Scaffolding in Teacher-Student Interaction: A Case Study in Two Oral English Classes in China

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Abstract
This paper reports a case study designed to understand classroom interactional processes in a Chinese university. The case study focuses on scaffolding in teacher-student interaction as well as the process of shifting the responsibility from the teacher to student. Our first aim was to determine how teacher-student interactions in two oral English classes were distributed, and our second aim was to determine how the two teachers perceive their roles in teacher-student interaction and how their perceptive differences were reflected in teacher-student interaction in their oral English classes. The data were collected through videotaping and an interview. Results show that distribution patterns of teacher-student interactions were mainly different in the two oral English classes, and the role perception differences of the two teachers were partly reflected in their teacher-student interaction. The study suggests that the process of shifting the responsibility from teacher to student is a complex process which demands great efforts from teachers as well as willingness from students.

Key words: teacher-student interaction; scaffold; teacher's role; oral English classes

1. Introduction
Contemporary sociocultural approaches to learning stresses the importance of active mental processing by learners and the interaction with others (Karpov & Haywood, 1998). This sociocultural perspective, largely based on the work of Vygotsky (Vygotsky, 1978), assumes that cognition and other psychological processes are situated in social and cultural practices, and education and cognitive development are viewed as cultural processes. “Education is seen as taking place through dialogue, with the interactions
between students and teachers reflecting the historical development, cultural values and social practices of the societies and communities in which educational institutions exist” (Rojas-Drummond & Mercer, 2003: 100). Thus, knowledge is not only possessed by an individual learner, but also shared among members of a community.

Associated with the sociocultural theory of Vygotsky is the concept of scaffolding, a metaphor which is used to explain the role that adults can play in joint problem-solving activities with children (see Wood, Bruner & Ross, 1976). Scaffolding refers to any temporary support provided for the completion of a task that learners otherwise might not complete. It originated from Vygotsky’s (1978) conception of the zone of proximal development (ZDP). According to Vygotsky, a child’s ZPD is the distance between a child’s actual and potential abilities. Children’s actual ability accords with tasks they can perform independently, whereas their potential ability corresponds with tasks that can only be completed under adult guidance or more capable peers. Later, the term scaffolding was extended to teacher-student interactions by Cazden (1979). The implication of ZDP is that individual learners have learning potential which can be reached with scaffolding provided by parents, teachers, or peers. In terms of scaffolding, it is desirable that the task given to a child or student is at the appropriate level within his or her ZPD for the scaffolding experience to be successful.

The sociocultural approach to learning has been complemented with research on the analysis of interaction and discourse in various cultural and educational contexts, which demonstrates the benefits of social interaction for learning (see Littleton, Faulkner, Miell, Joiner & Häkkinen, 2000). Research emphasis is placed on how language mediates the way knowledge is jointly constructed by all participants (e.g., Mercer, 1995, 2000). Besides contributing to our understanding of the dynamics of knowledge construction, studies from this sociocultural perspective have examined factors that promote and hinder communication in the classroom. Among those factors, the role of the teacher in scaffolding teacher-student interaction has attracted a lot of attention.

Empirical research has revealed that the nature of the role assumed by the teacher is extremely important for the promotion of successful learning and productive discussion in classrooms (e.g., Meloth & Deering, 1999). However, research has also revealed the complexities involved in the teacher’s roles in the scaffolding experience. Successful scaffolding requires that teachers have a solid knowledge of curriculum in general and their students’ individual needs (see Pressley, Hogan, Wharton-McDonald, Mistretta & Ettenberger, 1996). Moreover, the amount and type of support need to be regulated as an individual learner assumes more responsibility for learning. The process of shifting the responsibility from a teacher to a student has been discussed as one of the key characteristics of scaffolding (see Pol, Volman & Beishuizen, 2010), and education focused on the ZPD is seen as involving the progressive transfer of responsibility from the teacher to students as they progress in their completion of the task (Cazden, 1988).

Although the centrality of transfer of responsibility in the conceptualization of scaffolding has been supported by many researchers (e.g., Reigosa & Jimenez-Aleixandre, 2007; Pol et al., 2010), findings from recent studies have revealed difficulties associated with such transfer. Reigosa and Jimenez-Aleixandre (2007) identified a range of problems
arising in the process of transferring responsibility to students aged 15 to 16 years in a context of teacher assistance in science group work. Three types of problems were found in relation to a) excessive task difficulty, b) stereotyped school culture and c) problems related to within-group interactions and roles.

Along a similar line, Rasku-Puttonen, Eteläpelto, Arvaja and Häkkinen (2003) revealed the difficulty of achieving the transfer of responsibility by examining the process of scaffolding in terms of teacher-student discussions during a long-term learning project carried out in a web-based learning environment. They found that shifting the responsibility for managing tasks to the students was only achieved in one class, but not in the other.

Empirical studies on scaffolding in teacher-student interaction in Chinese classrooms are rare. Many researchers and practitioners in higher education in China accept the view that teacher-student interaction has the potential to engage students in activities that are valuable in the process of learning. However, such high-quality classroom discourse may not always occur between interlocutors. It is not known whether the transfer of responsibility can be observed in college English classrooms in China.

To attain a better understanding of scaffolding teacher-student interaction as well as the process of shifting the responsibility from the teacher to student in Chinese college English educational context, we conducted a case study in two oral English classes. We intended to address two research questions in our study:

1) What are the distribution patterns of teacher-student interaction in two oral English classes at a Chinese university? Does the distribution differ in the two classes? If so, how do they differ?

2) How do the English teachers understand their roles in teacher-student interaction? If there are differences in their perception of their roles, do they manifest themselves in teacher-student interaction in the oral classes?

2. Method

2.1 Participants
Participants were two college English teachers and 53 college English students. One of the teachers, a female, had taught college English for more than ten years and the other teacher, a male, had taught college English for about two years. Twenty-three student participants were freshmen majoring in logistics (hereafter participants in Class A) and 30 students were sophomores majoring in accounting, human resources, business & administration, E-commerce and financing (hereafter participants in Class B). At the time of this study, participants in Class A had had about two months’ English learning experience at the university, while participants in Class B had had about 14 months’ English learning experience. Those in Class A were less fluent in English than those in Class B.
2.2 Data collection
The research was designed to follow the teaching-learning processes of the two teachers, together with their respective students, in authentic classroom settings. No additional pedagogical arrangements were made for the sake of the study. One oral English session with 45 minutes in length was videotaped respectively for Classes A and B and transcribed focusing on teacher-student interaction. The English session transcribed for Class A involved an extended group discussion on “How to keep clean” in which students were encouraged to discuss feasible ways to keep themselves away from drugs and a group task in which they were asked to design and present slogans for anti-drug campaign. The English session transcribed for Class B had to do with a teacher-led oral task on world conflicts, followed by a group discussion on the “Importance of World Peace.” It also included a group discussion on the international conflicts in the Korean Peninsula and a group work in which students were first asked to draw a picture representing their ideas on world peace and then present their pictures to the class.

The two sessions were subsequently coded based on the coding scheme used in the study of Rasku-Puttonen et al. (2003). To assure the reliability of the coding procedures, the two sessions were coded by two scorers. Any disagreements were resolved through conferencing to arrive at final coding for each session.

Afterwards, an interview with the two teacher participants was conducted which was designed to understand the instructional context, and collect general information of the student participants, and above all, to find out how the two teachers perceive their roles in teacher-student interaction and how they scaffold teacher-student interaction in the oral session. With reference to the perception of the roles, they were asked three open-ended questions: (a) express their views on the significance of constructing a learning community with their students, (b) explain whether they encountered any difficulties in the construction of such a community and (c) indicate whether they were inclined to see themselves as a guide or controller in teacher-student interactions. Additionally, teaching plans of the two English sessions were collected with a view to have a better understanding of the way the two teachers planned to scaffold the interactional processes in classrooms.

2.3 Data analysis
We applied a coding scheme to all the videotaped teacher-student interactions. The scheme was based on the one used in Rasku-Puttonen et al. (2003). Following this scheme, we identified three types of coding categorization aimed to reveal the semantic content of the utterances and their functions in discourse. They are: 1) general problem-solving activities; 2) direct regulation; and 3) indirect regulation. Different from Rasku-Puttonen et al. (2003), the category of information and communication technology-related utterances was not used in our study since those utterances were not observed in the two English sessions.

The unit for each code with a discourse function can be a word, a sentence or sentences. For example: Teacher: You mean taking drugs has advantages? (Teacher requests explanation, code TRE); Student: No, no. We need to think about the problems of taking drugs (Student provides explanation as teacher requests it, code EXPLT). (More examples
are presented in Appendix.) The coding scheme was applied to both teacher and students utterances. A total number of codes identified for each of the major discourse types (i.e., problem solving, direct and indirect regulation) were calculated with a focus on the distribution of teacher regulation in contrast with student regulation in the two oral English classes.

3. Results

Our first aim was to determine how teacher-student interactions in the two oral English classes were distributed. We performed two Chi-square tests to determine whether distribution similarities or differences exist between the two classes. The frequencies and percentage of total discourse functions in each discourse category is shown in Table 1. As shown in Table 1, the teachers made a higher proportion of functional segments than their students (62.97% vs. 37.03% in Class A; 57.14% vs. 42.86% in Class B), and such distribution remained similar between the two classes ($x^2 = 0.388; df = 1; p = 0.533$).

**Table 1.** The frequencies and percentage of total discourse functions in each discourse category in Classes A and B

<table>
<thead>
<tr>
<th>Discourse category</th>
<th>Class A</th>
<th>%</th>
<th>Class B</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher problem-solving</td>
<td>11</td>
<td>20.37</td>
<td>11</td>
<td>19.64</td>
</tr>
<tr>
<td>Teacher direct regulation</td>
<td>20</td>
<td>37.04</td>
<td>12</td>
<td>21.43</td>
</tr>
<tr>
<td>Teacher indirect regulation</td>
<td>3</td>
<td>5.56</td>
<td>9</td>
<td>16.07</td>
</tr>
<tr>
<td>Student problem-solving</td>
<td>17</td>
<td>31.48</td>
<td>11</td>
<td>19.64</td>
</tr>
<tr>
<td>Student self-regulation</td>
<td>2</td>
<td>3.70</td>
<td>5</td>
<td>8.93</td>
</tr>
<tr>
<td>Student other-regulation</td>
<td>1</td>
<td>1.85</td>
<td>8</td>
<td>14.29</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100.00</td>
<td>56</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Of the teacher regulations observed in Classes A and B, the highest proportion involved direct regulation, the percentage being higher for Class A than for Class B (37.04% vs. 21.43%). However, utterances by teachers concerning indirect regulation were less frequent in Class A than in Class B. A close look at the classroom video showed that the teacher in Class A used more direct regulation to negotiate the meaning of the task and indicate language errors more frequently than the teacher in Class B. On the other hand, the proportion of student utterances for problem-solving was higher in Class A than in Class B (31.48% vs. 19.64%). This result indicates that the students in Class A produced a lot more utterances in response to the teacher’s request to provide information, and the type of teacher-student interactions were more frequent in Class A than in Class B. With regard to the student self-regulation, the percentage in Class A was lower than that in Class B (3.7%
The Concept of “Object” in Activity Theory and Its Application in Classroom Research

vs. 8.39%), and this indicates that the students in Class A did not take the initiative to provide explanations as often as the students in Class B did. Similarly, in reference to the student self-regulation and other-regulation, the percentage in Class A was much lower than that in Class B (1.85% vs. 14.29%), and this means that the students in Class A did not take the initiative to request help or elaborate their ideas as frequently as those in Class B. A comparison of the teacher-student discussions demonstrated a significant difference in distributions of the six functional categories between the two classes ($\chi^2 = 12.984; df = 5; p < 0.05$).

Our second aim was to determine how the two teachers perceive their roles in teacher-student interaction and how their perception differences were reflected in the teacher-student interaction in their oral English sessions. To address this aim, we analyzed the responses collected from the interview. Teacher interview analysis showed that both teachers valued highly the process of building a learning community with their students and they perceived the learning community as a positive one in which they could learn and develop together with their students. However, both teachers reported that they encountered practical obstacles constructing such a learning process with their students. For the teacher in Class A, one of the major sources of difficulties came from the way her students viewed her role as an English teacher. She reported that her students expected her to be a controller and most of them were passive in learning. For the teacher in Class B, the main difficulty lay in the way to choose good discussion topics. As to their role in teacher-student interactions, the teacher in Class A reported that she viewed herself as a controller, an assessor and a guide, while the teacher in Class B considered himself as a guide and designer in teacher-student interactions.

4. Discussion and conclusion

The present study is contextualized within the research of sociocultural approach to learning that has shown that the role assumed by the teacher in scaffolding teacher-student interaction is assumed to be significantly important (Wood & Wood, 1996). We hope to deepen our understanding of the interactional processes in Chinese university educational context focusing on scaffolding in teacher-student interaction and the transfer of responsibility from the teacher to the student in two college English oral classes.

Our results revealed a similar distribution pattern of teacher regulation and student regulation in the two classes. This is demonstrated by a higher proportion of functional segments generated by the two teachers than their respective students in the oral tasks. This result was obtained in spite of the language proficiency difference reported between the participants in Classes A and B. This finding might suggest that in the two college English oral classes, teachers played a dominant role in teacher-student interaction.

On the other hand, our results showed one major difference of teacher regulation and three major differences of student regulation between the two classes. Here, we intended to discuss and interpret those discrepancies in relation to the differing roles of the teacher observed in the interview. First, one of the major differences in teacher regulation between
the two classes was that the teacher in Class A used significantly more direct regulation than the teacher in Class B. A close examination on the types of utterances generated by the teacher in Class A showed that apart from elaborating the meaning of an oral task and indicating language errors, the teacher in Class A produced 18 utterances in relation with setting or confirming goals of a specific task, while the teacher in Class B only produced 7 utterances of those kind. Those two observations seem to accord with the two teachers’ notion of their roles in interactional processes in learning. As reported in the previous section, the teacher in Class A reported her role first as a controller, then an assessor and a guide in classroom interactional processes, while the teacher in Class B described himself more as a guide and designer. What needs to be noticed, however, is that the teacher in Class A might not deliberately act more like a controller in interactional processes as she reported that her students expected her to be a controller, and they would not be inclined to taking more responsibility in learning. So, it is possible that her perception of her own role reflected, to some extent, her understanding of the role expected by her students.

Second, among the three main differences of student regulation observed between the two classes, one was that the participants in Class A produced significantly more utterances concerning problem-solving than those in Class B. This finding, together with the one discussed in the previous paragraph, implies that more information and explanations were produced and elaborated in the interactions between the teacher in Class A and her students than between the teacher in Class B and his students. One possible explanation for this feature of student utterances in Class A might have something to do with the perceived role of the teacher, and another possible explanation might lie in the fact that the participants in Class A were less fluent in English than those in Class B; therefore, more problem-solving activities were observed.

The two major differences discussed above indicate that the role perception differences of the two teachers were somehow reflected in their teacher-student interaction.

Third, our analysis indicated the student participants in the two classes differed in the amount of student self-regulation utterances. In Class B, 2 utterances were observed when the participants provided explanation as teacher requests it (EXPLT) and 3 utterances were observed when they provided explanation without being requested (Student provides explanation, code SPE). However, in Class A, only 2 utterances coded as EXPLT were observed while no utterances coded as SPE were observed.

Fourth, our analysis revealed that the student participants in the two classes differed in the amount of student other-regulation utterances. The participants in Class B generated significantly more utterances to elaborate their ideas with the teacher than those in Class A. To illustrate this point, a sample teacher-student interaction is provided below:

Teacher in Class B: Why peace is important?
Student 1: Peace is important because it can ... fulfill their lives.
Teacher: You mean because people can enjoy the happiness of their lives?
Student 2: Yea, peace is important because this is a necessary condition for people’s happiness.
In this example, the teacher and his students were engaged in an oral task before the students were asked to perform the task of group discussion on the “Importance of World Peace”. Obviously, *Teacher in Class B* intended to elicit ideas from the students centered on the topic of the group discussion. Interestingly, *Student 2* volunteered to elaborate the idea of “happiness”, and saying that “*peace is necessary condition for people’s happiness*”, thus he contributed to the interaction between the teacher and *Student 1*.

The findings concerning student self-regulation and other-regulation discussed above imply that participants in Class B were inclined to take more responsibility for their own learning, and this could be achieved as a result of higher language proficiency or it could derive from a gain from longer learning experience in interactional educational processes. Needless to say, this transfer of responsibility from teacher to student observed in Class B is valuable for the language learning and knowledge building for the students.

Overall, this case study shows that the two teachers mainly differ in the way they scaffold teacher-student interaction in college English interactional processes, and results of the study suggest that the process of shifting the responsibility from the teacher to student is a long and complex process which demands great efforts from teachers as well as willingness from students, which supports the view expressed in Reigosa and Jimenez-Aleixandre (2007). Although student self-regulation and other-regulation may not be easily achieved in college English oral classes, the study clearly reveals the progressive nature of transfer of responsibility from teacher to students, demonstrated by the student participants in Class B, as they progress in their completion of the task and as they progress in gaining more interactional experience. Moreover, the study clearly reveals teachers’ willingness to construct a learning community to share knowledge and learning experience with students. As expressed by the teacher in Class A, constructing a learning community can facilitate growth of teachers and students, and further, in the dynamic process of constructing such a community, knowledge shared between students and teachers can promote teachers’ professional development.

The study has several limitations that warrant mention. First, the findings of this study may have limited generalizability given the small sample size of only two teachers. Therefore, the degree to which findings can be applied to other educational contexts and settings with student groups may be questioned. Second, the fact that two teachers were observed only once also limits our conclusions. Future studies that collect a more comprehensive representation of classroom observations would help to support our findings. Finally, apart from the factor of teachers’ role, other learner factors, such as learners’ perception of learning, as well as their willingness to contribute to the process of knowledge construction in classrooms need to be examined as far as future research is concerned.
Acknowledgements

We wish to express our gratitude to the two teachers who generously allowed us to videotape their classes and provided useful information for this study.

References


### Appendix  Description and examples for six discourse functions

<table>
<thead>
<tr>
<th>Discourse category</th>
<th>Code</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher problem-solving</td>
<td>ELABOS</td>
<td>Teacher elaborate after student initiated elaboration</td>
<td>Ok! We can give them the education of harm. Harm is a noun of harmful and harmless. We can tell them the harm and?</td>
</tr>
<tr>
<td>Teacher direct regulation</td>
<td>TCE</td>
<td>Teacher indicates error or corrects</td>
<td>three countries? Or six countries?</td>
</tr>
<tr>
<td>Teacher indirect regulation</td>
<td>TRE</td>
<td>Teacher requests explanation</td>
<td>You mean taking drugs has advantages?</td>
</tr>
<tr>
<td>Student problem-solving</td>
<td>SPI</td>
<td>Student provides information</td>
<td>Oh, six countries.</td>
</tr>
<tr>
<td>Student self-regulation</td>
<td>EXPLT</td>
<td>Student provides explanation as teacher requests it.</td>
<td>No, no. We need to think about the problems of taking drugs.</td>
</tr>
<tr>
<td>Student other-regulation</td>
<td>ARTICT2</td>
<td>Student provides explanation as teacher requests additional information</td>
<td>There are things meaningful from our daily life. They may help us against them and go on so we have our things to do and don’t have to take drugs.</td>
</tr>
</tbody>
</table>

(Copy editing: David Teich)
Classroom Research in a Chinese Context: A Review

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Summary

The theme of this special issue is classroom research. Locating research inside the classroom, rather than in experimental or laboratory settings, is assuming more and more importance in applied linguistics these days, so this special issue is timely. If classrooms are constituted specifically for the purposes of language learning and teaching, then it is reasonable to look there for answers to the questions that we have.

This issue contains six empirical investigations into aspects of English language teaching in Chinese college contexts. They provide important insights into substantive issues within those contexts as well as illustrating a range of methods that can be deployed in classroom research.

Before turning to a review of the articles, I will address some terminological issues including what we mean when we talk about research, the characteristics of classroom research, and the nature of research paradigms.

Key terms and concepts associated with research

A very general depiction of “research” is that it is a systematic process of question/hypothesis formation, data collection and analysis and publication (Nunan, 1992). The studies in this collection all fit this definition. They have all been characterized as classroom research. Van Lier (1988: 47) defined the L2 classroom as “the gathering, for a given period of time, of two or more persons (one of whom generally assumes the role of instructor) for the purposes of language learning”.

In commenting on this definition, Nunan and Bailey (2009: 15) write:

This definition encompasses everything from one-to-one tutorial sessions to a professor lecturing to hundreds of students. However, with the development of distance learning, and, in particular, the use of technology, the “gathering together” may happen in a virtual classroom rather than in physical space.
Classroom research is research that is carried out in such contexts. It may be carried out by the teacher, with a view to improving practice, or it may be carried out by an external researcher. While the classroom may be specifically constituted for the purposes of research, it is generally carried out in intact classrooms, that is, classrooms that have been created for the purposes of pedagogy.

Twenty years ago, I carried out an analysis of fifty widely cited studies in our field that purported to offer advice to teachers. Of the fifty studies, only fifteen were carried out in genuine language classrooms. The others were carried out outside the classroom, either through formal experiments or in simulated settings. At the time I drew a distinction between classroom-based and classroom-oriented research, and made a call for more classroom-based research. I draw on this distinction in my analysis below.

In characterizing research, a basic distinction is drawn between qualitative and quantitative research. However, as long ago as 1987, Grotjahn pointed out that this two-way distinction is an oversimplification. In analyzing actual research, we need to establish three things: the method of data collection (whether the data were collected through an experiment or in naturalistic setting); the type of data (qualitative or quantitative) and the type of analysis (statistical or interpretive). Mixing and matching these variables results in two “pure” research paradigms, and six “hybrid” forms as follows:

**PURE FORMS**

Paradigm 1: exploratory-interpretive
1. non-experimental design
2. qualitative data
3. interpretive analysis

Paradigm 2: analytical-nomological
1. experimental or quasi-experimental design
2. quantitative data
3. statistical

**MIXED FORMS**

Paradigm 3: experimental-qualitative-interpretive
1. experimental or quasi-experimental design
2. qualitative data
3. interpretive analysis

Paradigm 4: experimental-qualitative-statistical
1. experimental or quasi-experimental design
2. qualitative data
3. statistical
Paradigm 5: exploratory-qualitative-statistical
1. non-experimental design
2. qualitative data
3. statistical

Paradigm 6: exploratory-quantitative-statistical
1. non-experimental design
2. quantitative data
3. statistical

Paradigm 7: exploratory-quantitative-interpretive
1. experimental or quasi-experimental design
2. quantitative data
3. interpretive

Paradigm 8: experimental-quantitative-interpretive
1. non-experimental design
2. quantitative data
3. interpretive

(Grotjahn, 1987: 59-60)

I shall refer to Grotjahn’s scheme in the analysis of the six studies in this collection.
In carrying out this review, I interrogated the studies through the following key questions.
Where were the data collected—in intact classrooms (i.e. classroom constituted for the purposes of research) or in non-classroom contexts?
What was the research paradigm within which the research was carried out?
What was the nature of the data that were collected?
What kind of the analysis was deployed?
What substantive issues emerged from the study?

Xiong and Zou: Developing Chinese Undergraduate English-Majors’ Research Article Writing Competence

The context of the research
Xiong and Zou situated their investigation into the writing competence of Chinese English-major undergraduates in a university in Shanghai. Participants were 28 senior students of English. The study took place in a class that was constituted for the purposes of pedagogy, not research. It is therefore an authentic classroom-based study.

Research paradigm and purpose
Although the researchers state that the study “is experimental for the research purpose
of developing a scheme for teaching research article (RA) writing to the senior students in China”, it does not meet the essential criteria for a “true experiment”. Research design demands that for a true experiment, there must be experimental and control groups, that the subjects be randomly assigned to the different conditions, and that there be pre- and post-treatment tests (Nunan, 1992: 41).

In this investigation, the subjects consisted of an intact class. There was no control group. Nor was there a pre- or post-treatment test. As there were not two groups, it could not be characterized as a quasi-experiment. If it were to be characterized as an experiment at all, it would have to be seen as a pre-experiment (Pre-experiments may have pre- and post-treatment tests, but lack a control group.)

The study is classroom-centered, in that it was conducted in a classroom that had been constituted for the purpose of instruction not research. It also had the practical purpose of providing insights into effective ways of developing English research article writing competence, scientific thinking/reasoning, and academic language. As the authors point out, there is a pressing need for students to develop these skills in order to be accepted into the academic discourse community.

The purpose is made explicit in the opening section of the article, namely, to develop and evaluate a set of procedures for teaching academic article writing and develop scientific thinking skills. The specific research questions are also clearly articulated, as follows:

1) What aspects of the competence of English RA writing can students learn from classroom instruction?
2) If the competence of RA writing can be gained from classroom instruction, what aspects of the competence of RA writing can be transferred from one RA writing task to another?
3) If English RA writing competence can be learned from classroom instruction and be transferred, what contributes to the learning and transferring?

**Research procedure**

An innovative course entitled *Integrated Skills of English Course* was developed and taught to 28 high proficiency, undergraduate, English language majors over a 19 week semester.

Data consisted of samples of student work collected during the course of a semester in which students carried out a range of tasks as they completed four projects. These tasks included developing a working plan, designing questionnaires and interviews, creating the outline of a research report, and preparing and evaluating the research report.

Students’ writings were analyzed from three perspectives: 1) to determine the extent to which they had mastered the research article genre, 2) the development of their scientific reasoning and thinking skills, 3) their academic writing development. Student reflections on their own development as academic writers were also analyzed.

**Substantive outcomes**

The study demonstrated that students benefited from the innovative academic writing program, although with no pre-treatment data and the lack of a control group, it is impossible to say with certainty that any improvements in the writing (the dependent
variable in the study) came about as a result of the writing program (the independent variable).

**Commentary**

As I have already indicated, this study is not an experiment. With no pre-treatment data collection, we do not know what students could or could not do prior to the innovative treatment. With the lack of a control group, it is difficult to say whether improved writing performance can be ascribed to the treatment or to other factors such as maturational effects.

In fact characterizing it in terms of its research genre presents a challenge. With a little tweaking, it could almost be recast, either as a case study or as a piece of action research into an innovative academic writing program. Regardless of what we call it, the study provides valuable insights into the development of academic writing.

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**Chang and Xia: A Study of the Effects of CBI for English Majors in the Chinese Context**

**The context of the research**

This study examined the effect of content-based instruction on the language proficiency of Chinese university English majors. Content-Based Instruction (CBI) is becoming increasingly important, not only in China, but in post-secondary contexts around the world, and ministries of education are mandating that a proportion of academic subjects are taught through the medium of English. Like the investigation by Xiong and Zou, this study is carried out in classrooms that were constituted for the purposes of instruction, not in artificially constituted classrooms or laboratory settings, and can therefore legitimately lay claim to being a classroom-based study.

**Research paradigm and purpose**

Although no research question or hypothesis is explicitly stated, this study takes the form of a “methods comparison” study (Nunan & Bailey, 2009) in that it seeks to test the relative efficacy of CBI and SOI (skills oriented instruction) in the development of language skills and content knowledge. As it is seeking to test the strength of a relationship between two variables (method of instruction and learning outcomes), the psychometric paradigm is the appropriate one. The author(s) identify the study as a quasi-experiment as randomization was not possible.

**Research procedure**

Eight intact classes were identified for the experiment, with four being assigned to the experimental condition and four being assigned to the control condition. In terms of design, then, it was a relatively straightforward quasi-experiment. There were 107 students in the control groups and 130 students in the experimental groups. The researcher(s) indicate that students in three of the experimental classes were of a lower proficiency
than those in the control groups as measured by the comprehensive national Chinese and English exams. This raises a concern as to whether all subjects were drawn from the same population. Not reason was advanced for this difference.

Both control and experimental groups were offered 4 skills-based courses. While the experimental groups were also offered 16 content-based courses the control groups were offered additional skills-based courses. The independent variable was therefore the pedagogical focus (CBI versus SOI). The dependent variable was a large-scale standardized test of skills, grammar and vocabulary to which was added a multiple choice test of history, geography, culture and literature drawn from the CBI courses. The test was therefore intended to be at least partially “program-fair” to those in both condition (Berettta, 1986). I say “partially” because it is unclear whether the CBI test items and the SOI test items were represented in proportions that reflected the instruction.

The treatment lasted two years, which is worthy of note. Most classroom research is carried out over a much shorter time frame for reasons of practicality. (For example, in many contexts, it is impossible to retain students over this length of time.) Increasing the length of an experiment increases the chances that the treatment will have a measurable effect, but it also increased the chances that other factors such as maturation, exposure to authentic content through the Internet or other sources etc., many have an influence.

Substantive outcomes
Pre- and post-treatment tests were administered either side of the treatment. Scores on subcomponents of the test were analyzed through a series of t-tests. Results on the pre-test showed a significant difference between the control and experimental groups, with the control subjects outperforming the experimental subjects. At the end of the experiment, the experimental subjects slightly outperformed the control subjects. Overall the differences were not significant, although the experimental scores were, not surprisingly, significantly higher on the sub-components of general knowledge and vocabulary.

Commentary
Several factors in the design of this study complicate the interpretation of the results. Firstly, the pre- and post-treatment tests were not equivalent, nor were the experimental and control subjects. Why this should have been so, is not explained in the study. Nonetheless, it would appear from the results, that CBI had a marked effect, not only on variables where one would expect it to make a difference, such as vocabulary and general knowledge, but also in skills areas such as listening, reading, and grammar-vocabulary.

Liu and Xiao: A New Model in English Language Teaching in China: The Case of Shantou University

The context of the research
This study reports on the development of an innovative approach to the teaching of English at Shantou University, a provincial university in southwest China. The innovation
was implemented in order to address several significant challenges confronting College English teachers in China, in particular large classes, limited contact hours, limited opportunities for students to use English for authentic purposes, examination-oriented instruction, and limited professional development opportunities for teachers. Particularly noteworthy is the longitudinal nature of the study: data were collected over an eight-year period.

Research paradigm and purpose
The aim of the innovation described in this study was to develop high levels of communicative competence, as well as critical thinking skills and learner autonomy. It therefore aimed at both content and process outcomes. The theoretical framework underpinning the innovation draws on several key pedagogical models currently being promoted in English language education, namely:

- Integrated skills
- Learner-centeredness
- Task-based language teaching
- Collaborative learning
- Theme- or content-based instruction
- Critical thinking

In order to meet its aims, the innovation focused on academic design and instruction, the assessment system, professional support for faculty, and facilities that would facilitate authentic student communication outside of the formal instructional process.

In terms of design, this study takes the form of a program evaluation. It is non-experimental, although the principle means of assessing the effectiveness of the innovation was determined both quantitatively and qualitatively.

Data yielded in order to evaluate the innovation included:

- a range of proficiency tests, some administered pre- and post-treatment; recognition of the program locally, provincially, nationally and internationally; and student successes in a range of national competitions.

Research procedure
Pre- and post-treatment tests were administered, although these were not identical (a speaking component was added as a post-treatment measure, but was not part of the pre-treatment assessment). Although there was no control group, and therefore no random assignment of students to different treatments, students from the Medical faculty, who had a different English program, acted as a comparison group. A non-randomized sample of Medical students took the post-test but not the pre-test. An ANOVA revealed some statistical differences among colleges. For example, the Liberal Arts college significantly outperformed the Medical college overall, and all colleges significantly outperformed the Medical college on the post-treatment test of speaking. Although there was no pre-treatment test for speaking, the results do appear to be quite striking. As the enhancement of oral communication was a major aim of the curriculum, the data would seem to support the researchers’ claim that “the result clearly demonstrates that the EEP has
greatly improved the speaking ability of the majority of the student population on the main campus of STU”. When comparing STU student scores on the CET against the national average, STU students significantly outperformed the general universities on the three occasions that the comparisons were made, and outperformed the key university students on two of the three occasions.

Other data included “recognition” of the program, and the performance of Shantou U. students in competition at the national level. In terms of recognition of the program, the ELU won or was nominated for excellence in teaching awards at the local, provincial and national level. Additionally, the “program was recognized not only by experts in the field both in China and abroad but also by the media”. Shantou U. students have also received recognition in various national level competitions.

**Substantive outcomes**
The study has provided compelling evidence of the efficacy of the curricular innovation. Students who took part in the program outperformed cohorts of students from the Medical college who did not take part in the program. They also outperformed students from general universities on the CET. Researchers also report a growth in dedication and self-confidence on the part of students.

**Commentary**
This study documents a richly comprehensive curriculum innovation at the College English level. It provides support for advocates of learner-centered, task-based collaborative learning as well as those who argue for a fostering of independence and learner autonomy.

The study illustrates the “messiness” of classroom-oriented research carried out in the real world rather than in a laboratory context. In an ideal world, for example, pre-treatment test scores would have been collected from the Medical college, and a speaking component would have been included in the proficiency tests from the beginning. It would also have been good to see more qualitative data such as teacher accounts of the teaching learning process, and interview data from students on their experience with what to them would have been new and probably radical ways of approaching language learning. It would also have been useful to have an opinion from the researchers on the relative contributions of the four different aspects of the innovation to the success of the program. To what extent, for example, did the teacher professional development dimension enhance the innovation?

Is the study a piece of classroom research? This is an interesting question, because implicit in the innovation is a questioning of the “traditional” notion of “the classroom”. Learning happens in the learner, whether or not he or she happens to be in what we conventionally think of a classroom. This is reflected in the organization of out-of-class activities and the creation of a Centre for Independent Language Learning. Overall, I would probably characterize the study as classroom-oriented rather than classroom-based.
Zhang and Jin: Promoting Student Participation in Seminar Courses: A Case Study

The context of the research
This study was carried out in an intact class of undergraduates at Beijing Foreign Studies University. As the class was constituted for the purposes of teaching and learning, not research, this is clearly a piece of classroom research.

Research paradigm and purpose
This is one of the studies in the collection that explicitly identifies the researcher’s chosen method: case study. (Although there are other studies in the collection that could pass muster as case studies.) The study resides within the naturalistic paradigm as there was no intervention or manipulation of either the teacher or the students. Data analysis was largely interpretive, although there is also a limited amount of quantification in terms of classification of question types.

The overall purpose of the research was to uncover “an effective way of integrating disciplinary learning with language skills development”. The issue of content-based instruction is thus emerging as an important substantive theme within the collection.

The research questions of interest to the researchers were:
1) What are the strategies Jiang (the teacher) has used to promote student participation in discussions?
2) How are the strategies used in the teacher-led question-answer sequences to promote student participation?

It was not entirely clear to me whether the questions had been identified prior to the initiation of the research, or whether they emerged in the course of interrogating the data—which consisted of video transcripts of two lessons. While the psychometric tradition requires the prior formulation of questions, it is quite permissible, and not at all unusual in naturalistic research, for questions to emerge, or be reformulated and refined, during the course of data collection and analysis.

Research procedure
A two-hour class taught by a single teacher to a group of 24 third-year undergraduates, was videotaped. The tape was transcribed, and analyzed. Although this is basically a naturalistic study, the research design, as the researchers indicate, in mixed-method in that it involved quantitative coding and qualitative conversation analysis. The piece of research presented here was part of a larger study that involved other data collection methods such as questionnaire administration and analysis.

The data were analyzed using a conversation analysis system in which the “turn” was the basic unit of analysis. The researchers did not assign turns to predetermined categories, but “on close analysis of the relationship between adjacent turns. Close attention is paid to how each turn relates to the prior turn as well as to the following turn; the teacher turns on which subsequent student turns are clearly contingent are underscored”.

107
Substantive outcomes
Teacher questions emerge as fundamentally important in promoting student participation. The researchers distinguish between Initial Questions and Expansion Questions, and identify four types of Expansion Questions. Each of these has an important role to play within instructional sequences on engaging the learners and encouraging their participation. The teacher artfully draws on his repertoire of Expansion Question types to get learners engaged in the content of the class and drawn the learners into the lesson. Within instruction sequences, each question type plays a unique role. Although the researchers found that the basic IRF pattern persisted in what appears to be a teacher-fronted lesson, they also found that this basic pattern is an oversimplification. They present an elaboration on the basic pattern, and their I-R-(E)-F-FC model represents an original contribution to classroom research.

In their conclusion, the researchers also defend the fact that the teacher does not relinquish control to the students, or encourages student-student interaction on the grounds that “this might lead to the loss of teacher guidance, resulting in the detriment of the fulfillment of instructors’ pedagogical goals”.

Commentary
This study shows the value of case study research for theory generation, model building / elaborating, and for suggesting practical pedagogical applications. Although the “case” is a single two-hour lesson carried out within an intact classroom which aims to integrate content with language development, it provides clear pointers for practice.

Cheng: The Concept of “Object” in Activity Theory and Its Application in Classroom Research—A Case Study of a Phonetics Course

The context of the research
This study took place at a normal university in China in a class that was constituted for the purposes of pedagogy, not research. It is therefore a genuine piece of classroom research. The course, for first year English majors who intend to become teachers, has two aims: to help students improve their pronunciation, and to introduce them to theories and ways of teaching pronunciation.

Research paradigm and purpose
The author explicitly identifies this piece of research as a case study in the title of the piece. By definition, a case study is non experimental. (“Unlike formal experiments, which control and manipulate variables and look for causality, case studies are centered on description, inference and interpretation”. (Nunan & Bailey, 2009: 162) ). Qualitative data that are qualitatively analyzed form the basis of the empirical part of the research report. This research therefore resides within the naturalistic paradigm.

The purpose is to deploy activity theory to show why, in a phonetics course (and
presumably any other type of course), there will be differentiated outcomes for different learners. The researcher focuses on the functioning of “object”, a central construct within activity theory, pointing out that within the learning process, in this case a phonetics class, different learners may focus on different aspects of pronunciation. For different learners there will be different objects and therefore different outcomes. This insight, of course, is not unique to activity theory—it has been around for many years, and has been used to address the question of why learners don’t learn what teachers teach. However, activity theory provides a more rigorous framework for what is, in some ways, a rather programmatic insight.

Research procedure
Data for the study are two transcripts from the phonetics class. These are subjects to discursive, interpretive analysis.

Substantive outcomes
The study illustrates the co-construction of learning. Although the context of the study is a phonetics class, the substantive content is, in a sense, unimportant. The insight would play out, in some shape or form, in any lesson.

In the discussion section of the report, the author lists and discusses the factors that may have altered the course of the activity. She illustrates the fact that any given lesson does not exist as an isolated entity, but will be part of the evolving history and culture of this particular class as well as the history and identities of the individuals involved. As she states:

individual differences among the students and tutors, such as their motivation, their past learning and living experience, their personality, their learning style, and the like, all of which may have a role in shifting and modifying the focus of tutor’s talk, or the emphasis the tutor puts on different exercises and tasks.

Commentary
The study confirms the fact that lessons are co-productions between teacher and students. They do not unfold like a film script. It illustrates very nicely the fact that there is a complex relationship between what we, as teachers, plan to do, what actually happens in the moment-by-moment reality of the classroom, and what students actually learn. Elsewhere, I have referred to these three different aspects of the instructional process as the curriculum as “plan”, the curriculum as “action”, and the curriculum as “outcome”.

The description of activity theory in this piece is a model of clarity, the author articulating a complex theory in a way that even a naïve reader should comprehend. Although the empirical component of the study is relatively modest, consisting of the interpretive analysis of two short classroom extracts, it provides yet more evidence of the complexities of the classroom as well as reinforcing the notion that if we want to understand the complexities of the curriculum, we need to go into the classroom itself.
Li, Yang, Wang and Chen: Scaffolding in Teacher-Student Interaction: A Case Study in Two Oral English Classes in China

The context of the research
This study was carried out in a Chinese university context. It involved the analysis of two lessons by two different teachers. Both lessons were conducted in intact classrooms, and the study can therefore be considered to be an authentic piece of classroom research.

Research paradigm and purpose
The study was carried out within a sociocultural framework and addressed two key questions:

1) What are the distribution patterns of teacher regulation and student regulation in two oral English classes at a Chinese university? Does the distribution differ in the two classes? If so, how do they differ?

2) How do the English teachers understand their roles in teacher-student interaction? If there are differences in their perception of their roles, do they manifest themselves in teacher-student interaction in the oral classes?

Research procedure
Two different classes involving fifty-three college English students were videotaped, transcribed and coded. Following the lessons the two teachers who taught the lessons were interviewed. The data (classroom transcripts and interview data) were therefore qualitative. Coding the transcripts resulted in quantitative data that were subjected to Chi-square analysis. The teacher interviews were analyzed qualitatively.

Although the data analysis involved the use of the Chi-square statistic, the method of data collection was non-experimental, and the raw data were qualitative. It is therefore a mixed-method study, falling between Grotjahn’s Paradigm 1: exploratory-interpretive and Paradigm 5: exploratory-qualitative statistical.

Substantive outcomes
The study confirmed that in teacher-student interactions, it is the teacher who dominates. This was the case with both teachers. However, the study revealed major differences between the two lessons in terms of teacher and student regulation. Teacher A used significantly more regulation than Teacher B which reflected differing perceptions of their roles within the pedagogical process. Also, students in Class A produced significantly more problem solving utterances. The researchers suggest that this might be a result, either of student perceptions of the teacher’s role, or to the lower levels of fluency on the part of students in Class A.

Commentary
This study, like several others in the collection is interesting because it illustrates the fact that many pieces of classroom research these days defy strict classification. In the 1980s Grotjahn pointed out that the two-way distinction between qualitative and quantitative
research is an oversimplification, and proposed an additional six paradigms. This study shows that these days, even this elaboration is inadequate to capture the complexities of mixed-method classroom research.

Concluding remarks

The studies in this collection represent an important advance in classroom research in China. They illustrate the investigation of a range of substantive issues and provide models of both classroom-based and classroom-oriented research.

Substantive issues

These six studies in this collection explore a rich variety of contemporary themes and issues. The following are woven through the studies, and reflect the fact that the issues concerning contemporary language education in other parts of the world are also of interest and concern to classroom researchers in China.

- The writing of research articles by undergraduates
- Content-based Instruction
- Critical thinking skills and learner autonomy
- Student interaction/participation
- Co-construction of learning
- Teacher student roles

Methodological issues

The studies bear out the observation that much of the research in applied linguistics these days is hybrid in nature. From Table 1, below, we can see that while Study 1 resides purely within the naturalistic paradigm (Grotjahn’s “exploratory-interpretive paradigm”) and Studies 2 and 5 resides purely within the experimental paradigm (Grotjahn’s “analytical-nomological paradigm”), the other three are mixed in terms of the types of data that were collected and/or the types of analyses to which they were subjected.

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<thead>
<tr>
<th>Study</th>
<th>Method of data collection</th>
<th>Types of data</th>
<th>Types of analysis</th>
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</thead>
<tbody>
<tr>
<td>Xiong &amp; Zou</td>
<td>Non-experiment</td>
<td>Qualitative</td>
<td>Interpretive</td>
</tr>
<tr>
<td>Chang &amp; Xia</td>
<td>Experiment</td>
<td>Quantitative</td>
<td>Statistical</td>
</tr>
<tr>
<td>Liu &amp; Xiao</td>
<td>Non-experiment</td>
<td>Quantitative and qualitative</td>
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<td>Zhang &amp; Jin</td>
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<td>Cheng</td>
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<td>Qualitative</td>
<td>Interpretive</td>
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<tr>
<td>Li, Yang, Wang &amp; Chen</td>
<td>Non-experimental</td>
<td>Qualitative</td>
<td>Statistical and interpretive</td>
</tr>
</tbody>
</table>
References


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