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A Study on the Status Quo of Applying Resource-based Scaffoldings in Primary School English Classes and Its Effectiveness

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Abstract

Under the guidance of Gagné's Nine Events of Instruction, this paper attempts to analyze status quo and effectiveness of applying resource-based scaffoldings in five dimensions: content, clarity, timing of presence, teacher's guidance, and students' participation status. 12 regular classes delivered by 3 English teachers in a primary school are selected to be research subjects. Through classroom observation, results show that textual scaffolding and suggestion scaffolding are used with relatively high frequency but comparatively low effectiveness. The validity of demonstration scaffolding is the highest. The application of graphic scaffolding is less frequent but more effective comparatively. Thus, to improve the effectiveness of the application of resource-based scaffoldings, teachers should reasonably presuppose, flexibly apply and dynamically generate scaffoldings.

Keywords

Resource-based scaffoldings; Status quo; Effectiveness

1. Introduction

Being one of the three teaching modes of constructivist learning theory, "Scaffolding Instruction" emphasizes the function of teacher's guidance and assistance, as well as students' autonomous learning and self-construction. In recent years, scaffolding has been widely applied in English classrooms because of its richness in content, variety in form and practicality in function. It has been observed in classrooms that effective resource-based scaffoldings can help students successfully complete learning tasks and cross the zone of proximal development. However, through classroom observation, it was found that among regular English classes in elementary school, the design and application of resource-based scaffoldings had issues such as arbitrariness and ambiguity.

In order to explore the current situation of resource-based scaffolding design and application in regular English classes and its effectiveness, this paper applies the classroom observation and conversational analysis to offer a microscopic understanding of resource-based scaffolding.

2. Resource-based Scaffoldings

2.1. Definition

Based on different classification bases, domestic and foreign scholars have given different definitions of scaffoldings.

Foreign scholars have put forward their own views on the definition of scaffoldings from the perspectives of providers, adaptability, existence time, and goals. Wood et al. (1976，p. 89)

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were the first to define scaffoldings from the perspective of the providers. He held that the scaffoldings in teaching were the learning support provided by the helper during the learning process of the grantee, and the age, gender and relationship between the helper and the grantee were not limited. Pressly defined scaffolding as a tool provided according to students' needs, and should be taken away in time after their abilities grew (qtd. in Donato 34).

In China, based on the learning process theory and Gagné's Nine Events of Instruction (1992), Zhang Lixia and Shang Leijie (2011, p. 28) proposed "Resource-based scaffolding". Zhang Lixia and Shang Leijie (p. 29-30) suggested that resource-based scaffolding was a method for teachers to provide students with various learning resources and ways of resource acquisition and utilization, so that students could obtain relevant information timely and accurately during learning. From the purpose of scaffolding usage, Zhang Jin (2017, p. 101) further proposed that a resource-based scaffolding was a learning scaffolding that provided a series of resources to support students in completing learning tasks and achieving goals, and had the function of passing knowledge.

This paper argues that resource-based scaffoldings refer to instructional scaffoldings with learning resources and methods of accessing and utilizing them, which are directly presented by teachers to assist students in completing tasks.

2.2. Classification

Currently the most commonly used classification of resource-based scaffolding is that by Zhang Lixia and Shang Leijie (2011, p. 30). Resource-based scaffolding can be classified into four categories: textual scaffolding (TS), suggestion scaffolding (SS), graphic scaffolding (GS), and demonstration scaffolding (DES) (Zhang Lixia & Shang Leijie, 2011, p. 30), as defined and exemplified in the following table (Yu Xueming & Luo Xiaojie, 2020, p. 5).

Table 1. Classification of Resource-based Scaffolding

Type	Definition	Examples
Textual scaffolding	Textual materials provided by teachers, which are needed for students to complete the tasks.	Language support such as task-related vocabulary, sentence patterns or discourse.
Suggestion scaffolding	Ways and means of accessing and applying resources in the form of suggestions when students are having difficulty understanding tasks or accessing key information.	Suggestions for students to focus on one key piece of information that may have been overlooked.
Graphic scaffolding	Structured diagrams visualizing the required learning resources in order to help students.	Tables, flowcharts, mind maps, etc.
Demonstration scaffolding	Examples of organizing and manipulating existing resources in order to avoid vague and lengthy explanatory processes.	Vivid examples or clear demonstrations, etc.

2.3. Studies on applying of resource-based scaffoldings

In the 1990s, foreign researches on instructional scaffoldings began. Wood (1976，p. 89) first applied "scaffolding" to the field of education and suggested that instructional scaffolding was what built by a high-level person for a low-level learner. Based on the characteristics of scaffolding, Pressly et al. (p. 34) proposed the gradual withdrawal of instructional scaffolding.

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These theories have proved that scaffolding instruction has broad application prospects and practical significance.

In addition, foreign scholars have paid increasing attention to scaffoldings and found that instructional scaffoldings played an important role in promoting learners' active participation in classroom activities, enhancing knowledge comprehension and task completion, and improving language skills (Muhonen et al, 2016, 143-145). The usefulness and effectiveness of instructional scaffolding for the development of second language skills had been well verified by existing studies (Ahmadi Safa & Beheshti, 2018, p. 37; Ahmadi Safa & Rozati, 2017, p. 447).

Studies on applying of resource-based scaffoldings also have done in China. Chen Qinqin (2016, p.53) used quantitative observations to investigate the effectiveness of instructional scaffoldings in elementary school English teaching through classroom observation using a designed classroom observation scale for scaffolding validity, and as a result emphasized the importance of in-time presence and openness of scaffoldings. This study was concerned with the macro level. It analyzed not only resource-based scaffoldings but also other types of scaffoldings.

Gradually, the relevant research content has moved from macro to micro. Wang Xinyi and Luo Xiaojie (2019, p. 7) adopted Zhang Lixia and Shang Leijie's classification of instructional scaffoldings (2011, p. 28-30), and applied it to English teaching research. They analyzed the use of four types of resource-based scaffoldings and their effectiveness in five English demonstration lessons of elementary school from five perspectives: content, clarity, timing of presence, teacher's guidance and students' participation status. They also made relevant suggestions on how to optimize the design and apply resource-based scaffoldings effectively.

However, it can be found that, the objects of existing studies are almost demonstration lessons or competition videos, lacking data sources and researches of regular lessons.

3. Research Design

3.1. Research subjects and questions

This research chose the recordings of 12 regular classes delivered by 3 English teachers in an elementary school in Zhejiang and the elementary school to be the research subjects. This study attempts to discuss the current situation and effectiveness of applying resource-based scaffoldings in elementary school regular English classes by answering the following two questions:

What is the status quo of applying resource-based scaffoldings in elementary school English class in five dimensions?

What is the effectiveness of applying resource-based scaffoldings in elementary school English class?

3.2. Research instruments

In order to complete the research from both quantitative and qualitative aspects, two research instruments, classroom observation and conversational analysis, are used.

The use of classroom observation research method aims to quantitatively and qualitatively analyse the validity of the design and use of resource-based scaffoldings in regular English classes. A classroom observation scale for scaffolding effectiveness from Chen Qinqin (55) (see Table 3) is adapted.

The effectiveness of a scaffolding can be assessed in two dimensions: design and utilization (Cui Yunguo, p. 107; Chen Qinqin, p. 54). The validity assessment of resource-based scaffoldings can be further subdivided into five dimensions: content, clarity, timing of presence, teacher's guidance, and student's participation status (see Table 4). The first two are at the level of

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scaffolding design, while others are at the level of scaffolding utilization (Wang Xinyi & Luo Xiaojie, p. 8).

Table 3. Classroom Observation Scale for Scaffolding Validity (Adapted from Chen Qinqin)

Time		Class					Teacher	
Observer		Topic						
Number	Teaching Procedures	Type of scaffolding	Effective factors of scaffolding design and application					Notes
			Content	Clarity	Timing	Guidance	Participation	
1								
2								
3								
4								
5								
Comments								

Table 4. Definition of Five Dimensions (Adapted from Yu Xueming & Luo Xiaojie)

Dimension	Definition
Content	The rationality and sufficiency of the scaffolding itself
Clarity	Whether the presentation of scaffolding is clear and explicit to facilitate students' understanding
Timing of presence	Whether the time point at which the teacher throws out the scaffolding is in the student's zone of proximal development
Teacher's guidance	Teacher's prompting or direction to students when the scaffolding is thrown
Student's participation status	Students' interest level and thinking status when utilizing the scaffoldings

In this paper, when calculating, the total value of validity for each scaffold design and utilization can be set to 25. The five assessment indexes are divided into five: 5, 4, 3, 2, 1 (Yu Xueming & Luo Xiaojie, p. 6).

4. Results and Discussion

4.1. Overall situation of the application of resource-based scaffoldings

Through class observation and further analysis, it was calculated that teachers used resource-based scaffoldings 53 times in 12 lessons, and all four types of resource-based scaffoldings were involved (see Figure 1).

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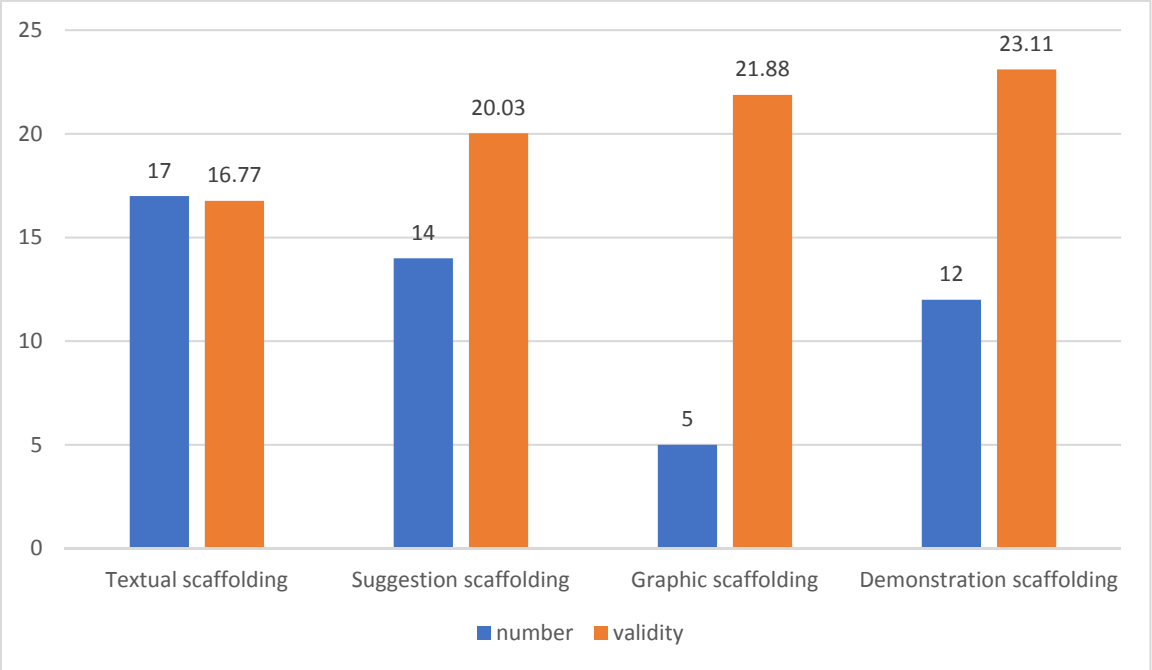

Figure 1. Statistical Chart of the Amount and Validity of Each Type of Resource-based Scaffolding

According to Figure 1, the average validity values for each type of resource-based scaffolding are generally high. Judging from the quantity and validity of application of the four types of resource-based scaffoldings, TS, SS and DES are used more frequently, among which the validity value of DES is the highest and the validity value of TS and SS are lower. The use of GS is less frequent but more effective comparatively.

4.2. Effectiveness of the application of resource-based scaffoldings

To further investigate how these factors affect the validity of applying different types of resource-based scaffoldings, this study selected one typical case from each of the four types of resource-based scaffoldings for further observation and analysis.

4.2.1. Analysis of effectiveness of applying textual scaffoldings

It is found that teacher's appropriate guidance plays an important role in utilization, and the content can't be too specific, or the validity will be influenced negatively.

[Case analysis 1]

In conversation practice session of *PEP5 Unit3 What would you like? A Let's talk* about food-ordering, taught by Teacher H, textual scaffolding was provided for students with relevant sentence patterns and phrases on the learning materials, including word bank, sample conversation and sentences (see Figure 2).

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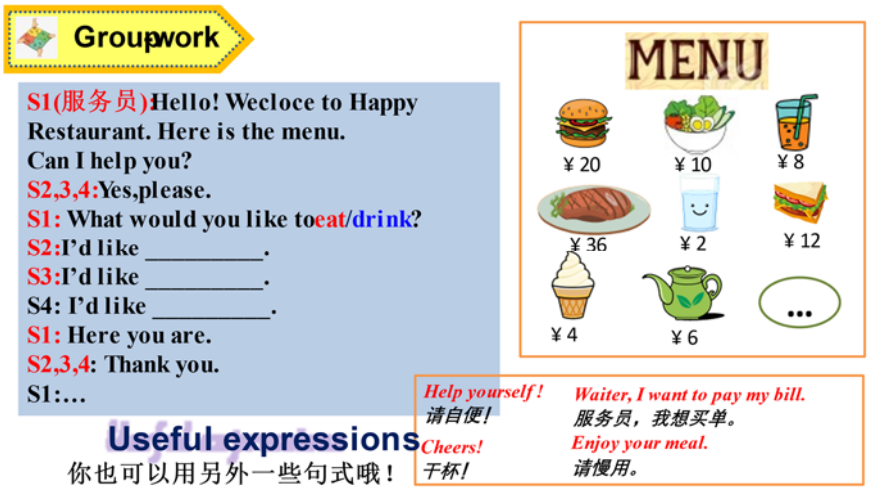

Figure 2. Textual Scaffolding Teacher H used

In this case, although the presentation of the textual scaffolding is clear and the resources provided are extensive, the effectiveness of it is affected by a lack of teacher's guidance after the presentation of the textual scaffolding, leaving students unsure of how to use the textual scaffolding in the face of a wide range of text resources as well as the following direction of the conversation. On the one hand, timely guidance on how to use the sentence patterns and phrases is a necessity. In this case, in the word bank are some phrases related to the purpose of the event, which might be unfamiliar to students, so without further explanation it would be hard for them to apply these new phrases into their conversation. On the other hand, the lack of further explanations of the sample conversation is also a main factor that causes low validity. Sample conversation includes the beginning of each speaker, which can help students successfully start their dialogue. However, without teacher's appropriate guidance, it is difficult for most students to combine the required elements with their own ideas.

In addition, promoting students' mental and intellectual development is one of the main goals of the English curriculum (Chen Qinqin, p. 57), so scaffoldings should help with instead of limiting students' performance. Through classroom observation, there were two common phenomena shown in this task. One was that students didn't know how to organize the following information logically and couldn't even finish the dialogue; the other was that the pair just completely relied on the text they had just learned with only some key information replaced, which seemed to be fluent but their thinking was not activated while the quality of language output failed to meet expectations.

4.2.2. Analysis of effectiveness of applying suggestion scaffoldings

It is found that the timing of presence is important for suggestion scaffoldings, and the content should be specific and closely related to the previous material in class.

[Case analysis 2]

In the PEP5 Unit3 What would you like? C Story time delivered by Teacher Z, students were required to see some background pictures about the story. Later, they were supposed to share their questions about the story. To help students focus on some core aspects, suggestion scaffolding was provided for them with three dimensions given, (see Figure 3).

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Figure 3. Suggestion Scaffolding Teacher Z Provided

In this case, Teacher Z provided students with a suggestion scaffolding, recommending them to focus on some core aspects. At the same time, Teacher Z left some space for students to think about. In terms of scaffolding design, the content of this scaffolding was closely linked to reading materials in this lesson, and the suggestions were clear. Supported by the suggestion scaffolding above, students accurately captured key information, and successfully completed the task which was slightly above their own ability to extract information. In addition, from this case, it is also shown that resource-based scaffolding plays a role in providing students with methods and techniques for accessing resources, as well as facilitating the improvement of students' information processing skills (Zhang Lixia & Shang Leijie, p. 29-30).

4.2.3. Analysis of effectiveness of applying graphic scaffoldings

It is found that the design of the content of graphic scaffoldings should be useful to lower the level of difficulty.

[Case analysis 3]

In PEP5 Unit4 What can you do? A Let's learn, students were required to read the material and find out the things they can by filling the blanks in the table (see Figure 4).

Figure 4. Graphic Scaffolding Teacher N Used

In this case, the graphic scaffolding mainly included information about people and different abilities, which were clear and closely related to the reading material. This table not only served as an aid for students to complete the reading task and helped them know what to focus while reading. The graphic scaffolding was presented before students reading the target segment, when they had already had a preliminary understanding of the topic and structure of the material. However, grasping too many key points may be too hard for primary school students.

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Therefore, the scaffolding was built in the student's zone of proximal development and was presented at the appropriate time.

4.2.4. Analysis of effectiveness of applying demonstration scaffoldings

It is found that content and teacher's guidance can greatly affect the validity of demonstration scaffoldings.

[Case analysis 4]

In PEP5 Unit5 What can you do? A Let's talk, students were supposed to have a role play by using the word bank and following the rules (see Figure 5).

Figure 5. Graphic Scaffolding Teacher S Used

In the last session of the talking lesson delivered by Teacher S, students were required to play the roles in a given situation with group members by using the words and expressions they had learned in this lesson. In order to make students meet the requirements, rules were designed for their performance. Before students started preparation, Teacher S gave an impromptu demonstration scaffolding with some students to provide an example. Quotes are as follows:

T: OK. On next Sunday, we'll have a birthday party. And a reporter is going to ask you about the things you can do for the party. What can you do? Now, I want to be the reporter, and who want to join in the party? Wow, Lily, Oscar, come to the front. Don't forget the rules. If you can read it out, you can only get one star. Act it out, 2 stars. If you can use body language and act naturally, then, three stars for you. Understand? One, two, action!

T and Ss played the roles.

T: Ok. How many stars can we get? Yes, three stars. Thank you so much. Now, let's act it out in groups.

In this case, the content of the demonstration scaffolding was appropriate and reasonable. This task was designed to develop students' creative thinking and their ability to apply what they had learned into practice. Teacher S provided examples before they started playing the roles, and the timing of presence of this scaffolding was proper. Meanwhile, the process itself by which T and Ss verbally provided the demonstration scaffolding was also an instruction to the student (Luo Xiaojie & Zhao Kaijing, p. 8). With the assistance of the demonstration scaffolding, students smoothly switched scenes into a given situation, and applied the information and language acquired from the reading material into oral expressions accurately and fluently, and with sufficient and reasonable content.

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5. Conclusion

Through classroom observation, the validity value of demonstration scaffolding is the highest; the application of graphic scaffolding is less frequent but more effective comparatively; text scaffolding and suggestion scaffolding are used more frequently but with lower validity value, probably caused by the content which is too specific or too patterned.

According to the major findings above, this research provides some referable pedagogical suggestions on how elementary school English teachers can improve the effectiveness of applying resource-based scaffolding to promote students' language acquisition. Firstly, in terms of scaffolding design, teachers should reasonably presuppose resource-based scaffoldings before class by analyzing students and providing content supplement and guidance for utilization according to students' ability level and their prior knowledge. Secondly, as for scaffolding application, teachers should be able to flexibly apply and dynamically generate some scaffoldings in class based on students' actual performance and need so as to improve the validity of resource-based scaffoldings applied in class.

However, there are still some limitations of this research. Firstly, in this study, due to the limitations of investigation time and conditions, a small number of samples were selected and few students were interviewed, which may lead to some uncertainty in the results. Secondly, in terms of the analysis of the factors that can affect the validity of resource-based scaffoldings, in this paper, it is launched simply from five dimensions; other elements such as students' prior knowledge and the difficulty of the tasks are not considered fully, which may also result in certain limitations. Thus, as for future studies, quantitatively adequate regular classes especially for one certain lesson type can be selected as the research objects, so as to make a comparison between the status quo and effectiveness of applying resource-based scaffoldings of classes with different lesson types. Besides, future researches could combine three stages, before, during, and after scaffolding presentation, to comprehensively assess the validity of resource-based scaffoldings and their effectiveness on students' language acquisition through more scientific experiments.

References

[1] Ahmadi Safa, M., & Beheshti, S. (2018). Interactionist and interventionist group dynamic assessment (GDA) and EFL learners' listening comprehension development. Iranian Journal of Language Teaching Research, 6(3 (Special Issue)), 37-56.

[2] Ahmadi Safa, M., & Rozati, F. (2017). The impact of scaffolding and nonscaffolding strategies on the EFL learners' listening comprehension development. The Journal of Educational Research, 110(5), 447-456.

[3] Gagné, Robert, M., et al. (1992). Principles of Instructional Design. Fort Worth: Harcourt Brace College, 44 (2).

[4] Muhonen, H., Rasku-Puttonen, H., Pakarinen, E., Poikkeus, A. M., & Lerkkanen, M. K. (2016). Scaffolding through dialogic teaching in early school classrooms. Teaching and teacher education, 55, 143-154.

[5] Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. Child Psychology & Psychiatry & Allied Disciplines.

[6] Chen Q. (2016). A classroom observation report centered on the effectiveness of the learning scaffoldings in elementary school English classes. Basic Foreign Language Education, 3, 53-58.

[7] Cui Y., et al. Classroom Observation II: To Observing and Evaluating Class Professionally. Shanghai: Shanghai Foreign Language Education Press, 2001.

ISSN: 2637-6067 DOI: 10.6918/IJOSSER.202212_5(12).0026

[8] Luo X., & Zhao K. "A Study on the Effectiveness and Its Influential Factors of the Resource-based Scaffoldings in Senior High School English Classes." Foreign Language Teaching & Research in Basic Education 4(2021): 5-9.

[9] Zhang L., & Shang L. (2011). Types and functions of learning scaffoldings in virtual c. China Educational Technology, 4, 27-31.

[10] Yu X., & Luo X. (2020). A study on the effectiveness of the design and application of the resource-based scaffoldings in junior middle school English classes. Foreign Language Teaching & Research in Basic Education, 8, 5-9.

[11] Wang X., & Luo X. (2019). A study on the effectiveness and its influential factors of the resource-based scaffoldings in elementary school English classes. Foreign Language Teaching in Schools, 11, 7-13.

[12] Zhang J. (2017). Research on the design of learning scaffold for STEM+ education. Modern Educational Technology, 10, 100-105.