

Analysis of the Exchange Structure in Online Tutoring by Pre-service English Teachers

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Abstract: Based on the national strategy of revitalizing teacher education, as an important part of talent training, pre-service teacher education plays an important role in the process of building a high-quality education system. However, affected by many factors, there are still many problems in the practice teaching of pre-service teacher education. In recent years, private tutoring by college students has developed rapidly. Similar to other practice courses for normal students, private tutoring provides pre-service teachers with the opportunity to practice teaching, reflect on learning and improve their professional competence. This emphasis on self-reflection is in line with The Exchange Structure proposed by Sinclair and Coulthard (hereinafter referred to as S&C) at the University of Birmingham in 1975, which is widely used in classroom conversation analysis. As pointed out by Atkins (2001), it is a very valuable work for teachers to apply this model to analyze classroom teaching activities, because they can better understand the courses they teach and improve classroom teaching in this way. However, the existing researches mainly focus on the traditional classroom exchange of in-service English teachers, and there are few on the classroom conversation between pre-service English teachers and students in online tutoring. Therefore, in order to truly reflect the characteristics of exchange structure of online English tutoring, this study selects a clip of the author's (pre-service English teacher) online teaching audio one year ago and transcribe it with the transcription system developed by Hutchby & Woffitt (1999). Then, the text materials are analyzed according to the original Exchange Structure (S&C, 1975), so as to provide suggestions for the professional improvement of pre-service English teachers. At the same time, the application of the Exchange Structure can be expanded to provide data for related studies, and suggestions are put forward for the improvement of the theoretical model.

Keywords: Classroom Conversation; Pre-service English Teachers; Teacher Education; The Exchange Structure; Tutoring.

1. Introduction

Teachers are the foundation of education. Teacher education is located in the upper reaches of the talent training system and has long been attached great importance by the Party and the state. Among them, pre-service teacher education, as a key link of teacher training in basic education, is the foundation of high-quality development of basic education (Zhang, 2023). In recent years, remarkable progress has been made in the practice teaching reform of teachers' pre-service education. However, influenced by many factors, there are still many problems in the cognition and practice of pre-service teachers' practice education, such as ignoring the long-term career development of normal students, the cultivation of innovation, professional ethics and morals. Normal students lack the opportunity of independent, comprehensive and individual development; Attach importance to the social value of practical teaching while not paying enough attention to the intrinsic value of individuals (Miao et al., 2023).

In recent years, as private education, college students' private tutoring has developed rapidly and has been widely concerned by the society. Nowadays, there is chaos in the private tutoring market, and some scholars have already pointed out that "family tutoring is a sick extension of school teaching." However, some scholars insist that private education should not be examined with the methods and purposes of public education, but should recognize the its particularity, and guide it with the principle of promoting children's personality development (Shen, 2022). The author believes that giving full play to the advantages of tutoring is

not only conducive to the development of students, but also a good helper to improve the professional quality of pre-service teachers. It is helpful for pre-service teachers to deepen their understanding of the theory and guide practice. In the process of tutoring, getting along with students and their parents is helpful to enhance their understanding of their own occupation, cultivate professional ethics, and discover their intrinsic value. Tutoring provides pre-service teachers with the opportunity to independently choose the time, place and object of practice, and online tutoring is not limited by time and space, which is conducive to the generation of practical wisdom. Through analyzing their own class videos or audios, pre-service teachers constantly reflect on their own shortcomings, learn from others' strengths, improve teaching skills, and enhance professional quality. In the meantime, pre-service teachers can appropriately adjust their teaching content and methods according to the analysis of the classroom exchange structure (Du, 2013).

2. An Overview of the Exchange Structure

2.1. Theoretical Background

The Exchange Structure, proposed by Sinclair and Coulthard at the University of Birmingham in 1975, is a relatively complete discourse description system. In the early 1970s, funded by the British Social Science Research Council, S&C and others undertook the project "the English Used by Teachers and Pupils", through which the Exchange Structure was proposed based on classroom dialogues between teachers and students, aiming to provide a model for describing and

analyzing various types of spoken discourse. Once introduced, it was favored by classroom teaching researchers and widely used in classroom conversation analysis. Later, with the modification and development of Burton (1981), Coulthard & Brazil (1981), Tzui (1994) and others, this model became richer in content and form, and its application was further expanded. In addition to classroom conversation, it is also gradually applied to the analysis of daily conversation and structural discourse.

2.2. The Exchange Structure

Referring Halliday's hierarchical model, it was a hierarchical system with five layers. S&C (1975:20) points out that the system is flexible, that each level is equally important, and that the upper level can be described by the lower level. The "Lesson" is the highest layer and contains several "Transactions"; The "Transaction" is composed of one or more "Exchanges". The "Exchange" is composed of several "Moves", and the "Move" is composed of several "Acts". "Act" belongs to the lowest level and has no structure. Its role in oral conversation needs to be determined in the context. In the above hierarchical system, the Exchange is the basic unit for speakers to talk about the topic. Researchers generally focus on analyzing the characteristics and structure of this level and the levels below. The "Exchange" is divided into "Boundary Exchange" and "Teaching Exchange". The former marks the beginning and end of the "Transaction" and has an organizational function, including two types of moves "Framing" and "Focusing". The latter has teaching function, usually including three moves of teacher "Initiation", student "Response", and teacher "Feedback", referred to as IRF structure. Among them, according to the different expectations of students' responses, "Initiation" can be subdivided into three types of acts. "Elicitation Act" expects them to reply; "Directive" expects a react from the other party, that is, to do something according to the instructions; "Informative" is used to express ideas, convey facts, opinions, and information in anticipation of an acknowledge, such as saying "oh" or nodding.

3. Classroom Exchange Analysis

According to the annotation of the corpus, we can see that the classroom conversation includes two stages: the beginning boundary exchange and the middle teaching exchange. The basic structure of the session is IRF, which is different from the severely criticized spoon-feeding pedagogy in the past, and the interaction between teachers and students is enhanced in online one-to-one tutoring. On the other hand, the teaching progress is hindered due to the course content, the student, the teaching level of pre-service teachers and the form of online teaching, making the classroom exchanges complicated, and all of them are adhesive, which is specifically manifested as $I_1R_1I_2R_2I_nR_n...FR_{n+1}$.

3.1. The First Exchange Analysis

The teacher attracts students' attention by the acts of marker and starter and helps the student understand the structure of the lesson, the purpose of the next exchange, and what tasks need be accomplished through the meta-statement act.

3.2. The Second Exchange Analysis

The teacher expects the student to present homework through the act of directive. However, the student is still

absent-minded, not following teacher's order, so the teacher issues two acts of nomination and prompt, urging students to focus on the current task. However, the student's speech speed is slow in answering the question, and keeps repeating the "relative term" and teacher's directive, indicating he is distracted again or does not grasp the definition and function of the relative term. At the same time, this is also related to the teacher's concise but unclear instructions. Although the meta-statement act in the first exchange specifies the task including relative word, attributive clause and antecedent, which confuses the student. The student has strong initiative and sends out a loop act to confirm the task assigned by his teacher. But he interrupted her and gave another wrong reply immediately. The teacher expresses her dissatisfaction through the evaluate act while guiding student's thinking by the acts of informative and clue. However, she still sounds negative after the student solves the problem under guidance, which will hurt the student's confidence and enthusiasm. Soon the teacher realizes the problem and adjusts her tone. Meanwhile, the teacher also issues the acts of comment and check according to the level of student, emphasizing the definition of relational term again, and paying attention to student's affective state, rather than simply saying good or bad. The author reflects that as a pre-service teacher, it is necessary to constantly practice teaching posture including intonation, body movements, facial expressions and emotional management. At the same time, even if the answer is not correct, the teacher should recognize student's potential, hold patience, sincerity as well as the sense of responsibility, and evaluate the student's answer in an acceptable way, and impart knowledge through the act of comment, protecting students' self-esteem and at the same time, students can realize their shortcomings and take the initiative to analyze the problems, which can promote the interaction and relationship between teachers and students.

3.3. The Third Exchange Analysis

The most complicated one in this lesson, the teacher sends two moves of feedback besides abundant initiation moves. The teacher first initiates a new question through the meta-statement act, and the student makes an unexpected response: reading the wrong question stem. And the teacher decides him to be inattentive through his act of aside, suggesting that teachers should not only notice if the lecture is clear, but also pay attention to the students. The teacher gives negative feedback by the act of evaluate and then states the task again by the act of directive. The student immediately draws his attention back, and locates the attributive clause which indicates that he knows how to recognize relative words and attributive clauses. Combined with the marks in Figure 1, the slow speed indicates that the student may be afraid of being criticized by the teacher for giving wrong answers again and that the metacognitive strategy is used to check the answers, through which it can be inferred that the student has strong self-esteem, self-awareness, good learning strategies and thinking qualities.

The teacher should not issue too much negative evaluation at this moment, otherwise it will restrain students' desire to express. However, given the student's performance before, another reasonable assumption is that he is being distracted again. After the student finds the relative word and attributive clause, the teacher sends out an adhesive initiating act, leading to the new question about the Chinese meaning of the sentence.

Table 1. Exchange Structure

Conversation	Move	Act
T: All right. We've learned the definition and function of attributive clauses, antecedents and relative words and assigned homework. Let's see if you have found the correct antecedent, relative term and attributive clause in each sentence.	Framing	Marker Starter Meta-statement
S: Ok.	Response	Acknowledge
T: Ok, the first sentence. Qiqi, What are you doing?	Initiation	Accept Directive Nomination Prompt
S: Looking for relative terms.	Response	Reply
T: Yes, The first thing you should do is separating the main clause from attributive clause by locating the relative term.	Feedback	Evaluate Comment
S: Relative term.	Response	Acknowledge
T: Relative term...	Initiation	Informative
S: Oh, so we are looking for the relative pronoun, aren't we?	Response	Loop
T: Em...yes, what you should do is...	Initiation	Reply Directive
S: Mr White! Mr White!	Response	Reply Reply
T: No, it seems that you are still not clear about the definition and function of relative term. Relative term is the conjunction introducing attributive clause. You have located the attributive clause. Why did you look for the relative term in the main clause?	Initiation	Evaluate Informative Clue
S: Who.	Response	Reply
T: Correct! What's the role of "who"? Conjunction, introducing attributive clause. It has been stated over and over again that relative term is conjunction. It's only called relative term in attributive clause. Clear?	Feedback	Evaluate Comment Comment Check
S: Yes.	Response	Acknowledge
T: OK, next sentence.	Initiation	Accept Meta-statement
S: Ok, Em...this... The only thing that...	Response	Acknowledge Aside Reply
T: No. It's "A dictionary...", this sentence.	Initiation	Evaluate Clue
S: Oh! The attributive clause is "which tells us" ...	Response	Acknowledge Reply
T: Please read the whole clause, "tell somebody something", it's a double object structure.	Initiation	Directive Clue
S: Oh, "which tells us the meaning".	Response	Acknowledge Reply
T: Of words!	Initiation	Clue
S: Oh, of words.	Response	Acknowledge
T: The meaning of what? The meaning of vocabularies. So what's the meaning of the clause? A dictionary is a useful book. What kind of useful book?	Initiation	Elicitation Clue Elicitation Clue Elicitation
S: Em...	Response	Reply
T: telling us the meaning of words.	Initiation	Clue
S: A useful book telling us the meaning of words.	Response	Reply
T: Yes! Did you notice? The word "book" is modified by the attributive clause introduced by "which". What kind of useful book? Then what's the antecedent of this sentence? Hello? Qiqi? What's the antecedent of this sentence?	Initiation	Evaluate Check Comment Elicitation Elicitation Prompt Nomination Elicitation
S: It's...em...	Response	Acknowledge
T: You haven't grasped the knowledge in last class. I told you to memorize it after class. Antecedent is the word modified by the attributive clause. You just showed how to translate it.	Feedback	Evaluate Comment
S: Oh, It's "a dictionary".	Response	Acknowledge Reply
T: No, It's the book, a useful book. Think about how did you translate it just now. What's a dictionary? It's a book which tells us the meaning of words. Here, the word "book" is modified. It's not a book which tells stories.	Initiation	Evaluate Informative Clue Clue Comment Comment Comment Comment
S: Ok.	Response	Acknowledge
T: It's not a book about space exploration. It's a book which tells us the meaning of words. The word "book" is modified by the attributive clause, isn't it? Therefore, what's the role of the word "book"? It is the antecedent, right?		Comment Comment Comment Elicitation Informative Check
S: Yes.	Response	Acknowledge
T: The antecedent is in the main clause. Listen! The antecedent is in the main clause. The relative term is in the subordinate clause. OK?	Feedback	Comment Directive Comment Check
S: Ok.	Response	Acknowledge

It is worth noting that this move includes multiple acts of prompts and initiation. Considering the limited time, the

teacher does not give the student time to think about it, but directly informs step by step. However, the teacher mentions

the word "meaning" many times, whose connotation needs to be illustrated. In the third exchange, the teacher's several adhesive initiating acts (the function is to direct and guide) serve for the final main initiating act. Therefore, the teacher gives a positive evaluation act to acknowledge the student, and then initiates the next adhesive move and new question in order to maintain student's initiative. But the effect turns out not good, the student failing to give the expected correct answer. Therefore, the teacher gives a negative evaluation and even criticizes the student since she has given him a lot of prompts by the adhesive moves of initiation and the Socratic questioning method before, but the student failed to complete the recitation task after class and he behaves poor, which hinders the teaching progress. Although attributive clause is new knowledge, and the learning content is too difficult for the student who has just graduated from primary school, the student's English level is excellent since he has been learning from foreign teachers since childhood and has rich practice experience and higher cognitive level than most of his peers. Moreover, the definitions of attributive clause, antecedent and relative word have been introduced in the last two classes, making them old knowledge. The main reason is that the student didn't complete the recitation, so the progress of this class (the practice of grammatical rules) cannot be advanced as expected. According to Skinner's theory of Programmed Instruction, the teacher needs to continue explaining this grammar point, and then enter the practice session. Therefore, in the next adhesive initiation move, the teacher uses a large number of clues and informative acts to present the definition of antecedent, check acts to ensure the student is focused, and comment acts to extend the learning content, training the student's independent thinking. In conclusion, the analysis of exchange structure indicates that teachers should take students' age, cognitive level, learning style and learning ability into consideration when presenting complex grammatical rules, adjust teaching plans and methods in a timely manner and pay close attention to students' performance.

4. Findings and Discussion

Through the analysis above, we can see that the IRF initiated by the teacher is still the basic structure of classroom exchange in online tutoring. However, the exchanges are too complicated, and the adhesive initiation moves used to prompt and guide students account for a large proportion. The main reason is that pre-service English teachers know their students well and understand they expect them to give timely and constructive feedback. In addition, the student dare to give loop acts to ask the teacher instructions, indicating that the relationship between pre-service English teachers and students is relatively friendly and harmonious, which is related to the dual role of pre-service teachers (teacher-student). At the same time, pre-service English teachers have teaching competence, good at guiding and helping students step by step, understand the way of "evaluation first and comment later", and can apply the act of comment effectively.

However, throughout the whole class exchange, the proportion of adhesive initiation moves used to prompt and inform the student is too large, which means the teaching process is blocked. Although pre-service teachers know their students well, the student analysis is not targeted, comprehensive and scientific enough, leading to the mismatch between the difficulty level of the learning content and the student's cognitive level, and the student becomes

distracted due to declining enthusiasm. Besides, it shows that the teaching process lacks integrity, rigor and organization and pre-service teachers need to strengthen their ability of classroom management. What's more, although the student has the opportunity to voice his thoughts, he sounds uncertain and hesitant as the teacher gives negative evaluation acts on his inappropriate answers and her tone is full of impatience when delivering the acts of clue and informative, which indicates that pre-service English teachers are susceptible to personal character, need to improve teaching evaluation and update educational philosophy. Moreover, despite pre-service English teachers understand the use of comment acts to supplement knowledge, the width and depth of the added content are not eligible. Therefore, pre-service English teachers should learn to explore and elucidate meaningful topics around the current issues or from students' speeches to achieve the unity of instruction and education. Finally, although they often adopt the acts of clue and elicitation, most of the questions raised are answered by the teachers themselves. In order to ensure the integrity of teaching, the time left for students to think independently is too short, through which they can easily fall into the trap of spoon-feeding instruction. And it is not conducive to students' self-construction of knowledge, against the scientific educational concept. Therefore, pre-service English teachers should attend more training so as to better understand the rules of classroom conversation and improve professional competence.

5. Conclusion

This study attains many findings through the analysis of classroom exchange in online tutoring by pre-service teachers based on the Exchange Structure (S&C, 1975). Even though online tutoring has problems such as insufficient supervision and lack of organization, and its conversational structure is relatively complex, this platform still provides a good opportunity for pre-service English teachers to enhance professional quality, deepen their understanding of students and themselves, and strengthen their awareness of teaching and research, especially for the lower-grade pre-service English teachers who lack practice experience and for students to improve language proficiency. In addition, this study selects the class conversation of private tutoring as the research object, which expands the research scope of the model Exchange Structure, and provides corpus for subsequent research. At the same time, in view of the theoretical model, the author suggests adding another type of act to describe speaker's emotional attitude. The author combines the Exchange Structure with the Conversational Analysis Theory to explain the discourse structure of classroom conversation in private tutoring, and the subsequent research can continue to combine sociolinguistics and pragmatics. At the same time, the author selects the online teaching audio of herself (a pre-service English teacher) a year ago for case analysis. In the future, more corpus samples can be selected to carry out comparative studies. Looking forward, in the new era, pre-service teachers should take the initiative to play the role of researchers, continue to apply the Exchange Structure to classroom conversation, constantly improve professional competence, insist scientific practice and lifelong learning, and become an excellent educator.

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