Experimental Research Instruments

The research tools used in the study included ① classroom observation, ② interview, ③ questionnaire, ④ pre-test and post-test. Table 3.11 shows tools used to answer individual research questions.

Table 3.11 Research Instruments

Research Instruments	RQ 1	RQ 2	RQ 3
Classroom Observation and Recording	√		√
Interview	√		√
Pre-test and Post-test results		√	
Compare two groups Score	√	√	√
Questionnaire	√		√

For research questions and data sources, see Table 3.12.

The following are detailed introduction of the measurement instruments used in classroom observation, interview, questionnaire, pre-test, and post-test.

3.5.2.1 Classroom Observation and Recording Instruments

Given that the focus is on whole-class interaction, one important data source is the observation of the class and the actions of the participants in it. Classroom observation is a qualitative method of measuring classroom behaviors from direct observations. Observational data are useful as they afford the researcher the opportunity to gather "live" data from "live" situations. The researcher has the opportunity to look at what is taking place in situ rather than at second hand (Patton, 1990). This enables researchers to understand the context of programs, to be open-ended and inductive, to see things that might otherwise be unconsciously missed, to discover things that participants might not freely talk about in interview situations, to move beyond perception-based data (for example., opinions in interviews), and to access personal knowledge.

With the permission of the two teachers involved, two sets of recording equipment were used to record in an unobtrusive way. To better record the classroom discourse, two sets of recording equipment were used, one on the teacher's desk and the other on a desk surrounded by students. The two recorders guaranteed the clear recording of teacher-student negotiated interaction in the class: both recordings were transcribed. Usually the recording on the teacher's desk was used, while the one on the students' desk was used only to clarify students' voices.

Classroom observation and recording were used to provide answers to Research Questions 1 and 3. Classroom observations were used to illustrate the exact process of

teacher-student negotiated interaction in the class, to examine how the teacher provided scaffolded assistance at both word and sentence levels and to observe student responses towards this kind of scaffolding. From the observations, also it was hoped to identify some frequently used strategies the teacher adopted when providing scaffolding. Classroom observations were made regularly in both groups, without disturbing the normal class teaching so that they would operate naturally. The details of time line of classroom observations are in Table 3.12.

Table 3.12 Details of Time Line of Classroom Observation

Data	Teacher	Time Line
Classroom Observation	Ms. Luo (Experimental Group)	August 26 th , 2021 September 2, 9, 16, 23 and 30 th , 2021; October 14, 21 and 28 th , 2021; November 4, 11, 18, 25 th , 2021; December 2, 9, 16, 23 and 30 th , 2021
	Mr. Han (Control Group)	August 27, September 3, 10, 17 and 24 th , 2021; October 8, 15, 22, 22, 29 th , 2021; November 5, 12, 19 and 26 th , 2021; December 3, 10, 17, 24 th , 2021

For each observation, I sat in a corner of the classroom and took notes in an unobtrusive way. I never contributed to class discussions, nor did I participate in any small-group work over the course of the 18 observations.

Notes consisted of information regarding the sequence and records of activities that took place in each class. Another section of the notes for each class contained information about which student participated during the whole-class discussion, along with a calculation of the total number of scaffolding functions provided by the teacher. It is important to note here that I did not ask the teacher in both groups to modify their course syllabus or their normal teaching schedule in any way. To capture the nature of teacher-student negotiated interaction in the class under observation, I did not want to disturb the classroom culture or the existing rapport between the teacher and the students. While the presence of the researcher (and the recording equipment) most likely affected oral interaction at some level, care was taken to be as discreet and inconspicuous as possible. Transcription was an important part of the analysis: all the audio-taped data was transcribed. The conventions used followed Sinclair and Coulthard (1975). See Table 3.13 for recording instruments.

Table 3.13 Recording Instruments (Transcription Conventions)

Symbols	Description	focused	which needs to be negotiated
T	teacher	Italics italics are employed to indicate a word, phrase, or sentence	eeh/ ehm/mm Nonverbal sounds marking hesitation or positive affirmation

Table 3.13 (cont.) Recording Instruments (Transcription Conventions)

Symbols	Description	focused		which needs to be negotiated	
S	One student			Students	Several or all students simultaneously
...	(dots) pause			boldface	Sentences in boldface were parts of utterances being negotiated
[]	(brackets) description of relevant behavior				
()	(parentheses) actual functions of the scaffolding				
—	(underlining) words underlined were linguistic choice being				

3.5.2.2 Interview Instruments

There are two types of interviews in the present study. The interview questions are shown in Table 3.14. One is the students' interviews which are conducted before the experiment in order to know more about their English learning experiences. The other type of interview is teachers' interviews.

Table 3.14 Interview Questions

Student Interview	Teacher Interview
1. How long have you been studying English?	1. How do you generally describe the oral English course regarding the teaching goal and teaching method?
2. Where did you start to learn English, in the kindergarten, the primary school or the secondary school?	2. Which teaching method do you employ in your class, teacher-centered or learner-centered? What do you think of the effectiveness of group work and pair work activities?
3. Did you learn oral English when you began to study English? If yes, how did you learn it?	3. Compared with the group work or pair work, how do you evaluate teacher-student interactions?
4. How do you learn oral English now? Any successful experiences or depressing stories?	4. During the teacher-student interaction, do you consciously negotiate meaning and form with students to promote their participation and help them reach their ZPD (Zone of Proximal Development)?
5. How did you solve the problem when you encountered some difficulties in learning oral English?	5. What is more important to you in the oral English class, the meaning or the way they express themselves?

Table 3.14 (cont.) Interview Questions

Student Interview	Teacher Interview
6. How did your teacher help you learn oral English, particularly how to help you articulate your ideas?	6. In your view, to what extent should language be regarded as a tool for communication and a tool for thinking in English teaching at the university level?
7. If you are asked to design a mobile APP to help you practice your oral English, what functions would you like it to have?	7. As the focus of the course is to equip students with communicative competence, are there any special focuses on language output (accuracy, fluency, complexity) to meet the goal of this course?
8. Are you satisfied with the APP or educational technology tool you currently use? What are they? What features do you want it to have? Does this educational technology help you improve your spoken English?	8. What's your view of the role of teachers and students in the classroom interaction?
	9. In your opinion, what are the main problems in oral English teaching?
	10. Do you have any suggestions to improve the oral English teaching?

Both the student interview and the teacher interview are carefully audio-taped and transcribed immediately afterwards in relation to the questions designed for the interview. Both interviews are conducted in English. However, Chinese language is also permitted if the participant feels uncomfortable to express their thoughts in English. A digital recorder is used to record all the answers from the participants and transcribed into texts for analysis (See Appendix 4, Appendix 5.1 & Appendix 5.2).

Teacher and student interviews were qualitatively analyzed in section 4.1.2 and 4.1.3.

3.5.2.3 Pre-test and Post-test Instruments

A pre-test was used to determine the student proficiency prior to the treatment. The oral English testing was conducted on a computer: student oral recording files were stored onto disks and rated manually. The test included self-introduction, prompt question-answering, card question, group discussion and supplementary question answering. Oral English pre-test and post-test was shown in Table 3.15.

Table 3.15 Pre-test & Post-test

Pre-test	Post-test
Direction: This is the question of the oral English test. Today we are going to talk about environmental protection. My question is that what are the effective measures to protect the environment and why? You will have one minute to prepare and then finish your answer within 1.5 minutes.	Direction: This is the question of the oral English test. Today we are going to talk about smoking. My question is that in what ways does smoking do harms to us health? You will have one minute to prepare and then finish your answer within 1.5 minutes.

In order to answer Research Question 2, analytic units for oral performance and objective measures that measure the accuracy, fluency and complexity of student utterances were required. It is crucial to divide described data of the pre-test and post-test into units which are reasonable and logical to assess the accuracy, fluency and complexity of student oral production. Hunt (1970) introduced the notion of a “minimal terminal unit” (T-unit). He defines the T-unit as “one main clause plus any subordinate clause or non-clausal structure that is attached to or embedded in it” (1970: 4). According to Hunt, when a sentence is divided into T-units, it is divided into the shortest possible units that can be punctuated as sentences. Thus, T-unit is “minimal” and “terminable”. In linguistics, the term T-unit was coined (Hunt, 1965) It is defined as the "shortest grammatically allowable sentences into minimally terminable unit." Often, but not always, a T-unit is a sentence. The definition provides the criteria for dividing the transcripts of students’ oral English test into T-unit in order to assess students’ oral English proficiency in terms of accuracy, fluency, and complexity. The calculation is demonstrated in Table 3.16.

Table 3.16 Calculation Method of Accuracy, Complexity, Fluency

Type	Measurement	Calculation Method
Accuracy	proportion of error-free T-units to total T-units	error-free T-units ÷ total T-units
Complexity	mean number of words per T-unit	total number of words ÷ total
Fluency	ratio of total number of words to total time used to finish the task (minutes)	total number of words ÷ total minutes used to finish the task

Table 3.17 interprets the theories and measures for calculating accuracy, complexity, and fluency.

Table 3.17 Interpretation of the measures for calculating accuracy, complexity, and fluency

Type	Theoretical basis for Measurement	Interpret
Accuracy	In this study, the definition of error is in accordance with Zhang’s viewpoint (2002), that is, error is defined as the grammar violation or inappropriate use of words observed by the researcher based on Standard English.	when we calculate the accuracy, we exclude all the syllables, words, phrases that repeated, reformulated or replaced in the students’ oral performance.
Complexity	The major ones are from what Ellis and Barkhuizen (2005) label as interactional attributes of complexity, turns and words per turn, and another was what Ellis and Barkhuizen (2005) categorized as a lexical attribute of complexity, the type-token ratio.	Among the most reliable predictors of complexity in learners’ output, is used of the Mean Number of Words per T-unit in the present study.

Table 3.17 (cont.) Interpretation of the measures for calculating accuracy, complexity, and fluency

Type	Theoretical basis for Measurement	Interpret
Fluency	Fluency in task performance is calculated using temporal variables (e.g., amount of speech and pausing) and hesitation phenomena (such as, false starts, repetitions, and reformulations and replacements).	<ol style="list-style-type: none"> 1. Number of words produced per minute of speech: the number of words within each speech, divided by the number of minutes used to complete the task. 2. The calculation of fluency is different from that of accuracy and complexity. When we calculate the fluency, the errors, words, phrases, clauses that are repeated in the oral performance are not excluded. All the words, errors, phrases, clauses repeated are all counted in.

This study only focused on student individual oral English performance while dealing with the given task. For the sake of validity and reliability, the pre-test scores were assigned by a rater who was well familiar with the testing system and participated as an examiner in the CET 4 and Oral English Test many times following the Oral English Score Scales.

Post-test scores were also collected. The post-test was given in the final examination at the end of the semester, in the same form as the pre-test. The same rater scored both tests to ensure consistency. All the student participants, from both classes, took the computer-assisted oral English test to determine whether they improved within a single semester, regarding accuracy, complexity and fluency. Scoring Criteria are as follows:

(1) Vowel & consonant pronunciation; Word light and stress pronunciation; Correct grammar; Initial and final consonant clusters; The pronunciation skills such as continuous reading, explosion loss and weakening are accurate. Add 1 point for accuracy and no point for inaccuracy.

(2) Intonation; Fluency and accuracy; The content of question and answer questions is substantial and the discourse logic is accurate. Add 3 points for inaccuracy.

3.5.2.4 Unit testing topics

The Unit 1 to 5 test had two forms: case analysis (in the form of group discussion), and reflection notes (in the form of personal speech). It was evaluated from 50% basic memorization questions and 50% practical application questions; See Table 3.18 for unit test topics.

Table 3.18 Unit Test topics

Group	Episode	Topic
Experimental Group	1	Festival and Celebration
	2	Earthquakes
	3	Feelings
	4	Feelings
	5	About the Form in the Target Language

Table 3.18 (cont.) Unit Test topics

Group	Episode	Topic
	6	Festival and Celebration
	7	Read An Article About Feelings
	8	Feelings
	9	Feelings

3.2.5.5 Test measurement

There are two sets of Score Scales standards for this experiment, Score Scale A (shown in Table 3.19) was rated according to Yang, 1999, It is used to measure students' pre-test and post-test results, from Accuracy, Complexity, Fluency of oral English proficiency.

The second set of Score Scale B was shown in Table 3.20 to measure students' oral performance in Unit 1 to 5.

Table 3.19 Score Scales-A (From Yang, 1999)

Score Scale	Accuracy and Range	Size and Discourse Management
5	<ul style="list-style-type: none"> ① Basically, correct use of grammatical and lexical items. ② Adequate vocabulary and a fair range of grammatical structure for the given task. ③ Fairly good pronunciation though some residual accent is acceptable. 	<ul style="list-style-type: none"> ① The ability to produce extended and coherent utterances concerning the task, though with occasional pause due to word loss.
4	<ul style="list-style-type: none"> ① Errors in the use of grammatical /lexical items that do not seriously affect communication are acceptable. ② A basically satisfactory range of vocabulary to finish the given task. ③ Acceptable pronunciation. 	<ul style="list-style-type: none"> ① The ability to produce fairly coherent utterances, though most utterances are short. ② Frequent pause while organizing thoughts and searching for words, which sometimes impede communication.
3	<ul style="list-style-type: none"> ① The use of grammatical / lexical items may be incorrect and sometimes impede communication. ② Lack of a rich range of vocabulary and grammatical structure to deal with the oral task. ③ Pronunciation is incorrect and impede communication 	<ul style="list-style-type: none"> ① Short utterances. ② Long and frequent pauses while organizing and searching for words, which sometimes impede communication, though basically fulfilling the oral task.
2	<ul style="list-style-type: none"> ① Fairly larger number of grammatical and lexical errors that impede communication. ② Lack of lexical and grammatical structures that impedes communication. ③ Poor pronunciation that causes frequent breakdowns in communication. 	<ul style="list-style-type: none"> ① Short and disconnected utterances, which are difficult to follow, make the communication almost impossible.

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Table 3.19 (cont.) Score Scales-A (From Yang, 1999)

Scale	Description
A+ (14.5-15) A (13.5-14.4)	Be able to use English to communicate about familiar topics with no difficulty.
B+ (12.5-13.4) B (11-12.4)	Be able to use English to communicate about familiar topics, though with have some difficulties which do not impede communication.
C+ (9.5-10.9) C (8-9.4)	Be able to use English to communicate about simple topics.
D (7.9 and below)	Do not possess the communicative ability of oral English.
Scoring Criteria	
Vowel & consonant pronunciation; Word light and stress pronunciation; Correct grammar; Initial and final consonant clusters; The pronunciation skills such as continuous reading, explosion loss and weakening are accurate. Add 1 point for accuracy and no point for inaccuracy.	
Intonation; Fluency and accuracy; The content of question-and-answer questions is substantial and the discourse logic is accurate. Add 3 points for inaccuracy.	

The Unit 1 to 5 test was evaluated from 50% basic memorization questions and 50% practical application questions; See Table 3.18 for unit test topics. The single score adopts the 100 marks system, and the test scores are obtained from the online PAD Yi platform. The final exam was scheduled at the end of the course. The test time, content, and grading standards of the two groups of students were the same, the group teachers focused on marking scores, double checked the score entered the online system. Score scales rubric was referred to Table 3.20.

Table 3.20 Score Scales Rubric -B

Category	Scoring Criteria	Total Points	Score
Organization (15 points)	The type of presentation is appropriate for the topic and audience.	5	
	Information is presented in a logical sequence.	5	
	Presentation appropriately cites requisite number of references.	5	
Content (45 points)	Introduction is attention-getting, lays out the problem well, and establishes a framework for the rest of the presentation.	5	
	Technical terms are well-defined in language appropriate for the target audience.	5	
	Presentation contains accurate information.	10	
	Material included is relevant to the overall message/purpose.	10	
	Appropriate amount of material is prepared, and points made reflect well their relative importance.	10	
	There is an obvious conclusion summarizing the presentation.	5	

Table 3.20 (cont.) Score Scales Rubric -B

Category	Scoring Criteria	Total Points	Score
Presentation (40 points)	Speaker maintains good eye contact with the audience and is appropriately animated (e.g., gestures, moving around, etc.).	5	
	Speaker uses a clear, audible voice.	5	
	Delivery is poised, controlled, and smooth.	5	
	Good language skills and pronunciation are used.	5	
	Visual aids are well prepared, informative, effective, and not distracting.	5	
	Length of presentation is within the assigned time limits.	5	
	Information was well communicated.	10	
Score	Total Points	100	

3.6 Data Collection

For this study data collection is data triangulation, it involves studying the data from different perspectives (Brown, 2001). It also involves multiple sources and methods of data collection and investigators. Here, those sources included: tape-recorded data, interview, questionnaire, unit tests, pre-test and post-test. Multiple data sources were useful, because the information from the different sources was often complementary in explaining the phenomenon being studied. Also, data from different sources enabled verification or invalidation of preliminary findings and interpretation. See Table 3.21 for data collection:

Table 3.21 Data Collection

Research Questions	Data Sources
RQ1: What are the scaffolding effects of PAD class?	1. Observations and records of activities from teachers and students in the two groups, coded and classified. 2. Combine teachers 'interview results, questionnaire results, and compare two groups.
RQ2: How does PAD class influence students' oral English proficiency in terms of fluency, accuracy, and complexity?	1. Pre-test and Post-test results (Students' score) 2. Compare two groups' tests results.
RQ3: What strategies have teachers adopted in the PAD class mode?	1. Observations and records of activities from teachers and students in the two groups, coded and classified. 2. Combine students 'interview results, questionnaire results, and compare two groups.

3.7 Data Analysis

See Table 3.22 for data analysis

Table 3.22 Data Analysis

Research Questions	Data Sources	Data Analysis
RQ1: What are the scaffolding effects of PAD class?	<ol style="list-style-type: none"> 1. Observations and records of activities from teachers and students in the two groups, coded and classified. 2. Combine interview results, questionnaire results, and compare two groups. 	<ol style="list-style-type: none"> 1. Based on the results of classroom observation and interview, qualitative analysis was used to derive the characteristics and impact of scaffolding, and percentage quantitative analysis was used to compare the frequency of scaffolding use and effectiveness between the two groups. 2. The questionnaire results include both qualitative and quantitative analysis, use SPSS 26 to analyze. (Percent %)
RQ2: How does PAD class influence students' oral English proficiency in terms of fluency, accuracy, and complexity?	<ol style="list-style-type: none"> 1. Pre-test and Post-test results (Students' score) 2. Compare two groups' tests results. 	<p>The scores of the two groups were compared for final exam scores, chapter 1 to 5 tests, teaching evaluation scores, curriculum evaluation questionnaire, and independent learning ability scale, etc., and analyzed. SPSS 26.0 was used for data entry and analysis. Data was expressed as percentages and Descriptive, T-test, paired T-test, and analysis of variance χ^2 tests were used. Measurement data were expressed as $\pm s$, and t test was used to compare the two groups. $p < 0.05$ was considered as statistically significant.</p>
RQ3: What strategies have teachers adopted in the PAD class mode?	<ol style="list-style-type: none"> 1. Observations and records of activities from teachers and students in the two groups, coded and classified. 2. Combine interview results, questionnaire results, and compare two groups. 	<p>Descriptive analysis of questionnaire data using SPSS 26 both qualitative and quantitative analysis, use SPSS 26 (Percent %) to analyze.</p>

CHAPTER 4

RESULTS AND DISCUSSION

Based on the three research objectives:

(1) To describe the process of PAD class mode how the teacher provides scaffoldings and how students respond to the scaffoldings.

(2) To investigate how the PAD class mode to improve students' oral proficiency by fluency, accuracy, and complexity.

(3) To summarize the strategies the teacher used scaffoldings in PAD class mode.

This chapter conducts qualitative and quantitative analysis of the data, and draws conclusions and discussion directions for the three research issues:

RQ1: What are the scaffolding effects of PAD class?

RQ2: How does PAD class influence students' oral English proficiency in terms of fluency, accuracy, and complexity?

RQ3: What strategies have teachers adopted in the PAD class mode?

4.1 Results of RQ1:

What are the scaffolding effects of PAD class?

4.1.1 Analysis of Ms. Luo's class (Experiment group-PAD class)

Oral English instructional episodes are embedded in the broader instructional context of a classroom. Since the classroom is an institutional context there are educational practices that determine how instructional episodes proceed and what their typical organization is in that setting. Consequently, to be able to examine the process of classroom teaching the analysis of data from classroom observations needs to be looked at first. The purpose is to illuminate the general process of the classroom instruction by describing the detailed procedure of the classroom activity. The instructional episodes selected from the data of classroom observation and recording for in-depth qualitative study provide us with further

insight into the process of interaction PAD class and students' growth on using the target language with the help from the teacher.

The following analysis of Ms. Luo's classroom discourse focused on the interactive data between the teacher and students to illustrate how the teacher provides scaffolded assistance and how the students responded to the assistance.

4.1.2 Analysis of responses from Ms. Luo's interview

Ms. Luo was a 42-year-old middle-aged female teacher. She was enthusiastic, straightforward and highly motivated, always willing to learn and try new things in teaching. She had an interest in education theories and was reflective about her teaching practice. She read books on theories for her own interest and for her students, and she sought to develop a better understanding of what interaction PAD class teaching method meant. According to her, interaction PAD class mode was one that enabled students to participate in classroom interaction where socially and culturally defined constructions of self could be challenged. Ms. Luo regarded the classroom as a microcosm of the world with students coming from different backgrounds and cultures, with different oral English proficiency and personalities. In keeping with this view, Ms. Luo thought that her role as EFL teacher was not to

teach students the mechanics of the language, but also the skills and discourse with which students would be able to participate more meaningfully and thoughtfully in their future work or study. Ms. Luo combined her teaching beliefs with teaching. One of her teaching philosophies was that people needed to be able to take responsibility for what they did either as teachers or learners. For Ms. Luo, providing students with proper assistance was part of assuming responsibility for one's learning and work. She mentioned several times that students had to learn to be responsible for their own learning. Drawing on her own teaching experience, she regarded the scaffolding process in PAD class as a means of helping students become a responsible and independent learner.

In order to explore the nature of teacher-student interaction PAD class mode in the oral class where the teacher engaged, open-ended questions were adopted in order to know more about the teachers' views about the teaching method, the pedagogical techniques and the focus of oral English teaching. This section centered on the analysis of responses from Ms. Luo's interview (See Table 4.1).

Table 4.1 Miss Luo's Interview

Theme	Sub-Theme	Example of Quotation
Self-experience after PAD method	Helping students to be responsible and independent learner:	<i>"I also take the responsibility for my own work. I am always taking responsibility for my own learning. I was given independence early..."</i> . ((Ms. Luo's interview, January 7, 2022)
The process of negotiation	For engaging students in the process	<i>"In the oral English class, students are working in collaboration on a given task. It is fundamental to not only develop their language skills, but also developing their critical abilities, the critical thinking. Because the process of negotiation, with a group, engaging with one another's comments forces them to think and to speak in ways that they wouldn't if it was a more meaning-focused class."</i> (January 7, 2022)
		<i>"Because you facilitate classroom participation, and try to direct students' attention on meaning and form of the target language rather than giving them the correct answer, I think it is the best way to encourage students to involve in the classroom activity in order to help them develop their oral English proficiency."</i> (January 7, 2022)

Ms. Luo's beliefs about the teaching of oral English have been influenced by her professional training and her own experiences in learning to speak. Ms. Luo said that, she received some training in this University at a teaching seminar organized by the academic affairs office and became a teacher using interactive classroom teaching method. Judging from her experiences of learning to teach oral English and learning to express her ideas more accurately, Ms. Luo estimated that interaction PAD class mode was more feasible than any other method, she said: "interaction PAD class mode is the best way to teach EFL students oral English".

Ms. Luo also believed that the process of negotiation was more important than the mere emphasis on learner-centeredness. She stated that the interaction PAD class teaching method was the best for engaging students in the process of classroom involvement and discussion:

Since Ms. Luo emphasized importance of negotiation, I asked her whether students could learn and improve their oral English only by negotiation. Ms. Luo responded that students learnt not only by NOM but also by NOF. According to Ms. Luo, most of her students did not have any previous school experiences in practicing

their oral English. She reported that the students seemed to have been taught to be obsessive about complexity of sentence structure, rather than the accurate and fluent use of the target language. She admitted that her attitude towards oral English teaching made it difficult “to understand those students who look to me for the correct answers.”

4.1.3 Ms. Luo’s teaching practice in PAD class

4.1.3.1 Scaffolding in NOM

In the process of teacher-student interaction PAD class, the teacher always acts as an encourager or facilitator to mediate NOM, when Ms. Luo noticed the gap in the student’s comprehension of the target language. In the group discussion stage, the teacher facilitated the students through prompts and explicit explanation to negotiate the meaning. In Ms. Luo’s class, negotiation was mostly initiated by the teacher when she noticed that the student had difficulties in finishing the task. Students rarely initiated questions about meaning at word and sentence level.

(1) Scaffolding at word level

Episode 1 (See Table 4.2) was a transcribed case from the experimental group. The teacher and the students were talking about “Festival and Celebration”. Since there are many unfamiliar words or colloquial expressions when students want to express the special ways of celebration in their hometown, it is not easy for them to articulate their ideas smoothly. Under this circumstance, teacher’s scaffolding was necessary.

Table 4.2 Episode 1

Teacher or Students	Conversation Content	Qualitative Analysis
T	Today we are going to talk about Festival and Celebration. Since we have learned a lot of festival about foreign countries as well as China, now it is high time for us to talk about the special ways to celebrate festivals both in China and in foreign countries. Who wants to tell us something about it? (R)	In this episode, the teacher was not satisfied with the student’s answer. This can be indicated from her saying “sticky?” in her feedback and raising a subsequent question “what do you mean?” Neither was she satisfied with the student’s following answer.
Jane	I want to talk about the Dragon Boat Festival.	
T	OK. Do you want to introduce the way people celebrate Dragon Boat Festival? (R)	
Jane	Yes. First, I want to talk about the food people eat.	
T	Um. What do they eat? (R)	
Jane	They eat...something like dumplings.	
T	Can you describe it? (DM)	
Jane	It is made of rice, <u>sticky rice</u> .	
T	<i>Sticky?</i> What do you mean? Can you use other words to replace it? (F) (Pause)	
Jane	I mean something that tends to adhere.	

Table 4.2 (cont.) Episode 1

Teacher or Students	Conversation Content	Qualitative Analysis
T	Can you think one word which has the similar meaning? (DM) (Pause)	So she guided the student to focus on the meaning of the word and tried to elicit the correct answer and finally gave the idealized solution directly in the feedback. When the student said “Um” to show her comprehension, the teacher stressed the meaning again. At last, the student understood the meaning of the word.
Jane	Um.	
T	So , we may use the word “ <i>glutinous</i> ” to replace the word “ <i>sticky</i> ”. (D)	
Jane	Um.	

(2) Scaffolding at sentence level

Besides the scaffolding at the word level, during the classroom observation, we noticed that there was great amount of scaffolding at sentence level. Single word sometimes could not help us gain the whole meaning of one’s opinion, we need the correct sentence pattern to help us obtain what the other wanted to say. The following example illustrated how the teacher scaffolds student at sentence level during the interaction in the oral English class. The following episode is the discussion between a teacher and a student, they are talking about the grammatical problem the student made during his oral presentation.

Episode 2(See Table 4.3 and Table 4.4) was the data from the identified scaffolding episodes, which illustrated how the teacher scaffolds the student at sentence level. The teacher and the student in this episode were talking about earthquakes. The students had already finished the video watching about the earthquakes, then in the classroom, both the teacher and the students focused on the terrible damages caused by the earthquake. While discussing, the teacher noticed the student’s gap in the form of the target language and then she provided scaffolded assistance to help the students reach their potential ZPD.

Table 4.3 Episode 2

Teacher or Students	Conversation Content	Qualitative Analysis
T	Please tell me what is the video about?	From this episode, the importance of scaffolding to the language learning and teaching process could be sensed since it represents specific attempts not only to “push” students to use the target language receptively and productively, but also to help them to do so as accurately as possible.
Sam	Earthquake.	
T	So we all know the earthquake is very terrible natural disaster. And we also have experienced earthquake in 2008 in Wenchuan, Sichuan Province of China have not you?	
Sam	Yes, we have. We have seen a lot of people lose their lives.	

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Table 4.3 (cont.) Episode 2

Teacher or Students	Conversation Content	Qualitative Analysis
T	Yes, but some people survived. Look at these pictures [The teacher shows three pictures to the students]. The first one is Wenchuan middle school. The second one is Beichuan middle school and the third one is Sangzao middle school. We know these three middle schools are all in Sichuan Province. They all went through the terrible earthquake on May 12th, 2008. But look at the three pictures carefully, what happened to Wenchuan middle school, Beichuan middle school, and what do you think of the students in Sangzao middle school? (S)	Scaffolding took many forms: it took the form of question in order to direct the students' attention to the damages caused by earthquakes (what happened to Wenchuan middle school, Beichuan middle school, and what do you think of the students in Sangzao middle school?); it proceeded with another question that helped the student focus on pertinent information and thus made a decision on how to proceed next (In other words, how could we prevent the damages caused by the earthquake); it presented challenging problems and learning tasks that require higher-order thinking skills that provided meaningful opportunities for scaffolding (You say buildings that columns and beams are equal strength? It is not grammatically correct; can you correct it? At last, it performed the function of demonstration to help the student realize the correct expression. In this example, from the beginning to the end, the teacher used different ways to elicit students' responses, and the students provided active responses to the teacher's questions concerning the topic, for example: earthquake. Then it came to the individual student answering which seemed more challenging for him to carry on the dialogue with the teacher. Finally, after realizing that the student could not produce the correct sentence in the target language, the teacher demonstrated how the correct sentence was. By doing so, the student was guided to comprehend the meaning of the sentence successfully and knew how to produce the target form correctly.
Sam	[Brainstorming different ideas]	
David	All the buildings collapsed which caused many casualties.	
T	Can you say something more about it? In other words, how can we prevent the damages caused by the earthquake? (S)	
David	Build houses with strong structures, attach the cupboards to the wall, place heavy objects in the lower place, and...	
T	OK. You listed many things that we should make in order to prevent any damages during the earthquake. Why don't you use a sentence to illustrate your opinion? (DM)	
David	We should build strong walls, attach cupboards to the wall, and place heavy objects in the lower place.	
T	Um, do you know anything about the building structure that might prevent earthquake damages?	
David	To prevent property damage, architects now design buildings that columns and beams are equal strength.	
T	You say buildings that columns and beams are equal strength? It is not grammatically correct; can you correct it? [DM]	
David	Um... I don't realize the mistake. It should be ...	
T	It should be buildings <u>so that</u> columns and beams are of equal strength. Or buildings in such a way that columns and beams are equal in strength. [D]	
David	I know.	

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Table 4.4 Episode 3

Teacher or Students	Conversation Content	Qualitative Analysis
T	Yeah, why don't you start the sentence with solitude? Solitude? What will you say? Solitude...which... He begins with solitude in the sentence. So, what does the sentence mean? Do you remember? Solitude does what? (DM) (Pause)	This episode illustrated how the teacher guided Mary to clarify the meaning of the sentence in order to repeat it into a coherent one by using the target structure. The teacher initially directed the student's attention to the meaning of the sentence containing the word "solitude" and thus forcing Mary to elaborate on the intended meaning, and in progress, to use a relative clause to repeat the sentence. She asked Mary several "what" questions: "What will you say? She begins with solitude in the sentence. So what does the sentence mean? Do you remember? Solitude does what?" When Mary produced a general idea in his response ("solitude can get inspiration."), the teacher guided him to find out a detailed idea by referring to the previous sentence. After a pause, Jenny got the idea and expressed her idea. Then the teacher gave positive feedback towards Jenny's performance. Next, she demonstrated, the idealized version of the appropriate form. Then Student, Mary made self-regulation on the sentence by repeating the teacher's utterance with Jenny. Thus, Mary was guided to comprehend the meaning of the sentence successfully and produced the target form correctly.
Mary	Uh, solitude can get inspiration.	
T	Um, and it also... does what? It gives us solitude in which... You do remember, right? The sentence before it. But I want you to repeat it. What is that? So it says: solitude...which...	
Mary	Solitude which... (Pause)	
Jenny	Um, I think here the sentence means solitude can free their thoughts and ...	
T	Great. So solitude, it will give inspiration, and it will free thoughts. Great. That's what they did say. (F) So you could say: Solitude, which frees their thoughts without any disturbance, helps many poets get inspiration. (D)	
Jenny	Solitude, which frees their thoughts without any disturbance, helps many poets get inspiration.	

4.1.3.2 Scaffolding in NOF

During the process of attention on the form, the students noticed the target form before or after NOM. The interactive assistance, for example: scaffolding, from the teacher, was achieved by talking about linguistic terms, namely, using metalanguage to focus on the target form. The following episodes of classroom interaction illustrated how attention to linguistic forms as verbal assistance was achieved in the teacher-student negotiation. It showed how an expert (the teacher) encourages novices (students) to think about the form of the target language and how the novices get involved in the construction of the linguistic form when they receive scaffolding in their language development.

(1) Teacher acting as a facilitator and students acting as participants

Unlike the teacher-centered teaching mode, the PAD class mode focuses on the interaction between the teacher and students. In this kind of teaching setting, the teacher is mainly acting as a facilitator or an encourager, primarily arousing the students to focus their attention on the correct target form either at the initial stage, or in the middle, or at the end of the students' talk. The teacher maintains the direction of the task in a

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proper way by stressing the task requirements, highlighting features of the task, and providing prompts or hints in the feedback on the students' performance. On the other hand, the students work in greater independence, showing self-regulated behaviors through scaffolding among one another in the collaborative work.

The following episode illustrated how the teacher provided scaffolding and how the student responded to the scaffolding during the negotiation of form in PAD class. This example was also taken from the discussion about feelings (See Table 4.5).

Table 4.5 Episode 4

Teacher or Students	Conversation Content	Qualitative Analysis
Jun	<i>But living with others cannot make this.</i>	This episode of classroom interaction illustrated how attention to linguistic forms as verbal assistance was achieved in the teacher-student negotiation. It showed how an expert (the teacher) encourages novices (students) to think about the form of the target language and how the novices get involved in the construction of the linguistic form when they receive scaffolding in their language development. Teacher acting as a facilitator and students acting as participants Unlike the teacher-centered teaching mode, the PAD class mode focuses on the interaction between the teacher and students. In this kind of teaching setting, the teacher is mainly acting as a facilitator or an encourager, primarily arousing the students to focus their attention on the correct target form either at the initial stage, or in the middle, or at the end of the students' talk. The teacher maintains the direction of the task in a proper way by stressing the task requirements, highlighting features of the task, and providing prompts or hints in the feedback on the students' performance. On the other hand, the students work in greater independence, showing self-regulated behaviors through scaffolding among one another in the collaborative work. And when the students worked in collaboration on the form, the teacher acted as a facilitator at the beginning in order to prompt the students to notice the target structure that needs to be refined, and an encourager at the end of the discussion. When the teacher found the students (Jun and Tao) not noticing the target form, she prompted to maintain the direction of the discussion by elaborating the task requirement specifically ("You don't have to change every sentence. ... if you feel it need changing, you change it."). At this initial stage, she did not provide explicit reminders as she expected the students to develop the capacity to control or maintain the direction of the activity independently. Within the teacher's expectation, the students reached a consensus to keep the targeted sentence as original and proceed to pay attention to the target form.
Tao	I think that is fine with it. (F)	
Tom	Can it be shorter? (DM)	
Tao	How do you want to change it to? (DM)	
T	You don't have to change every sentence. It's up to you. If you feel it need changing, you change it. But if you feel it doesn't need changing, don't change it. (DM)	
Jun	OK. (F)	
Tom	Um. (F)	
Jun	It sounds... There's no need to put this sentence, because when you see the first sentence in the third paragraph. (F)	
<i>Another reason makes people choose solitude is that as any society has its good and bad sides. It seems that there is no need to put this sentence here. Right? (DM)</i>		
Students	[Laughter]	
Jun	<i>But living with others cannot make this.</i> (DM)	
Tao	I think that's fine. (F)	
Jun	You think? To keep this sentence? (F)	

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Table 4.5 (cont.) Episode 4

Teacher or Students	Conversation Content	Qualitative Analysis
Jun	Ok, keep that. Keep that sentence. Let's go... (F)	Then the students co-constructed the target structure of the sentence through feedback. Tao proposed the feature of the target form "which" ("I think I'll put which in between reason and makes"). Jun made a confirmation check on Tao's advice (Another reason which makes people choose solitude is that...). The utterance was compensated by Tao's demonstration ("... is that society has its good and bad sides"). But Student A made another confirmation check to express the uncertainty to take the form ("Is it necessary?"). In response, Tao gave positive evaluation on his own solution ("I think it sounds better.") and demonstrated the production in a complete sentence ("Another reason which makes people choose solitude is that society has its good and bad sides."). To some extent, Jun might notice the gap between the appropriate output and his current level of understanding. He accepted Tao's solution by ironically teasing his own English ("My English is not quite good so that I listen to you."). Meanwhile, Tao hinted that he crossed out the words "as any" in order to avoid redundancy and keep the whole sentence coherent ("I've cancelled out as any."). His response towards Jun's clarification requests elicited Tom's feedback and activated his ZPD. Therefore, Tom gave positive feedback ("Yes.") and made comprehension check on Tao's solution to show his understanding. Jun was also elicited to make another confirmation check on the sentence ("Another reason which makes people choose solitude...?"). Tao immediately compensated with the solution, which was evaluated by the teacher with positive feedback ("OK, good. That's it."). In a word, the students worked collaboratively to achieve coherency in the task discussion with the focus on the target form and reached some level of understanding on the use of target language through feedback.
Tao	<i>Another reason...which...I think I'll put <u>which</u> in between reason and makes.</i>	
Jun	<i>Another reason which makes people choose solitude is that...</i>	
Tao	<i>...is that society has its good and bad sides. (D)</i>	
Jun	Is it necessary?	
Tao	I think it sounds better. (F)	
<i>Another reason which makes people choose solitude is that society has its good and bad sides. (D)</i>		
Jun	Um. OK. My English is not quite good so that I listen to you. (R)	
Tao	Oh, don't!	
Tom	Yes. (F)	
Tao	I've cancelled out as any.	
Tom	<i>Is that society has its good and bad sides. (F)</i>	
Jun	<i>Another reason which makes people choose solitude...? (F)</i>	
Tao	<i>Is that society has its good and bad sides. (D)</i>	
T	Ok, good. That's it. So you've done a good job. (F)	

(2) Teacher acting as an advisor and student acting as advisees in PAD class

In the learner-centered classroom, on a few occasions, the dominance of teachers over students is also substantially demonstrated in the discursive practice of giving advice.

As knowledgeable and authoritative experts, teachers are supposed to be advisors or guide who give advice while as relatively ignorant and submissive novices, students are advisees who seek or are given advice. It is not surprising to find that during the classroom interaction, the teacher, taking the role as an advisor or supervisor, guided students to focus on the target form and produce correct form, when the students might have difficulties in handling the form appropriately or

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maintaining the direction of the task efficiently by themselves. The teacher provided supervision to activate the students' ZPD through explicit intervention in the students' talk and detailed elaboration on the use of the target form in corrective feedback. As a result, the students manifested some other-regulated behaviors on their production, albeit working quite passively.

The following is an episode (See Table 4.6) of teacher-student negotiation of the form in the target language. It was taken from the scaffolding episodes in which the teacher scaffolded the student on noticing the form in the target language. The teacher noticed the misuse of the grammar when the student expressed his idea, then the teacher provided scaffolded assistance.

Table 4.6 Episode 5

Teacher or Students	Conversation Content	Qualitative Analysis
Mary	What's wrong? What's wrong of the word <i>as any</i> ...? (F)	<p>This episode illustrated how the teacher provided scaffolding and how the student responded to the scaffolding during the negotiation of form in PAD class. This example was also taken from the discussion about feelings.</p> <p>Teacher acting as an advisor and student acting as advisees in PAD class</p> <p>In the learner-centered classroom, on a few occasions, the dominance of teachers over students is also substantially demonstrated in the discursive practice of giving advice.</p> <p>As knowledgeable and authoritative experts, teachers are supposed to be advisors or guide who give advice while as relatively ignorant and submissive novices, students are advisees who seek or are given advice. It is not surprising to find that during the classroom interaction.</p> <p>This is an episode of teacher-student negotiation of the form in the target language. It was taken from the scaffolding episodes in which the teacher scaffolded the student on noticing the form in the target language. The teacher noticed the misuse of the grammar when the student expressed his idea, then the teacher provided scaffolded assistance.</p>
T	Don't speak too long to discuss it, right?	
Students	[Laughter]	
T	It's not really focusing on the grammar here. (DM) You've, you've focused on the relative clause at the beginning of the sentence. Yeah. But, thank you. (F) I will leave that out. Leave <i>as any</i> . (D)	
Mary	OK, goes on. Let's go on. (DM)	
T	You can go on to talk about the next task. (DM)	

4.1.4 Analysis of Mr. Han's class (control group-CLT class)

This section follows the same format with Section 4.1.2 It gives a detailed description of Mr. Han's interview response and his teaching practice in the oral English class.

They have the same lesson as the students in Ms. Luo's class (the experimental group). The difference between the two groups lies in the teaching method. In this section, it analyzes the interaction between the teacher and students, with a special focus on the scaffolding function. The data from the classroom observation reveals that Mr. Han gives students a lot of time during the class instruction to facilitate each other to discuss the meaning of key words and the

meaning of sentence. Most of the time, one student might act as the facilitator, the other student might take a tutor's role to facilitate the interaction and encourage other students to elaborate their task. During the whole instruction, Mr. Han only gave instruction when the students asked for help or he noticed that it was impossible for them to finish the task. Otherwise, Mr. Han would not give any help. He let the students to scaffold each other.

4.1.5 Analysis of responses from Mr. Han's interview

Besides the analysis on responses from Ms. Luo's interview, the same interview was carried out to approach Mr. Han's teaching practice in the oral English class.

Mr. Han was a 38-year-old male with a considerably long period of teaching experience. He holds the Associate professor title. Mr. Han was also active in changing the pedagogical techniques and designed a variety of classroom activities in order to echo the University English Curriculum Requirements. During the interview, Mr. Han frequently stated that his main goal of oral English teaching is to help guide students through the process of carrying out an oral English task while also helping them to overcome any difficulties in expressing their ideas. Mr. Han said that he intended to walk students through the process of how to carry on the classroom discussion by teaching them some fixed sentence patterns they that would be useful in the communication. Mr. Han expressed that one way in which he addressed this goal was by explaining to student what the correct answer was. Mr. Han reported that compared to the various classroom activity, he preferred adopting some kinds of assistance when engaged students in the classroom discussion. Mr. Han also reported that in line with the university English curriculum requirements, he provided students with a lot of free time to finish the task on themselves. He helped students solve the difficulties by providing correct answers instead of eliciting the correct answer through implicit assistance. When asked about the importance he placed on oral participation in the class, Mr. Han stated that part of what he intended to promote was the active participation of students. In the interview, he said the following:

Students will speak more and show more. I understand it as this. In a class, the most centered is the students, but not the teachers who keep standing there, as if she or he was the moon surrounded by a myriad of stars, talking. The class should be filled with active involvement of the students and the teacher. (January 7, 2022)

Mr. Han's comment here and the description of his class teaching, he viewed students' participation as an important part of the teaching procedure. In other words, Mr. Han's intentions for getting students to participate in class discussion in his class were closely tied to the idea that integrating or responding to others' comments during the class discussion would help students not only to develop their oral language ability in English, but also to develop critical thinking abilities through reacting critically and analytically to others' negotiation. When asked about how he provided students with feedback regarding their participation in class discussions, he stated that he periodically gave students oral feedback that indicated their level of participation. While students' participation did count towards their final grade or final performance in the test, he indicated that it was not a problem for a particular student, then he did not focus on it because "I don't want them to catch up with the idea that they are being graded with what they are saying in class; especially if there is a lot of good discussion". Again, we see that Mr. Han's views of students' participation are still important contributions to the discussion.

4.1.6 Mr. Han's teaching practice

4.1.6.1 Scaffolding in NOM

In the control group, the students, controlling dominantly, scaffold each other through the collaboration. During the process of CLT class mode in the oral English class, most of the scaffolding was achieved by students. The teacher rarely initiated questions which directed the students' attention on meaning at both word and sentence level. To some extent, the student acted as a facilitator while the teacher acted as an observer.

(1) Scaffolding at word level

In experimental group, the students and the teacher talked about Festival and Celebration. In order to compare the differences between the two groups, the same topic was used to minimize the variables. Episode 6 was also about the topic "Festival and Celebration". The students in the control group came from different areas and they knew various ways to celebrate festivals in their hometown. The problem was that whether they could find accurate words to express their opinion and made others understood what they said.

After the brief introduction to the task, the teacher divided the students into groups and lets them work collaboratively to discuss the topic. He only observed the procedure of students' task completion. Episode 6(See Table 4.7) only focuses on one group among the students.

Table 4.7 Episode 6

Teacher or Students	Conversation Content	Qualitative Analysis
Hui	The topic is "Festival and Celebration", so which festival shall we choose to discuss?	In episode 6, the students discussed the topic "Festival and Celebration". They decided to talk about the Lantern Festival. Besides the traditional way of celebrating this festival, Tao and Jun also negotiated about the food people eat during the festival. Because of the differences in different areas, Jun could not understand the meaning of the words "sweet dumplings". As a response to Jun's confusion, Tao explained by saying that "the typical food people eat during the festival".
Jun	What about Lantern Festival?	
Tao	OK.	
Hui	OK. Then how do you celebrate the Lantern Festival in your hometown?	
Jun	I come from Sichuan Province. During the Lantern Festival, people in my hometown will go out to temples carrying paper lanterns and solve riddles on the lanterns.	
Tao	People in my hometown may eat sweet dumplings.	

Table 4.7 (cont.) Episode 6

Teacher or Students	Conversation Content	Qualitative Analysis
Jun	Sweet dumplings?	Then, Jun continued to request to clarify the meaning of the words “sweet dumplings”. Then, Tao continued to use simple word to clarify the meaning by saying “Tangyuan”. At last, Jun got the meaning by saying “You mean Yuanxiao”.
Tao	Yeah, sweet dumplings, the typical food during the Lantern Festival. (S)	
Jun	What’s the meaning of sweet dumplings?	
Tao	It means Tangyuan. (S)	
Jun	Oh, you mean Yuanxiao.	
Hui	Yes, they are similar, but people in different areas have different ways to name the similar things. (F)	
T	Good. (F)	

(2) Scaffolding at sentence level

This section focused on the scaffolding at sentence level in the control group. As usual, Mr. Han provided instructions about what was going to happen during the class. In other words, both the teacher and the students oriented themselves towards the task. (See Table 4.8)

Table 4.8 Episode 7

Teacher or Students	Conversation Content	Qualitative Analysis
T	Now open your own books, page 34. We are going to read an article about Feelings. After reading this article, what do you think the writer is going to say in the sentence: <i>Another reason makes people choose...?</i> (R)	In episode 7, the teacher facilitated the students to discuss about the feeling, for example: solitude. The task for students was to clarify the meaning of the sentence when the students worked together on combining the two sentences by using a non-finite relative clause. Initially, the teacher directed the students’ attention to the meaning of the sentence “After reading this article, what do you think the writer is going to say in the sentence: Another reason makes people choose....
Ying	<i>Everything has two sides.</i>	
May	Does it have any other meaning? (DM)	
T	I mean the sentence is not very clear. (F) How to make it clear? (DM)	
Chen	<i>Any society has its goods and bad sides that makes people choose solitude.</i> (D)	

Table 4.8 (cont.) Episode 7

Teacher or Students	Conversation Content	Qualitative Analysis
Ying	<i>Everything has two sides which makes people choose solitude. (D)</i>	When he noticed the gap in the students' knowledge, he scaffolded the student by giving feedback to the student's answer followed by a question. Then, the students worked collaboratively by giving two different sentences. After realizing that it was not easy for students to give the correct answer, he gave a direct answer instead of scaffolding the students further.
T	I think the sentence should be " <i>Any society has its good and bad sides, comma, which makes people choose solitude. (D)</i>	

4.1.6.2 Scaffolding in NOF

In the same way in other identified episodes, scaffolding in NOF in the control group will be analyzed. In the control group, the students help each other to notice the target form within their ZPD when they attend to the linguistic terms in collaboration through feedback and arrive at their own solutions on the form (See Table 4.9).

(1) Teacher acting as an answer provider and students acting as controllers

Table 4.9 Episode 8

Teacher or Students	Conversation Content	Qualitative Analysis
Yaya	<i>So many people would rather choose solitude, solitude, which they admire very much... (D)</i>	This episode shows that how the two students dominated the discussion. The teacher acted only as an answer provider when there was a need. During the discussion, Nan who acted as the more knowledgeable partner marked the problem of the target form produced by Yaya, although he failed to give the correct answer. At first, Nan made feedback and asked "And what?" to prompt Yaya to notice the form in the next sentence. Yaya changed her expression by using a more complex sentence structure. Nan continued to respond to Yaya's sentence by saying that "It sounds a bit strange". Because both failed to scaffold each other to obtain the correct answer in NOF, the teacher finally gave the correct answer and pointed the mistake made by Yaya.
Nan	<i>So many people would rather choose solitude which they admire very much. And what? (F)</i>	
Yaya	Um, <i>through which they can put more time on self-reflection. (D)</i>	
Nan	I am a bit confused about what you said towards the topic.	
Yaya	I mean <i>many people would rather choose solitude which they admire very much, which they can put more time on self-reflection. (F)</i>	
Nan	<i>...which they can put more time on self-reflection?</i>	
Yaya	Yeah.	
Nan	It sounds a bit strange, but I do not know what is wrong you're your expression.	

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Table 4.9 (cont.) Episode 8

Teacher or Students	Conversation Content	Qualitative Analysis
T	The problem of Yaya's expression is that she omitted the preposition "through". The sentence should be " <i>Many people would rather choose solitude which they admire very much, through which they can put more time on self-reflection</i> ". (D)	Under this circumstance, students were given considerable freedom to control the conversation by themselves with the teacher's intervention. The teacher played the role as an answer provider. Teacher acting as an evaluator and students acting as participants.

(2) Teacher acting as an evaluator and students acting as participants

Because of the popularity of CLT, the teacher's instruction in the control group was minimized to let students practice the task independently. This kind of teaching has both advantages and disadvantages.

The advantages: CLT provides more opportunities to students practice oral English in the setting created by the teacher which is similar to the situation in daily life and since the lack of teacher's instruction to some extent relieves students' anxiety.

The disadvantages: CLT may not provide students with formal instruction which is crucial for language learning. Since they are not native speakers and their English proficiency is not very high. Giving students too much free time is not conducive to providing students with more correct language expressions.

In the control group, during the interaction between the teacher and the students, most of the time, the teacher acts as an evaluator, he made comments on students' responses (See Table 4.10).

Table 4.10 Episode 9

Teacher or Students	Conversation Content	Qualitative Analysis
Liang	I will say <i>many people who want to put more time on self-reflection...and then, would rather choose living alone.</i>	In episode 9, when Liang demonstrated the relative clause introduced by the relative pronoun "who", the teacher made feedback to prompt the mistake in Liang's performance. As a result, Liang's positive response revealed that through the teacher's scaffolding, she could confirm the place of the conjunction. Finally, the teacher agreed with the student's solution through another feedback.
T	OK, tell me <i>who want to put more time on self-reflection?</i> (F)	
Liang	Yeah. In that case, um, I should combine the two sentences by adding a conjunction <u>and</u> .	
T	Yeah, <u>And</u> . So just take and there.	

4.1.7 Quantitative analysis of scaffolding

Scaffolding occurs during the teacher-student PAD class interaction process in the oral English class. How frequent is scaffolding and what is the frequency of each scaffolding function? Besides the general quantitative analysis of the classroom

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observation, this section also makes a comparison of the quantitative numbers between the experimental group and the control group in order to gain a full understanding of the differences which lie in the two different teaching methods.

4.1.7.1 Quantitative analysis of scaffolding episodes

Altogether sessions of classroom discourse were recorded with a total number of 843 scaffolding episodes. There were 585 scaffolding episodes in the experimental group which adopted the teacher-student interaction PAD class method.

In the control group, the scaffolding episodes were only 258. Table 4.11 shows the number and percentage of scaffolding in each group.

Table 4.11 Number and Percentage of Scaffolding Episodes

Group	Experimental	Control
Number	585	258
Percentage(n=843)	69.4%	30.6%

From the above table, the number and percentage of scaffolding episodes in each group are clearly demonstrated. From the interactive discourse in the experimental group, the scaffolding episodes accounts to 69.4%. On the contrary, scaffolding episodes in the control group often occupies 30.6%. Students in the experimental group received more intentional scaffolded assistance than the control group.

4.1.7.2 Quantitative analysis of scaffolding functions

In order to gain insight into the implementation of the 5 types of scaffolding function, the distribution and the occurrence of 5 types of identified scaffolding functions within the overall data from the two groups was analyzed.

(1) Distribution of each scaffolding function in total episodes

Table 4.12 illustrates the distribution of each scaffolding function in total scaffolding episodes adopted by the teacher when providing scaffolded assistance in the oral English classroom.

Table 4.12 Number and Percentage of Each Scaffolding Function in Total Episodes (n=843)

Function	R	S	DM	D	F
Number	101	73	192	221	256
Percentage	11.9%	8.7%	22.8%	26.2%	30.4%

(Note: R= Recruitment; S= Simplifying the task; DM= Direction maintenance; D=Demonstration; F=Feedback)

From Table 4.12, feedback (30.4%) ranked in the first place, such as feedback covered about a third of the scaffolding episodes throughout overall discourse. In contrast, simplifying the task occurred (8.7%) was rare in scaffolding episodes. The distribution of scaffolding functions indicated that feedback was the most critical function of scaffolding in the instructional interaction which led students to focus on the appropriate form of the target language.

Moreover, demonstration and direction maintenance were the other two striking features, which could also represent the nature of scaffolding during the teacher-student negotiated interaction by which students were guided to understand and fulfill the task during the classroom interaction.

(2) Comparing results of scaffolding functions in each group

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The following table moves our attention from the percentage of episodes in a macro sense to the occurrence of specific scaffolding function in each group. Tables 4.3 and 4.4 show the distribution of each scaffolding function in the experimental and the control groups.

Table 4.13 Number and Fraction of Scaffolding Functions
in the Experimental Group (n=585)

Function	R	S	DM	D	F
Number	82	45	145	135	178
Fraction	14.0%	7.7%	24.8%	23.1%	30.4%

(Note: R= Recruitment; S= Simplifying the task; DM= Direction maintenance; D=Demonstration; F=Feedback)

Table 4.13 describes the number and fractions of scaffolding functions in the experimental group. Feedback (30.4%) still ranked in the first place among 585 scaffolding episodes, with direction maintenance (24.8%), demonstration (23.1%), recruitment (14.0%) and simplifying the task (7.7%) following in the descending order. The numbers in Table 4.14 revealed that feedback was the most frequent scaffolding function among teacher-student negotiated interaction when the students are focusing their attention to the target form in collaboration.

Table 4.14 Number and Fraction of Scaffolding Function
in the Control Group (n=258)

Function	R	S	DM	D	F
Number	19	28	47	86	78
Percentage	7.4%	10.9%	18.2%	33.3%	30.2%

(Note: R=Recruitment; S=Simplifying the task; DM=Direction maintenance; D=Demonstration; F=Feedback)

From Table 4.14, we can observe that Demonstration (33.3%) occupies the highest percentage among the 258 scaffolding episodes in the control group. This can be seen as the evidence to echo the teacher interview in the previous chapter. Mr. Han from the control group said that due to the limited time, there was not enough time to provide more scaffolded assistance, he put more emphasis on the completion of the classroom activity instead of the quality of the task completion.

Although Mr. Han realized the importance of student-centeredness in the oral English class, he interpreted the essence of CLT as providing students with more freedom to finish the task themselves with occasional intervention from the teacher. During the classroom instruction, when scaffolding was needed, he provided Demonstration in order to save time. Besides the highest percentage of Demonstration in the control group, the second highest percentage is Feedback (30.2%), with Direction maintenance (18.2%), Simplifying the task (10.9%), and Recruitment (7.4%) following in the descending order.

From the quantity of the scaffolding functions in different groups among the overall data and in scaffolding episodes during the interaction PAD class, Feedback (F) is the most frequent scaffolding in the overall data. Besides, Demonstration, Direction maintenance, simplifying the task and Recruitment follow in the descending order. The results shows that Feedback is the critical feature of scaffolding among teacher-student interaction PAD class. On the contrary, the data analysis of the control group reveals

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that Demonstration ranks the highest percentage. The results correspond with the data from the teacher interview of Mr. Han concerning the teaching approach and his perception of oral English teaching in the EFL classroom.

4.1.8 Scaffolding effects in PAD class.

The statistic results suggest that students make significant progress in the two settings, among which the students in the experimental group seem to achieve more statistically significant progress in coping with the oral English task than those in the control group setting.

4.2 Results of RQ2:

How does PAD class influence students' oral English proficiency in terms of fluency, accuracy, and complexity?

The detailed statistical analysis was elaborated the three aspects concerning oral English proficiency.

4.2.1 Changes of accuracy

The following tables illustrate the changes of accuracy.

Table 4.15 Accuracy (Score Scales-A ,From Yang, 1999)

Test	N	Range	Descriptive Statistics		Std. Deviation	Variance
			Mean			
			Mean	Std. Error		
Pre-test on Accuracy in the Experimental Group	30	0.17	0.28	0.02	0.06	0.01
Post-test on Accuracy in the Experimental Group	30	0.23	0.38	0.02	0.07	0.005
Pre-test on Accuracy in the Control Group	30	0.17	0.28	0.02	0.06	0.003
Post-test on Accuracy in the Control Group	30	0.18	0.28	0.02	0.06	0.003

Table 4.15 illustrates the changes of oral English accuracy after the experiment. The mean score in the table clearly indicates that the students' oral English accuracy in the experimental group improved a lot which increases from 0.28 to 0.38. In contrast, the mean score of the students' oral English accuracy in the control group shows that students' oral English proficiency does not improve after one-semester instruction of CLT class mode. Compared to the similarities of the pre-test score of the two groups, the mean score of the post-test in the experimental group is significantly higher than that of post-test in the control group. However, in order to see whether these numbers are statistically significant, a more detailed paired samples test is needed. Table 4.16 demonstrates the detailed comparisons of the results between the two groups.

Table 4.16 Paired Samples Test of Accuracy

Comparison		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-test on Accuracy in the Experimental Group — Pre-test on Accuracy in the Control Group	-0.0	0.00	0.00	-0.002	0.000	-1.8	29	0.1
Pair 2	Post-test on Accuracy in the Experimental Group — Pre-test on Accuracy in the Experimental Group	0.1	0.03	0.01	0.078	0.128	9.7	29	0.0
Pair 3	Post-test on Accuracy in the Control Group — Pre-test on Accuracy in the Control Group	-0.0	0.00	0.00	-0.002	0.001	-0.9	29	0.4
Pair 4	Post-test on Accuracy in the Experimental Group — Post-test on Accuracy in the Control Group	0.1	0.03	0.01	0.078	0.128	9.8	29	0.0

As the above table shown, students' English proficiency concerning the accuracy before the experiment is similar (Sig.=0.1, $p>0.05$). On the contrary, the paired samples test indicates that the comparison between the post-test on accuracy in the experimental group and the post-test on accuracy in the control group is statistically significant (Sig.=0.0, $p<0.05$) which the new teaching method generates a positive impact on accuracy compared to the CLT class mode. Besides, comparisons within the two groups also show the positive result of the new teaching method. In the experimental group, students' oral English output is more accurate over one-semester instruction of interaction PAD class. However, students in the control do not make any improvement on accuracy.

4.2.2 Changes of complexity

The complexity was calculated according to the mean number of words per T-unit. Table 4.17 and Table 4.18 demonstrate the statistical result of the analysis on complexity.

Table 4.17 Statistic Description of Complexity

Descriptive Statistics						
Test	N	Range	Mean		Std. Deviation	Variance
			Mean	Std. Error		
Pre-test on Complexity in the Experimental Group	30	0.91	3.205	0.110	0.312	0.097
Post-test on Complexity in the Experimental Group	30	0.99	3.208	0.114	0.355	0.125
Pre-test on Complexity in the Control Group	30	0.98	3.203	0.114	0.350	0.123
Post-test on Complexity in the Control Group	30	0.94	3.205	0.117	0.330	0.109

Table 4.18 Paired Samples Test of Complexity

Comparison		Paired Samples Test						t	df	Sig. (2-tailed)	
		Paired Differences				95% Confidence Interval of the Difference	Lower				Upper
		Mean	Std. Deviation	Std. Error Mean							
Pair 1	Pre-test on Complexity in the Experimental Group — Pre-test on Complexity in the Control Group	-0.003	0.49	0.02	-0.038	0.043	0.1	29	0.9		
Pair 2	Post-test on Complexity in the Experimental Group — Pre-test on Complexity in the Experimental Group	-0.008	-0.04	0.01	-0.041	0.026	-0.5	29	0.0		
Pair 3	Post-test on Complexity in the Control Group — Pre-test on Complexity in the Control Group	0.003	0.02	0.01	-0.017	0.022	0.3	29	0.8		
Pair 4	Post-test on Complexity in the Experimental Group — Post-test on Complexity in the Control Group	-0.008	0.06	0.019	-0.053	0.038	-0.4	29	0.7		

From the mean score in Table 4.19, it was shown that the students' oral output concerning complexity in the experimental group increases slightly from 3.205 to 3.208, and the control group increased slightly also from 3.203 to 3.205. Two groups' statistical significance numbers increased slightly in both experiment and control groups. And it was through the analysis of paired samples test of Table 4.9 that it was known more about the effectiveness of teacher-student interaction PAD class mode on complexity. Compared to the positive impact of PAD class mode on accuracy, the new teaching method also generate a little positive impact on complexity in the experimental group (Sig.=0.0, $p < 0.05$). Meanwhile, students in the control group of CLT class mode make a little bit improvement on complexity.

4.2.3 Changes of fluency

Regarding fluency, the measure used to assess fluency in students' oral production is that the ratio of total number of words to total time (minute) used to finish the task. Table 4.19 illustrates the statistic description of the test scores on fluency.

Table 4.19 Statistic Description of Fluency

Descriptive Statistics						
Test	N	Range	Mean		Std. Deviation	Variance
			Mean	Std. Error		
Pre-test on Fluency in the Experimental Group	30	39.69	51.22	4.73	13.4	179
Post-test on Fluency in the Experimental Group	30	42.30	60.12	5.01	14.2	201
Pre-test on Fluency in the Control Group	30	39.39	51.41	4.87	13.8	190
Post-test on Fluency in the Control Group	30	39.18	51.44	4.84	13.7	188

In Table 4.19, the mean score of the pre-test on fluency in both the experimental group and the control group is 51.22 and 51.44 respectively. The mean score of the post-test is 60.12 and 51.44, the experiment group higher than that of the pre-test and the control group slightly higher than that of the pre-test which indicates that students under different teaching methods all make some improvements on fluency.

Table 4.20 Paired Samples Test of Fluency

Comparison		Paired Samples Test							
		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Lower	Upper								
Pair 1	Pre-test on Fluency in the Experimental Group — Pre-test on Fluency in the Control Group	-0.2	1.2	0.4	-1.6	0.8	-0.5	29	0.6
Pair 2	Post-test on Fluency in the Experimental Group — Pre-test on Fluency in the Experimental Group	8.9	4.0	1.4	5.5	12.3	6.35	29	0.0
Pair 3	Post-test on Fluency in the Control Group — Pre-test on Fluency in the Control Group	0.0	0.1	0.05	-0.1	0.1	0.6	29	0.5
Pair 4	Post-test on Fluency in the Experimental Group — Post-test on Fluency in the Control Group	8.7	4.5	1.6	4.9	12.5	5.4	29	0.0

Table 4.20 shows that students in the experimental group achieves significantly higher score (Sig.=0.0, $p < 0.05$). While the comparison of the post-test and pre-test on fluency in the control group shows that there is no statistical significance (Sig.=0.5, $p > 0.05$). The teacher-student interaction PAD class is effective in improving students' oral production in terms of fluency, which is indicated in Table 4.11 (Sig.=0.0, $p < 0.05$).

4.3 Results of RQ3:

What strategies have teachers adopted in the PAD class mode?

The student questionnaire consists of many five-scale question items ranging from 5, strongly agree, 4, agree, 3, neutral, 2, disagree and 1, strongly disagree. There are four aspects in the questionnaire: what is happening in the oral English classroom in students' eyes (questions 1, 2, 3, 7, 12); students' evaluation of what's happening in the classes (questions 4, 10, 15, 19, 20); students' views on classroom teaching and learning (questions 5, 6, 8, 9, 11); and students' expectations of classroom teaching and learning (questions 13, 14, 16, 17, 18). The questionnaire was distributed to the students after the experiment at the end of the semester in order to gain a holistic view of their evaluation of the oral English teaching methods. The students finished the questionnaire in the classroom. Then, 60 questionnaires were collected and these questionnaires were checked manually to find out whether they were any missing responses.

The multi-functions of SPSS 26.0 in generating the automatic calculations were applied to obtain statistical data for the analysis. Each of the five scale choices of each question was counted and converted into percentage according to the number of students involved.

4.3.1 Analysis of students' questionnaire.

Table 4.21 demonstrated the general quantitative description of the the trends of participants' perceptions questionnaire.

Table 4.21 Questionnaire Summary

Factors of Evaluation	Items	Degrees of Evaluation				
		Strongly agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly disagree (1)
What is happening in the oral English classroom?	5	135	45	15	75	30
Evaluation of what is happening in the classroom	5	90	150	0	60	0
Students' views on classroom teaching and learning	5	45	120	30	90	30
Students' expectations of classroom learning and teaching	5	45	135	0	45	75

Table 4.21 summarizes the general quantitative description of the questionnaire results. Altogether question items concerning four aspects: what is happening in the oral English classroom, evaluation of what is happening in the classroom, students' views on classroom teaching and learning, and students' expectations of classroom learning and teaching. Regarding the four aspects, most of the students choose the answer agree or strongly agree. It is noteworthy that many participants applaud the teaching method in the oral English class despite the different teaching methods adopted in the two groups. Compared to the teaching methods in their senior high school, they seemed content with the current teaching method.

4.3.2 Comparing results of the two groups.

Although the general quantitative description has shown that a majority of students had positive attitudes (agree or strongly agree) towards the classroom language teaching and learning, the detailed differences between the experimental group and the control group were not known. In order to gain a holistic picture of the differences, a comparing analysis of the results of each group is conducted.

4.3.2.1 Analysis - first aspect: what is happening in the class?

Table 4.22 Responses to the First Aspect

Choices	Experimental group		Control group	
	Number	Percentage	Number	Percentage
Strongly agree	90	50%	45	37.5%
Agree	30	16.7%	15	12.5%
Neutral	0	----	15	12.5%
Disagree	60	33.3%	15	12.5%
Strongly disagree	0	----	30	25%

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The first aspect consists of five question items concerning the teaching method in each group. From Table 4.22, the majority students of the experimental group and the control group think that it is important to adopt the student-centered teaching method. At the university, the undergraduate English teaching is characterized by the small number of students in the class, use of multimedia and task-based approach which guarantees the quality of student-centeredness. Students have a totally different teaching methods they had in their senior high school. Moreover, the ELT in the senior high school is to pass the university Entrance Exam rather than cultivate students' communicative competence. Therefore, when students came to the English class in the university, they felt that it was very interesting and could attract their attention.

4.3.2.2 Analysis - second aspect: evaluation of what is happening in the class.

Table 4.23 Responses to the Second Aspect

Choices	Experimental group		Control group	
	Number	Percentage	Number	Percentage
Strongly agree	25	41.3%	17	28%
Agree	30	50%	31	51%
Neutral	0	--	0	--
Disagree	5	8.7%	12	21%
Strongly disagree	0	--	0	--

Table 4.23 shows the differences between the two groups regarding the evaluation of the teaching method in their class. 91.3% of the students in the experimental group hold the positive attitude towards the teaching method in their classroom, while in the control group only 79% of the students agree with the teaching method adopted by their teacher. The responses to the third aspect of the questionnaire indicate that the interaction PAD class is more helpful for students to improve their oral English. The communicative approach in the control group only focuses the importance of interaction between students, neglecting the importance of the roles the teacher plays in the classroom instruction. According to Vygotsky's SCT, the learner's development goes through other-regulation to self-regulation.

Considering students' language proficiency, without the assistance from morecapable others, any significant development was not made.

4.3.2.3 Analysis of third aspect: students' views on classroom learning and teaching

Table 4.24 Responses to the Third Aspect

Choices	Experimental group		Control group	
	Number	Percentage	Number	Percentage
Strongly agree	36	20%	9	6.7%
Agree	108	60%	12	8.9%
Neutral	9	5%	21	15.5%
Disagree	18	10%	72	53.4%
Strongly disagree	9	5%	21	15.5%

The third aspect of the questionnaire is about students' views on classroom learning and teaching. From Table 4.15, 80% of the students in the experimental group seem content with the current teaching method, and they think that interaction PAD class is beneficial for their English improvement compared with 15.6% in the control

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group think highly of interaction. The result clearly shows that the new teaching method contributes a lot to students' oral English improvement.

4.3.2.4 Analysis of fourth aspect: student expectations of language learning and teaching

Table 4.25 Responses to the Fourth Aspect

Choices	Experimental group		Control group	
	Number	Percentage	Number	Percentage
Strongly agree	39	17.1%	6	8.4%
Agree	117	51.3%	18	25%
Neutral	0	--	0	--
Disagree	12	5.3%	33	45.8%
Strongly disagree	60	26.3%	15	20.8%

The last aspect of the questionnaire is about students' expectations of classroom learning and teaching. Table 4.25 indicates that most of the students confirm that the new teaching method is in accordance with their expectations. In the control group, most students do not think the teaching method is what they expect because most of the time, they are allowed to finish the task themselves. So, conclusion can be made that teacher-student interaction PAD class is more popular with the students than the communicative approach. Based on the analyses of the results of the questionnaire, a conclusion can be drawn that the new teaching method is more ideal than the communicative approach.

4.3.3 Analysis of students' interview

4.3.3.1 Students' background information of English learning

The first two questions are concerned with students' duration of learning English and classroom setting where they first learned English. As is shown in Chapter Three, from the introduction of participants' information, we know that among the 60 subjects, 24 students (40%) started to learn oral English in the kindergarten. Thus they have learned English for almost 15-16 years. The other 60% of the subjects began to learn English as a compulsory course in primary school.

Therefore, they had learned English for about 9-14 years. Although the students have different duration in learning English, they reported that in consensus that all of them did not start to have formal oral English class until they studied systematic English courses in the secondary school. The responses from the student interview may account for their active participation in the oral English class activities. Because of the new teaching method of oral English, students found that it was totally different from along the way they learnt in the secondary school.

4.3.3.2 Oral English learning method

The interview question 3 and 4 explores the ways of learning oral English the students adopted at the initial stage of learning English and in current stage. All the students admitted that they rarely paid attention to oral English when they first learned English. At the beginning, they learned English through children's songs, games, and simple drills on daily conversations. It seems that the students acquired the sentence pattern by dull drilling other than by the scaffolding provided by the teacher in PAD class mode. It was from the secondary school that the students were fully involved with the systematic learning of oral English, even those who started learning English in the kindergarten. 80% of the student participants (48

students) recalled that they learned oral English by memorizing some sentence patterns and some words. For the other students, some reported that they never spent energy on oral English since it is not included in the university Entrance Exam. Still others regarded themselves as passive learners in oral English because they thought they learned how to use English in real life from learning how to express ideas from English newspapers, films or radio programs instead of practicing conversation with partners in the classroom. Only 25% of the subjects (15 students) admitted that they achieved success in articulating their ideas through the years of study, but the other 75% (45 students) still regarded oral English as the biggest obstacle for acquiring appropriate English in their academic studies.

4.3.3.3 Students' attempts in coping with difficulties in learning oral English

The responses to question 5 in the interview revealed the students' attitudes and attempts in coping with difficulties when learning oral English. Most students held that the process of learning oral English was tough and they just referred to memorizing words and sentence patterns and inquiries from teachers, learners with higher proficiency in English, when they encountered difficulties in learning how to articulate their ideas. Usually, they found a correct answer on how to express their ideas and then try to memorize it and repeat it when they encountered the problem the next time. When they notice the difficulty that could not be resolved by themselves, they would resort to help from other students and teachers.

4.3.3.4 Students' evaluation of teachers' helps

The interview question 5 and 6 attempted to investigate the teacher's practice in helping the students learn English in the classroom setting. The answers showed that all the students did not like the way their teachers taught oral English in class. Their teachers gave dialogue examples and sentence patterns and focused on drilling much more than the application in genuine communication context.

Undoubtedly it led to little interest from the students and resulted in slow progress in students' oral English proficiency. Taking the three measures of language proficiency as an example, the teachers most of time failed to keep a balance among the three measures. They often emphasized one measure, for instance, fluency, and neglected the other measures. This resulted in the dull practice in the class.

The seventh and eighth questions in the interview concerned educational technology aids. 100% of the students have mobile phones and computers, but only 50% used mobile APPs and computers to help them learn English. Among the 50% of the students, the common technical tools were used to memorize English words, watching English videos through WeChat, and PAD Yi platform, which are sometimes required by teachers. Technical tools were not widely used.

In addition to the analysis of the classroom observation, the student and teacher interviews in this chapter also help us better understand the results of qualitative analysis. On the one hand, the data from the student interview complement the analysis of the classroom observation. The students' answers to the interview questions concerning English learning, the way of English learning, attempts in coping with difficulties in learning English and their evaluation of the teacher's practices in helping them learn English can account for their performance in the oral English class and their responses to the teacher's scaffolding.

On the other hand, the data from the teacher interview details their different views of oral English teaching method and the teaching method adopted by them in the oral English class. The different views lead to the different results of classroom observation analysis and the different scaffolding strategies adopted by the two teachers.

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4.4. Discussions

4.4.1 Discussions for RQ 1

The present study contributes to the research on scaffolded assistance during the process of interaction PAD class mode in examining how the scaffolding provided by the teacher helps to extend the students' ZPD and facilitate language learning. The issue of interaction PAD class mode and scaffolding has been the center of many discussions regarding language learning.

In line with the previous study (Lyster & Ranta, 1997), students' errors can be corrected using different strategies during the interaction PAD class, which do not always have to be explicit. Importantly, in order to gain insights concerning the interaction PAD class mode and scaffolding, this study took account of the ongoing process and approached foreign language learning as a joint activity between the teacher and students. In contrast to previous study on corrective feedback within other approaches during the interaction (Chaudron, 1988) PAD class mode, this study within Vygotskian SCT demonstrated that any type of corrective feedback could be relevant to the teaching learning process if negotiation between the participants and provided within the learner's ZPD.

In the sociocultural perspective adopted, language learning is taken as a mediated process (Lantolf, 2006). In the study, scaffolded assistance during the interaction PAD class and language learning depends crucially on mediation provided by other individuals, who jointly with the learner dialogically co-construct the ZPD that the task represents for the learner. There may be different ZPD for different learners and for different tasks (Aljaafreh & Lantolf, 1994). Learning emerges as the result of interaction within the ZPD. In the ZPD the learner may move through stages of object-and other-regulation to complete self-regulation, thus becoming capable of solving problems independently (Wertsch, 1991). During the mediated activity the learner internalizes and appropriates features of the target language through social interaction within the teacher. From this viewpoint, learning is something the learner does without assistance. Rather, as Lantolf (2006) points out, it is a collaborative endeavor necessarily involving assistance, or additional mediation. This additional mediation may come, for example, from another individual or "from integration of an artefact, such as a computer, into the particular activity" (Lantolf, 2006).

Scaffolded assistance during the interaction PAD class process was a particular kind of social interaction, consisting of those supportive behaviors by which the teacher can help students achieve higher levels of regulation. During the process of interaction PAD class, the teacher creates "supportive conditions in which learners can participate and extend their current skills and knowledge to higher levels of competence" (Donato, 1994).

In the present study, scaffolded assistance during the interaction PAD class was taken to consist of different strategies adopted by the teacher in assisting students through oral English tasks. Scaffolding is a joint process that is constructed because of the students' needs. It refers to a collaborative process in which the teacher and the student cooperate within the student's ZPD. More specifically, scaffolded assistance is negotiated as an "online" joint effort in a social interaction between the teacher and students (Aljaafreh & Lantolf, 1994).

By viewing scaffolded assistance during the interaction PAD class as a joint activity, it was possible to demonstrate the full extent of the students' participation in the process and the negotiable nature of the activity. In line with the previous studies (Aljaafreh & Lantolf, 1994; NaStudentsaji & Swain, 2000), the analysis of the classroom discourse

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also showed the responsive nature of scaffolded assistance when provided according to the notion of the ZPD. In other words, the teacher adjusted her scaffolding strategies to the level of the students' needs as it emerged in negotiations. The teacher also provided assistance only when it was needed. This finding supports the results of previous studies within a Vygotskian perspective, which demonstrated that the teacher could use both explicit and implicit strategies successfully to assist learners in language learning (Aljaafreh & Lantolf, 1994). In the tasks in which the students were not yet completely self-regulated the students needed to be scaffolded during the negotiation. The teacher's scaffolding strategies promoted the students' language learning while with the help of the teacher's scaffolded assistance, the students were able to carry out tasks they would not have been able to complete on their own.

The study showed how the teacher's different strategies helped the students first to concentrate on one part of the problem at a time, and in the end to join different parts together and to complete the target structure. Scaffolded assistance was given in an interactive way and it was greatly determined by the students who were active participants in the activity. The analysis thus demonstrated the importance of the joint social activity and the value of the scaffolded assistance during the interaction PAD class given by others for language learning.

Moreover, PAD Class Mode has formed a "four-Steps teaching" elements mode based on scaffolding, which effectively divides the responsibilities and rights of teachers and students in class. The host of teacher's lecture and teacher's Q&A is teacher, which is the common teaching for the whole class. Students' independent study and group discussion are student-centered to achieve personalized learning. The specific use of teaching process and teaching platform is shown in the following as shown in Figure 4.1:



Figure 4.1 Control and responsibility rights In the PAD class Mode

4.4.2 Discussions for RQ 2

The Research Question 2 in this study explores how the teacher-student multi-negotiated interaction PAD class influences students' oral English proficiency in terms of accuracy, fluency and complexity. Like many other students mentioned in Chapter Two (Swain & Lapkin.1998), the findings of this study also have shown that interaction PAD class in the oral English classroom offered more opportunities to negotiate meaning and form at both word and sentence level which in turn generates a positive impact on students' oral English proficiency.

In fact, there are some differences in details between the two teaching methods. For example, in the discussion stage, the experimental group has scaffolding support, and there is an extra stage before the discussion which is Assimilation stage (marked in red), as shown in Figure 4.2 below. During the discussion, the teacher uses

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scaffolding support to put forward the discussion framework, while the control group lacks a pre discussion thinking process, and the guidance provided by the teacher during the discussion is not regular, which leads to the discussion effect of the experimental group is better than the control group. See Figure 4.2 and figure 4.3 for the discussion process of the two groups:

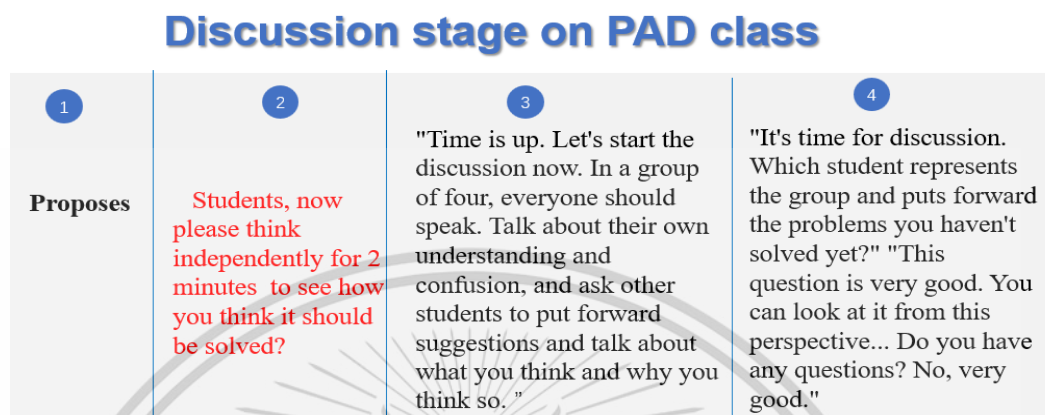


Figure 4.2 Discussion stage on PAD class

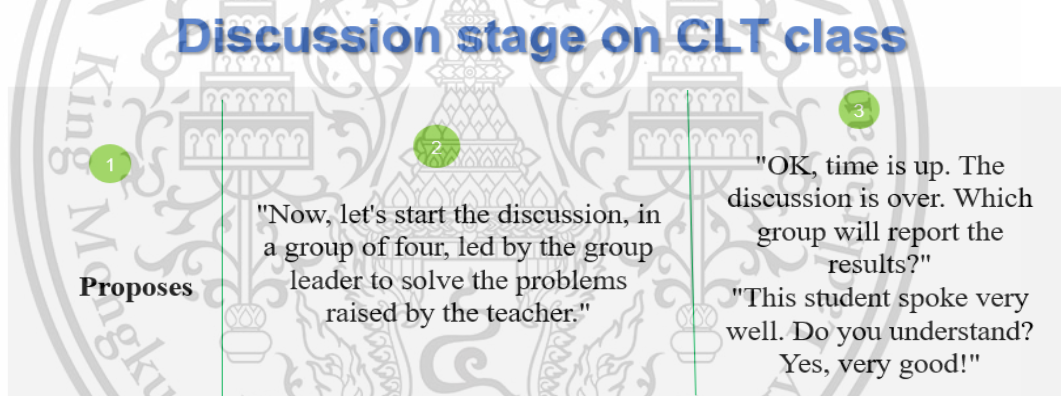


Figure 4.3 Discussion stage on CLT class

4.4.3 Discussions for RQ 3

From the analysis of the class discourse, it was a viable framework for investigating the teaching-learning process during the oral English instructional episodes in the class setting. In the class situation, the teacher used various strategies in providing the learners scaffolding during dependent exchanges. The teacher has adopted various strategies corresponds to the findings of the study by Greenfield (1984), which scaffolding: creates support:

- functions as a tool;
- expand the range of the learner;
- permits the learner to achieve a task he would not be able to achieve otherwise and is used selectively to help the learner where needed.

In order to gain insight into how the teacher's strategies scaffolded the students, the features of scaffolding as defined by Wood et al. (1976) were related to the strategies used by the teacher in the present study. These features were found to be present in the

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teacher's use of various strategies in scaffolding language learning and participation. The definition of scaffolding turned out to be general enough to apply to a context different from the original one-to-one tutorial situation. Overall, the original scaffolding features as described by Wood et al. (1976) were found useful in illuminating the teacher's strategies in an EFL classroom.

Based on these theories, PAD Class mode formed a four-step teaching theory, with each link closely connected. Its implementation steps are scientific and can bring good reference to the teaching of various disciplines - see Figure 4.4.

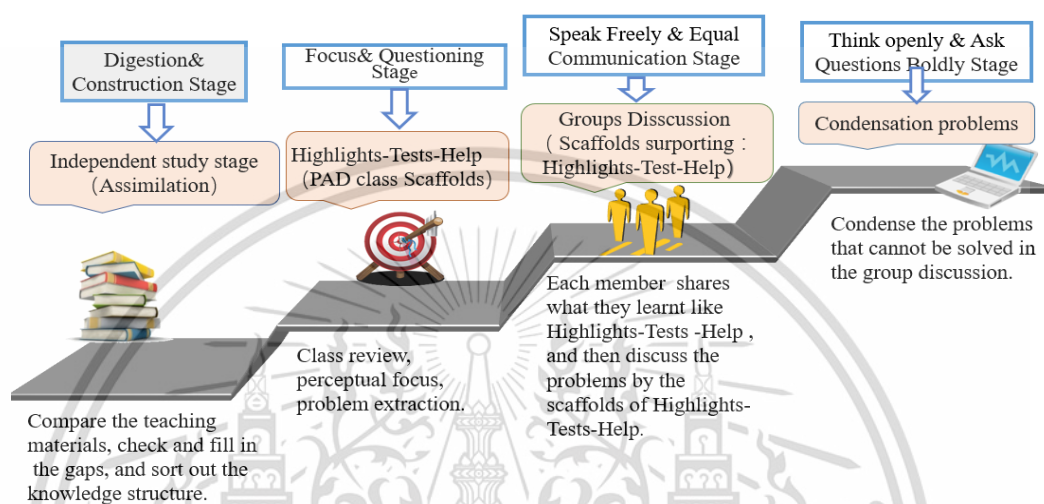


Figure 4.4 PAD class Mode of Four Steps Implementation Phase

4.4.3.1 PAD class teaching mode improves students' knowledge mastery

The presentation of PAD class no longer emphasizes the comprehensive coverage of knowledge content, but focuses on the intensive teaching of main knowledge points. Students are required to learn independently and internalize their knowledge with the "Highlight-Test-Help" as the scaffold support. It promotes students' confusion and learning motivation to increase their interest in learning. In the follow-up, students carry out group discussions with questions, and teachers randomly check the teaching mode of asking and answering questions, ensure that the students' theoretical knowledge can be grasped firmly, and improve the ability of knowledge integration in the internalized discussion. In this teaching experiment, it was found that the experimental group had higher scores than the control group, and there was no significant difference in the scores of basic memorizations, indicating that the PAD class with half the teaching time did not affect the students' mastery of basic knowledge. Moreover, MIT (Multi- Interactive Teaching Mode) -based PAD Class Mode was superior to the control group in practical application, case analysis, reflection and other ability assessment knowledge ($P < 0.05$). The research (Feng, 2021) also confirmed "PAD class" is beneficial for students to deeply explore and integrate knowledge, construct their own knowledge system, and help students to understand and master knowledge.

4.3.3.2 PAD class teaching mode improves learning experience

The results showed that the students in the experimental group were more satisfied with their learning experience in three aspects: teaching strategy, teaching evaluation and emotional experience than those in the control group ($P < 0.05$). The reason is that compared with classroom teaching, there are more interactions between teachers and

students and between students in the PAD class which is conducive to promoting the communication between teachers & students and students & students, effectively activating the classroom atmosphere, promoting students to examine and analyze problems from the perspective of others, and improving the ability of critical thinking and knowledge integration. At the same time, the online and offline interactive teaching platform effectively integrates teaching and multimedia, and allows students to turn mobile phones into learning tools, discover learning fun, and ensure that teachers & students can effectively communicate and answer questions at any time. Previous studies have also shown that the PAD class based on the online platform can stimulate students' learning motivation, effectively promote personalized learning and collective knowledge construction, and improve students' teaching satisfaction.

4.3.3.3 PAD Class Teaching promoting positive learning attitude and cultivating autonomous learning ability

Learning attitude is the main intrinsic motivation for students to participate in learning activities. The results of this study showed that the scores of learning interest, learning experience, learning habit, learning cognition and the total score of learning attitude of the experimental group were higher than those of the control group ($P < 0.001$). Multiple interaction, deepen students' knowledge of the connotation and extension of the course; PAD class can stimulate students' learning motivation, improve the classroom learning atmosphere; Online and offline interactive teaching mode ensures that students can ask questions at any time; The effective integration of the above teaching methods can continuously cultivate students' interest in learning, optimize their learning experience and learning cognition, develop good learning habits of studying, and then form a positive learning attitude and improve the level of learning engagement.

Through the teaching experiment this semester, it is found that the PAD class teaching mode based on MIT, relying on the online and offline interactive teaching platform, can effectively improve students' autonomous learning ability. Similar studies in China have also confirmed that (Li, Leng & Wang, 2020; Ren & Feng, 2020; Dong, Bu & Bong, 2019). PAD Yi based on online platform has transformed students into subjects of classroom learning. Students have changed from passive acceptance of knowledge to active discovery and exploration of professional knowledge, effectively promoting students' information retrieval and screening, team collaboration Self-management.

CHAPTER 5

CONCLUSIONS

In this chapter, a summary of the major findings regarding the research questions and the theoretical contributions and pedagogical implications will be addressed. Attention is also directed to the limitations of the study. Before closing this chapter, some suggestions for further research are made.

5.1 Major Findings of RQ1:

What are the scaffolding effects of PAD class?

The data revealed that during the interaction PAD class process, scaffolding is achieved by attending to the linguistic form and the content of the conversational interaction when students attempt to clarify the meaning and notice the form by using metalanguage to talk about the target language. Learners are likely to notice the form before or after the NOM from the lexical and syntactic level. If the contents prevented them from understanding the target form, students would clarify the meaning from the word and sentence level in order to achieve comprehension of the whole task. Scaffolding takes an effective role in focusing students' attention on form and therefore generates positive effects on foreign language learning. Besides, teacher-student interaction PAD class mode is overall active, and the focus of such negotiation is both on meaning and form. With episodes of NOM, many are sustained for communicative success. With episodes of NOF, more are conducted on language use. In general, teacher student interaction is more meaning-oriented.

The presence of scaffolding mechanisms corroborates their importance as the key features of mediated assistance in the ZPD, and confirms their applicability to potential situations in which a ZPD may be activated. Both the teacher and students have displayed several supportive behaviors that facilitate development. These behaviors seem to stretch the students' learning during difficulties with task comprehension. They do not occur in isolation; they are often used in combination when the students or teachers are conversing with one another. Moreover, their success also lies in the way in which the functions are operated by the teacher.

5.1.1 The More effective setting: teacher-student interaction PAD class mode

The results revealed that scaffolding in the teacher-student interaction is more effective in learning the target forms. Students completed the task with great independence as a result of dialogic discourse with the teacher and with their peers in classroom interaction. There was also evidence in the utterances that students moved from the other-regulation stage to the self-regulation stage. The ZPD is pushed more effectively through scaffolding in the teacher-student interaction PAD class mode setting than in the setting that adopts CLT class mode.

Correspondingly, the students could achieve greater progress in handling the target language through mediation when facilitated and monitored by the teacher and other students, than when receiving scaffolding just from the teacher's dominant supervision or when receiving scaffolding merely from other students. In the teacher-student interaction PAD class mode, the effectiveness of scaffolding is mainly caused by appropriate support in the combination of expert scaffolding and mutual scaffolding, as well as the relatively high quality of scaffolding functions.

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5.1.2 Appropriate facilitative support from teacher

The teacher generally chooses to take a facilitator's role to arouse the students' attention to the goal of the tasks, and to ensure the accuracy of the target form. When the students demonstrated the ability to maintain the direction of the tasks, the teacher sustained the students' independence in co-constructing the form as much as possible.

There was often self-regulation in the students' discourse, which showed that the teacher succeeds in facilitating the students' independent development in their foreign language learning and the extension of the ZPD. Support from the teacher in the teacher-student interaction PAD class mode is different from that in the CLT setting, where the teacher lets the students control the talk excessively. In this case, appropriate support in expert scaffolding means that the teacher mediates

- ✪ at the right time when there is a need for assistance, and
- ✪ with the adequate focus, not excessive, on the target form. This mediation can ensure participation opportunities for the students and make them highly involved in negotiation of meaning and form during classroom interaction (Hall, 1995; Anton, 1999).

Success is achieved by the teacher who facilitated the students to proceed with NOM and NOF through prompts and implicit explanation. The negotiation was mostly initiated by the teacher, when she notices difficulties in the content, or the errors in the form produced by the students. As a result, the students were motivated to find the solution to the problem independently through active participation in the discourse. The following episodes show that the teacher managed to focus the students' attention on NOM and NOF by means of

- ✪ providing implicit prompts or hints in the feedback;
- ✪ highlighting target features through alternative questions and
- ✪ passing task responsibility to students by questions and nomination.

5.1.2.1 Providing implicit prompts or hints in the feedback (See Table 5.1)

Table 5.1 Episode 10

Teacher or Students	Conversation Content	Findings
T	Yeah, and how? It says many poets inspired in solitude and they can free their thoughts without any disturbance. But living with others can't make it. (F)	When the teacher hinted at the meaning, Jun and Tao clarified the meaning Um... so I think we can delete in which. and then produced the correct form.)
Jun	And another reason makes people choose solitude. All these talk about solitude. (D)	
Tao	Um... so I think we can delete <u>in which</u> .	

5.1.2.2 Highlighting target features (See Table 5.2)

Table 5.2 Episode 11

Teacher or Students	Conversation Content	Findings
T	So what's the difference if you replace it with <u>that</u> ? If you want to use a relative pronoun, you can think about <u>by telling that</u> or <u>by which</u> ? (F)	When the teacher highlighted "by which", Jun and Tao chose the correct form through discussion.
Jun	<u>By which</u> ? (F)	
Tao	U Ah, yes. <u>By which</u> . As the sentence means by telling their feelings to their friends, they can relieve their solitude. (F)	

5.1.2.3 Passing task responsibility to students by questions and nomination (See Table 5.3)

Table 5.3 Episode 12

Teacher or Students	Conversation Content	Findings
T	What do you tell them? If you're feeling solitary, what do you talk to people about? (F)	The teacher asked Jing a why-question and nominated Mary to clarify the meaning at word level.
T	Oh, you could, yeah. We can say... OK, Mary, you can say something. (F)	
Mary	Relieve their solitude by sharing with their friends. (D)	

5.1.3 Appropriate guiding support from teacher

Occasionally, when the students appear to be uncertain about the form, the teacher guides the students to focus on the correct form to avoid digression, and maintains the efficiency of the students' collaborative work in the group. The teacher withheld the explanation and provided more examples so that students could reflect on the form in focus. The teacher guided the students by interfering in the students' talk and paraphrasing the correct form in feedback explicitly. As a result, the students manifested some other-regulated behaviors in their production. The teacher's guidance in the teacher-student interaction PAD class mode is not a control, which is different from the teacher's intentional control in the CLT setting.

The PAD class mode allows the students to work in greater independence in appropriating the form than the intentional control, so this guidance or supervision is also effective scaffolding. The following episodes show how the teacher guided the students to focus on the appropriate form through:

- ✿ explicit intervention in the students' talk and
- ✿ explicit corrective feedback.

5.1.3.1 Explicit intervention in the students' talk (See Table 5.4)

Table 5.4 Episode 13

Teacher or Students	Conversation Content	Findings
Jun	What's wrong? What's wrong of the word <u>as any</u> ...? (F)	When the students were uncertain about the form "as any" after a long discussion, the teacher interfered with the advice.
T	It's not really focusing on the relative clauses here. (DM) You've, you've focused on the relative clause at the beginning of the sentence. Yeah. But, thank you. (F) I will leave that out. Leave <i>as any</i> . (D) [Then the students followed the teacher's advice.]	

5.1.3.2 Explicit corrective feedback (See Table 5.5)

Table 5.5 Episode 14

Teacher or Students	Conversation Content	Findings
Jing	So many people would rather choose living alone, who admire this life style very much (D)	When the teacher noticed that the students cannot self-regulate on the target form appeared in her oral expression, she gave corrective feedback explicitly.
T	Um, you think we put the <u>who</u> after <u>living alone</u> ? (F)	
Jing	Yes	
T	No, you are wrong. Again, take it. Usually where we are using the relative clause, they must follow a noun, immediately after it. If you put living <u>alone</u> , <u>who</u> ... Then they refer to choose living alone, so it's not the case. (F)	

Accordingly, it pointed to the need for teacher's feedback to students as an essential component of a collaborative activity. It was argued that teacher's feedback on oral English is needed to ensure the correct form (Swain & Lapkin, 1998). The teacher is like a "background mother" (Ehrman & Dornyei, 1998) providing a holding environment and scaffolding for self-regulation. The key is the teacher leaves "center stage" for some portion of the learning period (Ehrman & Dornyei, 1998). Teachers should be flexible in the kinds of leadership they exert, offering greater or less scaffolding and structuring to different students.

5.1.4 Interaction PAD class mode and focusing on form

Based on all the qualitative and quantitative analyses, scaffolding during the interaction PAD class mode process provides a viable way for students to stretch their existing knowledge. During the process of negotiation students repair and reword their

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own utterances, and assist one another to notice the right form. Scaffolding can promote noticing the target form, in either word or sentence level.

The students and teachers in both groups attended to the target form through clarifying the meaning. The findings suggest that they noticed the form before or after NOM, moving from the word level to the sentence level. If the content appears to hinder their understanding of the form, the students and/or the teacher firstly clarified the meaning at the word level, especially the contextual meaning of the word. Then, they clarified the meaning at the sentence level.

Moreover, there could be assume that NOM inevitably arises when there is “difficulty in message comprehensibility” (Pica, 1994). Students will focus on the target form in the task after clarifying the meaning that hinders understanding or communication. The findings suggest that NOM at different levels can lead students to achieve the form by:

- ✪ recognizing the existence of a linguistic problem;
- ✪ switching their attentional focus from message to form;
- ✪ identifying the problem and
- ✪ noticing the form. This seems to support the argument of Foster and Ohta (2005).

Besides, the findings show that NOM is not restricted to the lexical level, but is extended to the sentence level if there is difficulty in comprehending the main idea of the communication. One explanation for learners resorting to meaning at the lexical level may be that there are predominant problems with lexis that cause communication failure (Foster & Ohta, 2005). It appears to be logical that either the teacher will facilitate the students to clarify the meaning of key words, or the students will predominantly discuss the meaning of the lexis first, in order to smooth understanding before turning to the linguistic features of the language.

5.2 Major Findings of RQ2:

How does PAD class influence students’ oral English proficiency in terms of fluency, accuracy, and complexity?

Results provided evidences that PAD class mode scaffolding university students’ attention onto target language while they participate in the interaction helps them to produce these linguistic features more accurately. It corresponded to Mochizuki and Ortega’s study (2008) which found that the scaffolded assistance helped better productive use of target form in English and that when scaffolded assistance is focused it may affect accuracy.

Regarding the effectiveness of teacher-student interaction PAD class mode and CLT on the complexity of language in oral production there were two important findings:

(1) Compared with the control group, negotiation and interaction PAD class mode only slightly help students expand interlanguage and produce a small amount of more complex language insight;

(2) Guiding students to pay attention to the accuracy and fluency of language is slightly helpful to improve the complexity of language, but the complexity is not significantly improved compared with the control group.

These two findings are in line with the trade-off proposal supported by Wendel (1997) and Yuan and Ellis (2003), namely that the trade-off involves accuracy and fluency. However, this finding is not in line with Norris & Ortega’s study (2009), which reports that fluency, accuracy and complexity are interdependent. The results for fluency

lend further support to the above-mentioned trade-off proposal. It was found that students under PAD interaction instruction class mode had more opportunities to perform the task produced language more fluently. Guiding learners to attend to a particular linguistic form may induce them to fall back on their rule-based system (Skehan, 1998) for extracting information from their explicit knowledge repertoire and self-monitoring their internal speech.

However, the findings of this study indicate that students make some improvements on fluency at the cost of complexity. Taking fluency and accuracy into consideration, students do not tend to produce some complex utterances. This also echoes to students' responses in the questionnaire.

The findings led us to examine the obtained data in search of possible effects on oral English proficiency that might have been caused by the differences of quantity and quality of students' participation in the oral English classroom. It was found that students' oral English fluency and accuracy in the experimental group varied considerably from that of the control group in that the interactive effect of the teaching method and proficiency factor was statistically significant for students' oral English development and the total mean score change shows that students in the experimental group gained much more than the control group. Bearing in mind that the experimental group outperformed the control group, it seems reasonable to state that interaction PAD class mode method can generate the beneficial impact on students' oral English proficiency. This finding echoes to Mackey's study (2007) which revealed a positive relationship between conversational interaction and language output. The study highlighted the importance of active engagement which resulted in more accurate and fluent language production.

In addition, the findings of this study also reveals that the PAD class mode scaffolding during the teacher-student interaction cater for language learning in general. This finding paves a way for language teacher and researchers into how to extend learners' current ZPD.

The findings of this study also provide some insights into the oral English instruction process. The students in the experimental group found PAD class method more conducive and facilitative for their oral English development than that in the control group which adopted the CLT. There are some plausible reasons for the superiority of the experimental group over control group in oral English proficiency. First, the experimental group had exposure to more scaffolding from the expert (teacher) than the control group had, in the forms of group discussion, teacher-student conversation, teacher feedback. Second, the higher level of the students' oral English proficiency in the experimental group may have been a sequence of the high quality and quantity of scaffolding provided by the teacher during the interaction PAD class mode process. This finding is in consistent with Wu Xudong's study (1996, 1997) which emphasized that one of the essential factors in determining learners' development of oral ability was the interaction between the teacher and the learners in the classroom. Therefore, this also accounted for the explanation of the teaching method adopted in the control group. Although Mr. Han adopted CLT class mode teaching method and provided students with a lot of opportunities to finish the task, the students did not make much progress as the students in the experimental group. His negligence of the interaction between the teacher and students did not generate positive impacts on students' oral English production.

5.3 Major Findings of RQ3:

What kind of strategies does the teachers employ in PAD class mode?

Compared to the CLT instruction, the implementation of the teacher-student interaction PAD class mode results in the great improvement of students' oral English proficiency. In this study, there are three measures used to assess the students' oral English proficiency development, namely, accuracy, fluency, and complexity. Based on the statistical analysis of the pre-test and the post-test data, the study demonstrated that interaction PAD class mode positively affects students' oral production of English. From the statistical comparison, the following conclusions can be drawn about the effectiveness of the teacher-student interaction PAD class on students' oral English proficiency.

(1) The teacher-student interaction PAD class teaching method is effective in helping students improve their oral English proficiency in terms of accuracy and fluency.

(2) Compared to the slight increase of the mean score of complexity in the control group, the mean score in the experimental group does slightly improved too. However, statistical analysis indicates that there is a bit statistical significance between the interaction PAD class mode method and CLT for effectiveness of complexity.

(3) The study has highlighted the teachers' crucial roles in helping students stretch the ZPD by promoting autonomous, self-regulated learning of the target form.

(4) Based on the observation, it showed that there were five kinds of strategies the teachers often adopted in the classroom regardless of their different teaching methods. Generally speaking, the five strategies were Recruitment (R), Simplifying the task (S), Direction maintenance (DM), Demonstration (D) and Feedback (F). Through the strategies adopted by the teachers during the interaction PAD class mode process, students' oral English proficiency to some extent has been improved according to the analysis in previous section.

The strategies adopted by the two teachers in the experimental group and the control group demonstrated significant differences and distinct characteristics concerning the five strategies: Recruitment, Simplifying the task, Direction maintenance, Demonstration and Feedback.

5.3.1 Recruitment

Recruitment among the strategies adopted by the teachers did not rank the highest. From the analysis, it showed that the percentage of Recruitment was only 11.9%. The Recruitment in the experimental group was 82, while in the control group the number was 19. Both teachers used Recruitment at the beginning of the class so as to attract students' attention to the target topic. From the imbalanced use of Recruitment in the two groups, that in the collaboration process, the teacher in the experimental group recruits interest in the task by encouraging the students to notice the task features and invites student to participate in the activity. On the other hand, the Recruitment used by the teacher in the control group serves merely as an introduction to the task. The occasionally used Recruitment in the control group corresponded to the teacher's understanding of the CLT class mode, which means giving the students enough time to deal with the task.

5.3.2 Simplifying the Task

The control group teacher Mr. Han mainly adopted CLT teaching method. In class, teacher mainly teaches according to the teaching arrangement of each class, focusing on

the common problems, difficult points of each chapter and the students' preview test. Simplifying the task is the least adopted strategies by the control group teacher, Mr. Han. Compared to other strategies, this strategy was rarely adopted. In the control group, Simplifying the task was only used when the students-initiated questions as they could not handle the task on their own. The teacher seldom simplified the task unless the students' raised questions.

Simplifying tasks is a strategy often adopted by Ms. Luo in the experimental group. She adopts PAD Class mode combined with multi-interactive Teaching Mode (MIT) method. In the first class, teachers give intensive presentation according to the Teaching objectives and contents of each chapter, and sort out the main difficult knowledge, mistakes and confusing problems. Teaching no longer emphasizes comprehensive coverage of knowledge content, but conducts guiding and framing teaching, focusing on highly concentrated and precise grasping of knowledge of various disciplines. And pay attention to the simple content, details of knowledge left blank for students to sum up learning, stimulate students' interest in learning and knowledge exploration desire.

5.3.3 Direction Maintenance

Direction maintenance was the third frequently used strategy when the teachers provided scaffolded assistance in the classroom. In the experimental group, the number of Direction Maintenance was 24.8%, while in the control group it was 18.2%. In order to maintain the goal of the task and the direction of the discussion in a proper way, Direction Maintenance was used to achieve the goal and push the students' ZPD. In the experimental group, the students were kept motivated and focused on the task and the teacher was responsible for the control of the procedure of classroom instruction. By doing so, this kind of teaching method gave students freedom to deal with the task on their own and guidance from the teacher in order to ensure the completion of the goal. The teaching method and the teacher's perception of CLT in the control group accounted for the low percentage of Direction Maintenance. Most of the time, the teacher in the control group acted as an observer and occasionally directed the discussion.

5.3.4 Demonstration

Demonstration is the most frequently used strategy by the teacher in the control group. Demonstration was used to allow the teachers to show the idealized version of task completion. Besides the common feature of Demonstration, it was used differently in the two groups. In the control group, the teacher used it only to provide direct answers to students' questions, while in the experimental group, the teacher used it to present a mode for the students to follow or perform.

The teachers in the experimental group gave intensive presentation on the teaching contents, and sorted out the main difficult knowledge, problems that are easy to make mistakes and confusion. More negotiation and interaction are used, and indirect demonstration is more than direct demonstration.

The teachers in the control group are arranged according to the syllabus of the undergraduate training program and the text content. The teaching content is very detailed. Direct demonstration is more than indirect teacher training.

The direct and indirect demonstration had different impact on the interaction between the teacher and the students. Indirect demonstration allowed more negotiation in the classroom.

5.3.5 Feedback

Feedback is the most used strategy in the experimental group. The teacher used feedback to generate proper understanding of the meaning or produce the correct form. Compared to the implicit corrective feedback, the teacher in the control group used explicit feedback to check the students' involvement in the task.

5.4 Theoretical Contributions

Studies on the effectiveness of expert scaffolding on oral English are lacking. Although some researchers (Anton, 1999; Schinke-Llano, 1994) have mentioned the limitations of expert scaffolding, little has been done to explore systematically whether assistance from the expert may facilitate or constrain adult learners' development in the ZPD.

Firstly, this study concerns the ways in which social interaction can help the development of the ZPD, with reference to the learning of oral English in the classroom setting. Although different settings can provide different pathways for language learning in a broad sense, some interactions may confine or restrict the development of the ZPD in the interaction. The teacher-student interaction PAD class mode can provide good form of interaction and push the individual student's development in the ZPD owing to the high quality of the teacher and student interactions and the teacher's roles during the process of scaffolding.

Secondly, it shows that scaffolding in the teacher-student interaction PAD class mode is effective and provides the conducive pathway where the student's ZPD can be pushed forward. It is argued that the ZPD can be stretched from the existing level of development to a new level through adequate, appropriate, and high-quality external assistance at the right time by the teacher. It is the quality that guarantees learning and the student can perform the task independently via internal mediation within the new ZPD. Thus, the ZPD is not only seen as a mode of the development process, but also a conceptual tool for teachers or education reformers to understand different aspects of students' emerging capacities in language learning (Lantolf & Thorne, 2006).

Thirdly, it adds new knowledge to the classroom-based interaction on scaffolding, by looking at the effectiveness of the teacher-student interaction and students' oral English proficiency development from a sociocultural perspective.

5.5 Pedagogical Implications

5.5.1 Implications for EFL teachers

PAD class interaction can be regarded as "a way to gain better instruction, Hence, in order to make sure that students can benefit a lot from the classroom interaction.

Firstly, EFL teachers should engage their students interactions which will result in a positive impact on their interlanguage development towards the target language norms.

Secondly, this study was designed teachers' awareness of their critical role in the scaffolded learning interactions. There are many strategies when the teachers provide scaffolding.

Thirdly, the implication of this study points out interaction PAD class mode improves English Oral skills.

5.5.2 Implications for Class Language Learning

The significance lies in the way a teacher manages his or her role as a facilitator, an encourager, or a director in the oral English class through the manipulation of scaffolding strategies to focus on appropriate form and ensure correctness in linguistic production. The PAD class mode has demonstrated how the assistance from the teacher can foster efficiency in language learning and provide opportunities for NOM and NOF during communicative exchanges.

5.6 Limitations of This Study

The present study demonstrates a small-scale, exploratory analysis of teacher-student interaction PAD class mode at a university in China. Employing the research methods of classroom observation and recording, interview, questionnaire, pre-test and post-test, this study uncovers the nature of teacher-student interaction PAD class mode and its impact on students' oral English proficiency. Even though both qualitative and quantitative methods are adopted in the study, there are still some recognized limitations.

5.6.1 Research Design

Firstly, the study has only explored the effectiveness of teacher-student interaction PAD class mode on a small group of university undergraduate students over one-semester experiment. If the goal is the sustained development of learners' oral English proficiency, it is important to discuss how the effects of interaction PAD class mode might connect to a large number of subjects during a considerably long period of instruction.

Secondly, the present study is a case study of a new teaching method of oral English, and it is to explore the PAD class mode process of teacher-student interaction and its impact on students' oral English proficiency in the EFL classroom. Thus, the findings were not generalized to all EFL interactions. They should therefore be seen as tentative rather than as a basis for generating hypotheses for future studies.

5.6.2. Interview

The student interview in this study was pre-task interview. It might be necessary to conduct a post-task interview after the experiment with the students, to record noticeable changes in the scaffolded interaction. From the students' perspectives, the post-task interview can help to confirm inference or interpretation of the dialogic discourse and students' perception of the new teaching method. In ethnographic studies, interviews are common practice. For the purposes of the present study, however, only the recordings of the oral English lessons and their transcripts were used as the main data source. Teachers' interviews were only used as a subsidiary tool. If the participants had been systematically interviewed after each lesson, it would have been possible to gather data on their own interpretations of the scaffolded strategies used. Such data would undoubtedly have been important in providing on the subjects' own explanations of the learning situations. However, the teachers' interview was conducted after the experiment, it was only got the general idea from them towards oral English teaching and the strategies they adopted in the classroom.

5.7 Recommendations for Further Research

During the interpretation of the findings, some relevant issues the study was not designed to systematically investigated.

Firstly, further research needs to focus on analyzing individual differences in scaffolding learning.

Secondly, the study could be employed to compare the effectiveness of interaction PAD class mode on the oral language proficiency of students with different language proficiency levels.

Thirdly, future studies in this line would gain a fuller understanding of the role of interaction PAD class mode in different contexts. And the PAD class mode, which promotes interaction between teachers and students, can even be studied across disciplines



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APPENDIX

Appendix A IOC Questionnaire

Description: This questionnaire is part of PAD class & CLT class feedback study. Your responses are valuable and highly confidential.

Direction:

Read through the test questions according to Appendix 1&2(Wenjuanxin Online Platform). Please indicate the degree to which each item is congruent with the objective of this study. If you have any comments on the congruence of each question, please record them in the space provided. Tick (✓) to rate the congruence according to the scale below.

+1 = certain that the question is congruent with themes with feedback.

0 = uncertain that the question is congruent with themes feedback.

-1 = certain that the question is NOT congruent with themes o feedback.

Table A.1 IOC Questionnaire

No.	Question Aspects (Appendix 1&2)	Question Items	Experts					Σ R	IOC	Result
			1	2	3	4	5			
1	Students' personal information (A)	4								
2	Interest in English learning	29								
3	Teaching methods	20								
4	Educational technology tools	7								

Appendix B STUDENT Questionnaire (Before Experiment)

Dear fellow students: You are supposed to answer the following questions truthfully. This survey aims to help better understand learner language learning experiences as well as learner views on oral English teaching for non-English majors in universities. Please answer the following questions by circling the number (5-1). Your name is not required but your frank answer to all questionnaire items is essential to the result of the research. Please be as accurate as possible. Many thanks for your cooperation and your time. Please circle a n appropriate option or a number from 5 to 1 after each statement below that most closely corresponds to your view: Strongly agree 5; Agree 4; Neutral 3; Disagree 2; Strongly disagree 1.

Appendix B.1 Students Demographics

1. Gender

- A. male B. female

2. Age

- A, 17 B, 18 years old C, 19 years old D, 20 years old

3. Place of origin

- A. City B. Township C. rural areas

4. Ranking of English scores in last semester

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- top 30% ○ medium 30% ○ last 30%

Appendix B.2 Students' Interests in English Learning

Table B.1 Students' Interests in English Learning

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
In English class, I always actively answer the teacher's questions					
In English class, I always take the initiative to participate in the classroom activities organized by the teacher.					
For me, having English class is a very happy thing.					
After English class, I carefully review the words and sentences I learned that day.					
I finish the English homework assigned by the teacher.					
After class, I always spend time improving my English listening, speaking, reading, and writing skills.					
I often read English related books and magazines or listen to English programs after class.					
The school provides good hardware and software for our English learning.					
The school provides us with many opportunities to practice and practice English.					
If there were fewer people in each English class, my English learning enthusiasm would be higher.					
If there were more foreign teachers, I would be more interested in learning English.					
The assessment and evaluation method of English level has affected my enthusiasm in English learning.					
Whether the learning materials are interesting or not largely determines my interest in English learning.					
The English professional level of English teachers can affect my attitude towards English learning to extent.					

Table B.1 (cont.) Students' Interests in English Learning

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
I study English because I am interested in the culture of English-speaking countries, including their music.					
English teachers are always full of passion in class.					
In English class, the English teacher often encourages me and gives me some suggestions on English learning.					
Teachers often organize classroom activities, such as storytelling and role playing.					
English teachers use a variety of teaching tools in class, such as multimedia, physical audio and video recording, etc.					
There is a lot of interaction in English class, which is lively.					
My strength in learning English depends largely on the quality of my English class.					
The enthusiasm of the students around me has a direct impact on my English learning.					
My interests in learning English is largely based on my English achievements of last year.					
I study English in order to go abroad to find better education and job opportunities.					
It is important for me to learn English well because it is a very useful communication tool in society.					
I am an outgoing and good at communicating with others person.					
In the dialogue, I will use facial expressions and action meters to express English words I can't speak.					
Even though I'm afraid of making mistakes, I still encourage myself to speak more English.					

Appendix B.3 Student Perspective on Teacher's Teaching Methods

Table B.2 Student Perspective on Teacher's Teaching Methods

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
The university oral English class in the university I had can be described as student-centered.					
Although teachers say they use communicative method of teaching in class, they don't allow lots of opportunities for learners to join in activities and speak English.					
English teachers seldom give direct answers or tell what is right or wrong, instead, they lead the discussion with learners and provide learners with opportunities to negotiate meaning and form in the target language.					
The amount of teacher-learner multi-negotiated interaction is rare in class because teacher authority is not to be challenged.					
Group work and pair work are most beneficial to oral English learning.					
I prefer talking to my teachers as teachers speak more accurately and can give me impromptu assistance.					
I always respond to the teacher's assistance actively when the teacher negotiates with me in order to help me articulate my ideas.					
I think interactive activities in class can improve my oral English proficiency.					
I think university oral English focuses too much on the task completion; it should pay more attention to grammar and colloquial expressions.					
I like College Oral English class because I enjoy being an active participant in the various learning activities.					
I think it is helpful for my oral English because of the teacher's correction.					

Table B.2 (cont.) Student Perspective on Teacher's Teaching Methods

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
My teacher almost never corrects my errors in my oral English even if I speak poorly.					
I like the teacher to encourage me to express myself in English, but I also think it necessary for the teacher to correct my errors sometimes.					
To motivate English learning, I think it is important for teachers to avoid giving direct answers to linguistic issues, rather, they should try to help learners realize the errors and correct these errors correct their own linguistic error to promote learners to extend discussions on a topic.					
In my class, I feel that teachers pay more attention to how I say something rather than what I say.					
When miscommunication occurs in teacher-student PAD class multi-negotiated interaction, it is good for both the teacher and the student to make efforts to resolve the miscommunication through making requests for clarification, repetition, explanation, etc.					
Although I am not an English-major student, I care about the accuracy and complexity of my oral English.					
I am aware of the importance of Oral English as I need to equip myself so as to meet the need of my future job requirements.					
I am confident that after finishing the course of university Oral English, I can well express myself in English.					
University Oral English meets the need of me as I want to take the Oral Test in the CET 4 or CET 6 test.					

Appendix C Student Questionnaire (After Experiment)

Dear fellow students: You are supposed to answer the following questions truthfully. This survey aims to help better understand learner language learning experiences as well as learner views on oral English teaching for non-English majors in universities. Please answer the following questions by circling the number (5-1) of the alternative which appears most applicable to you. Your name is not required but your frank answer to all questionnaire items is essential to the result of the research. Please be as accurate as possible. Many thanks for your cooperation and your time. Please circle an appropriate option or a number from 5 to 1 after each statement below that most closely corresponds to your view: Strongly agree 5; Agree 4; Neutral 3; Disagree 2; Strongly disagree 1.

Appendix C.1 On students' satisfaction with their English proficiency improvement (CLT Class)

Table C.1 On students' satisfaction with their English proficiency improvement (CLT Class)

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
CLT class needs to adopt textbooks. with good original recording, rich content, clear structure, difficulty, and challenge. Do you agree with this view? Is the textbook selected appropriate?					
CLT class tries to help students get familiar with the unit content and listening materials, overcome key and difficult points and prepare reading notes after class.					
CLT class tries to promote students' serious study of oral materials and prepare for group discussion through reading notes.					
CLT class tries to give students nearly a section of class time, encourage everyone to speak English through group discussion, and realize oral situational practice.					
CLT class tries to make students learn from each other and improve together through the sharing of excellent homework.					

Table C.1 (cont.) On students' satisfaction with their English proficiency improvement (CLT Class)

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
CLT class tries to use the assessment method of combining usual homework with final oral examination to evaluate students' learning effect more accurately and fairly.					
The reading notes and audio recording homework in CLT class, students can learn English according to their personal motivation and time without increasing their learning burden.					
In CLT class, the teacher timely graded and commented on the students' reading notes and recording homework, which encouraged the students to study and promoted the students' progress.					
We believe that CLT class needs textbooks with rich content, clear structure, difficulty, and challenge.					
CLT class tries to help students get familiar with the contents of the chapters, overcome the key points and difficulties, and lay a foundation for after-school learning.					
CLT class tries to make students promote each other and resolve difficulties through group discussion, to achieve an in-depth understanding of the contents of the chapter.					
CLT class tries to make students learn from each other and improve together through the sharing of characteristic homework or excellent homework.					
CLT class tries to evaluate students' academic performance more accurately and fairly by means of daily homework, short report, a small number of basic concepts and the combination of closed book and open book examination.					

Table C.1 (cont.) On students' satisfaction with their English proficiency improvement (CLT Class)

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
CLT class tries to reduce mechanical recitation learning, and through the loose and open form of reading notes, students can freely choose between basic summary and highly personalized play according to their personal time and arrangement, to control the learning burden of this course.					
CLT APP technology tool can help you improve your spoken English.					

Appendix C.2 On students' satisfaction with their English proficiency improvement (PAD Class)

Table C.2 On students' satisfaction with their English proficiency improvement (PAD Class)

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
PAD class needs to adopt textbooks with good original recording, rich content, clear structure, difficulty, and challenge. Do you agree with this view? Is the textbook selected appropriate?					
PAD class tries to help students get familiar with the unit content and listening materials, overcome key and difficult points and prepare reading notes after class.					
PAD class tries to promote students' serious study of oral materials and prepare for group discussion through reading notes.					
PAD class tries to give students nearly a section of class time, encourage everyone to speak English through group discussion, and realize oral situational practice.					
PAD class tries to make students learn from each other and improve together through the sharing of excellent homework.					

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Table C.2 (cont.) On students' satisfaction with their English proficiency improvement (PAD Class)

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
PAD class tries to use the assessment method of combining usual homework with final oral examination to evaluate students' learning effect more accurately and fairly.					
The reading notes and audio recording homework in PAD class, students can learn English according to their personal motivation and time without increasing their learning burden.					
In PAD class, the teacher timely graded and commented on the students' reading notes and recording homework, which encouraged the students to study and promoted the students' progress.					
We believe that PAD class needs textbooks with rich content, clear structure, difficulty, and challenge.					
PAD class tries to help students get familiar with the contents of the chapters, overcome the key points and difficulties, and lay a foundation for after-school learning.					
PAD class tries to make students promote each other and resolve difficulties through group discussion, to achieve an in-depth understanding of the contents of the chapter.					
PAD class tries to make students learn from each other and improve together through the sharing of characteristic homework or excellent homework.					
PAD class tries to evaluate students' academic performance more accurately and fairly by means of daily homework, short report, a small number of basic concepts and the combination of closed book and open book examination.					

Table C.2 (cont.) On students' satisfaction with their English proficiency improvement (PAD Class)

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Points	5	4	3	2	1
PAD class tries to reduce mechanical recitation learning, and through the loose and open form of reading notes, students can freely choose between basic summary and highly personalized play according to their personal time and arrangement, to control the learning burden of this course.					
PAD APP technology tool can help you improve your spoken English.					

That's the end.

Thank you for your time and cooperation!

Appendix D Sample of Student Interview

Q (Question): How long have you been studying English?

A (Answer): 12 years.

Q: Where did you start to learn English, in the kindergarten, the primary school or the secondary school?

A: Primary school.

Q: Did you learn oral English when you began to study English? If yes, how did you learn it?

A: No, when I began to learn English, I only focused on grammar and exercise. I did not practice oral English.

Q: How do you learn oral English now? Any successful experiences or depressing stories?

A: Frankly speaking, I learn oral English mainly in the classroom. There are no successful experiences of learning oral English and most of the time I felt depressed. I found it difficult to express my ideas when I try to convey my thoughts in English.

Q: How did you solve the problem when you encountered some difficulties in learning oral English?

A: It was a painful process to learn oral English if I wanted to produce fluent and native-like English. When I had difficulties in expressing myself, I just surfed the internet and tried to find the correct answer. If I could not find the proper answer, I turned to my teacher or other classmates for help.

Q: How did your teacher help you learn oral English, particularly how to help you articulate your ideas?

A: To tell the truth, I did not like the way the teacher taught me oral English in the class in senior high school. She asked us to memorize sentence patterns and vocabularies instead of creating a kind of situation in which we could practice how to handle the problem. Besides, what the teacher always emphasized was

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Therefore, when we communicated with us, we always thought about whether our utterances were correct or not. The accuracy was at the cost of fluency.

Q: If you are asked to design a mobile app to help you practice your oral English, what functions would you like it to have?

A: *I hope it can provide learning help according to my English level.*

Q: Are you satisfied with the APP or educational technology tool you currently use? What are they? What features do you want it to have? Does this educational technology help you improve your spoken English?

A: *I am quite satisfied with the current mobile app. It is PAD APP tool, I can log in with Wechat, it helps me remember words, read English articles and recite English poems.*

Appendix E. 1 Interview Abstract of Mr. Han

Q (Question): How do you generally describe the oral English course regarding the teaching goal and teaching method?

A (Answer): *I think the aim of the oral English course is to help students develop their oral English proficiency. Students may have more opportunities to practice oral English.*

Q: Which teaching method do you employ in your class, teacher-centered or learner-centered? What do you think of the effectiveness of group work and pair work activities?

A: *Students will speak more and show more. I understand it as this. In a class, the most centered is the students, but not the teachers who keep standing there, as if she or he was the moon surrounded by a myriad of stars, talking. The class should be filled with active involvement of the students.*

Q: Compared with the group work or pair work, how do you evaluate teacher-student interactions?

A: *I seldom was involved in the discussions with students. Since they have all passed the CET 4 exam, they can solve most of the problems. Although teacher-student interaction is necessary in the oral English class, it is not the main teaching technique I employ in my class. It is only adopted when students need help.*

Q: During the teacher-student interaction, do you consciously negotiate meaning and form with students to promote their participation and help them reach their ZPD?

A: *Sometimes, not always.*

Appendix E. 2 Interview Abstract of Ms. Luo

Q (Question): How do you generally describe the oral English course regarding the teaching goal and teaching method?

A (Answer): *Generally, the goal of the oral English course is to cultivate students' communicative ability. Specifically, I am not sure what to expect from the students. Part of the idea with this class is to give students more opportunity to practice*

English. I want to provide students with a variety of activity during the class. By doing so, they maybe highly motivated to be involved in the activity to practice English.

Q: Which teaching method do you employ in your class, teacher-centered or learner-centered? What do you think of the effectiveness of group work and pair work activities?

A: *According to the university english curriculum requirements, the teaching method in the class is student-centered which is called PAD class mode. It is a way to practice oral English if students work in pairs or in groups.*

Q: Compared with the group work or pair work, how do you evaluate teacher-student interactions?

A: *This is a good question. Due to the influence of CLT, we sometimes mistake the aim of CLT. We interpret CLT as giving students more time and opportunity to dominate the class. Instead, I think that we should not go to extremes. We should make a balance between teacher-centeredness and student-centeredness. Therefore, teacher-student PAD class mode interaction is the ideal method.*

Q: During the teacher-student interaction, do you consciously negotiate meaning and form with students to promote their participation and help them reach their ZPD?

A: *In the 50-minute teaching period, I do try to have a lot of variety because I know as student I did and then as someone doing student-like things now, I am bored if there is a complete repetition of the same mode of the class day in and day out. So, I do try to have variety in the activities. But I try to start the class with some sort of broad question that can engage all of the students. And then we move into a more specific activity. In order to complete the activity, students should work in pairs or in groups and they may also discuss with the teacher. During this kind of activity, negotiation of meaning and negotiation of form are very common. I should pay close attention to their linguistic gap and then provide necessary help to assist them in expressing themselves. Most of the time, we negotiate meanings over forms.*

Appendix F Semester course schedule Description

Table F.1 Semester course schedule Description

Period	Teaching period allocation	Teaching	Quiz	Assessment mode	Test
64		62	2	Credit	3
Textbooks	<i>New University English Comprehensive Course (Second Edition), 2021, Volume 1. Ji Peiyong, Wu Xiaozhen, Chen Jin, Shanghai Foreign Language Education Press</i>				
Reference books	<i>University English comprehensive course for teachers, 2nd ed, publisher: Shanghai Foreign Language Education Press</i>				
	<i>Zhang Dao's authentic English grammar, Foreign Language Teaching and Research Press</i>				
	<i>University English listening and speaking course for teachers, 2nd ed, Foreign Language Teaching and Research Press</i>				
Week	Teaching Content				

Table F.1 (cont.) Semester course schedule Description

Period	Teaching period allocation	Teaching	Quiz	Assessment mode	Test
64		62	2	Credit	3
Textbooks	<i>New University English Comprehensive Course</i> (Second Edition), 2021, Volume 1. Ji Peiyong, Wu Xiaozhen, Chen Jin, Shanghai Foreign Language Education Press				
Reference books	<i>University English comprehensive course for teachers, 2nd ed</i> , publisher: Shanghai Foreign Language Education Press				
	<i>Zhang Dao's authentic English grammar</i> , Foreign Language Teaching and Research Press				
	<i>University English listening and speaking course for teachers, 2nd ed</i> , Foreign Language Teaching and Research Press				
Week	Teaching Content				
1	Unit 1 Growing up New words and phrases Background Information Global reading of Text A: Writing for Myself				
2	Unit 1 Growing up Detailed study of Text A & Exercises Text B: The Scholarship Jacket				
3	Unit 1 Growing up Long passage reading: Text 1 Listening and speaking course				
4	Unit 2 Friendship Words and phrases explanation Background Information Global reading of Text A: All the Cabbie Had Was a Letter				
5	Unit 2 Friendship Detailed study of Text A & Exercises Text B: Never Let a Friend Down				
6	Unit 2 Friendship Long passage reading: Text 1 Listening and speaking course				
7	Unit 3 Understanding Science Words and phrases explanation Background Information Global reading of Text A: Public Attitudes Toward Science				
8	Unit 3 Understanding Science Detailed study of Text A & Exercises Text B: How to Make Sense out of science				
9	Unit 3 Understanding Science Long passage reading: Text 1 Listening and speaking course				
10	Mid-term Test Unit 4 The American Dream Words and phrases explanation Background Information				

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Table F.1 (cont.) Semester course schedule Description

Period	Teaching period allocation	Teaching	Quiz	Assessment mode	Test
64		62	2	Credit	3
Textbooks	<i>New University English Comprehensive Course</i> (Second Edition), 2021, Volume 1. Ji Peiyong, Wu Xiaozhen, Chen Jin, Shanghai Foreign Language Education Press				
Reference books	<i>University English comprehensive course for teachers, 2nd ed,</i> publisher: Shanghai Foreign Language Education Press				
	<i>Zhang Dao's authentic English grammar,</i> Foreign Language Teaching and Research Press				
	<i>University English listening and speaking course for teachers, 2nd ed,</i> Foreign Language Teaching and Research Press				
Week	Teaching Content				
11	Unit 4 The American Dream Global reading of Text A: Tony Trivisonno's American Dream Detailed study of Text A & Exercises				
12	Unit 4 The American Dream Text B: With His Own Two Hands Long passage reading: Text 1				
13	Unit 4 The American Dream Listening and speaking course Test Yourself (Unit 1—4)				
14	Unit 5 Work to Live or Live to work Words and phrases explanation Background Information Global reading of Text A: The Company Man				
15	Unit 5 Work to Live or Live to work Detailed study of Text A & Exercises Text B: You Might Be a Workaholic If ...				
16	Unit 5 Work to Live or Live to work Long passage reading: Text 1 Listening and speaking course				

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