

Application of 3D Grammar Teaching Method to Junior High School English Grammar Classes

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Abstract: Grammar teaching has always been a field of great concern and controversy in the junior high school education of China. The shortcomings of traditional grammar teaching are becoming more and more obvious. After the publication of the 2022 new curriculum standards, educationalists began to pay attention to more vivid and practical grammar teaching methods, in order to help teachers update their teaching concepts and teaching methods, and help students develop their interest in English grammar learning. In this context, more and more researchers have paid more attention to the teaching of Three-Dimensional Grammar Framework proposed by Larsen Freeman. Three-dimensional grammar teaching is a method to improve grammar teaching by presenting the form, meaning and use of grammar knowledge. This approach focuses on the combination of grammatical rules, linguistic meaning and practical pragmatics in a specific context. However, there are also many problems that need to be solved in the process of applying it, such as the cognitive deficiency of teachers and students, the shortage of appropriate three-dimensional grammar teaching design. After summarizing the previous research results, the actual class teaching is investigated. Then these data are analyzed about advantages and disadvantages of the current traditional English grammar teaching and three-dimensional grammar teaching in junior high school. And this paper aims to explore the application of three-dimensional grammar teaching in junior high school English grammar classroom, provide teachers with more suitable teaching program design, and improve students' interest in English grammar learning. Furthermore, feasible suggestions are given for improving the quality of English grammar teaching in junior high school.

1. Introduction

In junior high school's English grammar education in China, the question of grammar teaching has been much discussed: Is it necessary to teach grammar separately? How should grammar be taught more effectively? Exactly, languages can't be fully acquired without grammar, and the same is true for English. Studies show that traditional grammar teaching is believed to have a profound impact over the decades. Under the pressure of test-oriented education, more and more junior high school English grammar classes tend to become more and more dead: grammar teaching becomes a

mere formality; many teachers are tired of teaching grammar; many students become more rigid in their learning and feel tired of learning grammar. Therefore, the teaching of English grammar in junior high school has fallen into the dilemma of improving quality and efficiency.

Traditional grammar teaching places more emphasis on form, so many educators have experimented with this area. Besides, there is an alternative to the linear model which is called an organic approach to second language pedagogy in David Nunan masterpiece *Teaching Grammar in Context* ^[12]. Most importantly, Three-Dimensional Framework is proposed in masterpiece *Teaching Language: From Grammar to Grammar* and thus three-dimensional grammar teaching based on it has gained more and more attention and application^[4]. Driven by previous researches, three-dimensional grammar teaching has been gradually integrated into many secondary school English classrooms and further promoted. However, there are also many problems during the process of grammar teaching and learning, such as “research without application” or “application in formality”. After the reform of the new curriculum standards in 2022, the core literacy of English is summarized as language ability, cultural awareness, thinking quality, and learning ability. It has become a consensus to innovate English grammar teaching methods to improve students’ English learning ability. Many researchers and educationalists have gradually discovered the disadvantages of traditional grammar teaching and tried to improve it through various ways.

Among most papers, researchers paid more attention to the general importance or theoretical combination while neglected the actual design of three-dimensional grammar teaching classes. Therefore, this study aims to explore the application of three-dimensional grammar teaching in junior high school’s English grammar classes. Through analyzing the gaps in previous studies and supplementing them, several feasible suggestions are expected to improve the quality of English grammar class in junior high school. Besides, some methods are also provided for teachers with more suitable teaching plan design, which also improves students’ interest in English grammar learning. By taking three-dimensional grammar teaching as an example, this paper analyzes several representative problems through literature research and data research. Furthermore, several problems are also found in the process of junior high school’s English grammar classes, such as the systematic collation of literature, the difficulty of data extraction and analysis, and the lack of verification of actual teaching. In later studies, the combination of form, meaning and use is urged to be evaluated by practical classes, and puts forward effective improvement measures when analyzing these problems.

2. Literature Review

In the English education of junior high school in China, the three-dimensional grammar teaching has attracted much attention. The limitations of traditional grammar teaching on the core teaching literacy are becoming more and more obvious. This paper searches previous dissected focuses on form, meaning and use in English grammar teaching and then takes Larsen-Freeman’s three-dimensional grammar teaching concept as the research object. This chapter illustrates from two aspects: the three dimensions of grammar teaching; dilemmas of three-dimensional grammar teaching.

2.1. The Three Dimensions of Grammar Teaching

As the attention to the grammatical forms of English is generally the most important aspect of the English grammar teaching process, this aspect of research is more extensive. In a study abroad, Renate A. Schulz examined and compared the perceptions of foreign language students and teachers about the benefits of focusing on form in language learning. It showed that no matter what kind of languages surveyed students are born with, they are relatively inclined to focus on form ^[13]. In

domestic research, Gui Shichun proposed that three-dimensional grammar should be integrated into the teaching of listening, speaking, reading and writing in combination with the context of Chinese and emphasized the importance of grammaring^[1]. Then teaching method of both form and meaning also have been explored^[19]. Three-dimensional grammar teaching can significantly improve the grammar perception and output ability of high school students, and promote the transformation of knowledge into ability^[15]. In addition, the study of Uysal, H. H. and Bardakci, M. also found that teachers predominantly preferred a traditional form-oriented approach^[17]. Besides, sufficient metalinguistic knowledge is also regarded as an important point to learning the grammar by using the framework^[16]. Therefore, it can be seen that form has played an important role in English grammar teaching among teachers and students for a long time.

When it comes to the study of meaning, there are also several concerns both at home and abroad. In the research abroad, some aspects also mentioned for teachers to understand this point in *Grammar Dilemma: Teaching Grammar as a Resource for Making Meaning* by Liamkina^[6]. Debra Myhill drew on the theoretical framework of Hanley-German law, emphasizing grammar as a semiotic resource for meaning-making, and expounding on students' conceptual understanding of grammatical terms and the role of teachers' knowledge of grammar in supporting meaning-rich grammar teaching^[10]. Besides, Strauss, Susan, et al. mentioned the meanings of grammatical constructions in the discourse, instead of focusing on language as structure governed by rigid rules, which is an excellent book for language teachers and learners^[14]. Nosirova and Dilnoza talked about some benefits of learning grammar through context. The teaching of pragmatics in junior high school English grammar emphasizes the close connection between grammar and context, so that students can understand and apply the applicability and appropriateness of grammatical rules and meanings in practical communication^[11]. These researches have contributed to a deeper study of the core of meaning in grammar teaching.

Lastly, there are some studies concerning about the meaning and use of language, some of which will be mainly presented in next part. In domestic research, in the contextual teaching strategy of junior high school's English grammar, Luo Jun (2023) cultivates students' English writing skills by creating thematic contexts and provides timely feedback. The use of the writing portfolio in this study also provides new ideas for other teachers. This study provides some methods for the cultivation of pragmatic awareness of junior high school's English grammar in the context of situational teaching^[8]. There is also a recent literature review on English grammar teaching based on a three-dimensional grammar framework giving us a whole sight to understand it^[20].

2.2. Dilemmas of Three-dimensional Grammar Teaching

These above areas focus on one aspect of the Three-dimensional Grammar Framework. This part is going to talk about its dilemmas in two aspects: theoretical tendency of studies and limited teaching designs of three-dimensional grammar teaching.

Firstly, theoretical tendency of studies. In *Grammar Dimensions*, Larsen Freeman points out that students develop grammar skills through clear and comprehensive grammatical explanations, extensive practice, and lively communicative activities^[3]. Furthermore, in *Language Teaching: From Grammar to Grammmaring*, she expounded the "Three-Dimensional Grammar Framework" and called it the "Challenge Principle", and pointed out that the innovation of English grammar teaching can be promoted by presenting the three dimensions of grammar knowledge: form, meaning and use under a large number of cases in context^[5]. Besides, Larsen Freeman also mentioned mental grammar in students' learning process in *Teaching and Testing Grammar*, which can also help better solve these problems of mental fatigue in grammar learning^[5]. However, few studies have focused on the use of multidimensional grammatical frameworks (Three-Dimensional

Grammar Framework) in grammar teaching. Several researchers noted Larsen Freeman's Three-Dimensional Grammatical Framework in their studies and intervened as a teaching strategy. Using a mixed-methods design in their studies, they noted that interpreting sentences in terms of their form, meaning, and use helped teachers and students gain insight into the meaning of the text and enabled them to correct and understand their own English abilities^[13].

Secondly, limited teaching designs of three-dimensional grammar teaching. According to The English Curriculum Standards for Compulsory Education (2022 Edition), learning ability refers to students' awareness and ability to actively use and actively adjust English learning strategies, strive to broaden English learning channels and improve English learning efficiency^[9]. As to the three-dimensional grammar teaching, it also emphasizes the importance of English grammar learning ability. Therefore, the study and application of three-dimensional grammar teaching is also important for educators of China. In domestic research, Su Xuemei tried to construct a teaching of reinforcement context which used contextual theory and cognitive psychology as the framework and Three-dimensional grammar teaching as the basis^[15]. And research on the diachronic focus of language teaching and its grammar also have been conducted^[7]. Wen Xiangping and Zhu Xiaodong have made their views clear in their paper, which helps teachers to better design senior high school English grammar teaching^[18]. In addition, there are only some samples of teaching activity based on Three-Dimensional Grammar Theory, which can also be referred to teachers^[2]. Therefore, it is urgent for researchers to take this as an example for the design of junior high school English teaching.

Based on the analysis and summary of the previous researches, the Three-dimensional grammar teaching proposed by Larsen Freeman has positive application potential and prospect in junior high school's English grammar classes. However, many researchers paid more attention on the general importance or theoretical combination while neglected the actual design of Three-dimensional grammar teaching and learning classes. And many researches are based on past curriculum standards, which may not be adapted to the new pedagogical philosophy. In addition, previous studies have focused more on qualitative research and less on quantitative research. Besides, due to many problems in the application process, such as cognitive deficiency, it is difficult to apply Three-dimensional grammar teaching effectively.

This study takes three-dimensional grammar teaching as the theoretical basis, takes the new curriculum standard concept as the guide, and focuses on the actual class design of junior high school's English grammar teaching and learning. Through providing reference to update teachers' teaching concepts and methods, the transformation of students' learning motivation and methods, it is expected to promote the innovation of teachers' and students' English grammar teaching and learning concepts, and enrich the practical application of this theory in China.

3. Research Methodology

This chapter introduces the methodologies consisting of research questions, research subjects, research instruments, research procedures and data collection respectively.

3.1. Research Questions

After comparing the respective advantages and disadvantages of traditional grammar teaching and three-dimensional grammar teaching, the following two questions are put forward before the tests, aiming to better discover and promote the solution of the dilemma of English grammar teaching in junior high school.

(1) What are the current effects or influences of three-dimensional grammar teaching? And what are the current problems of it?

(2) How to better apply the three-dimensional grammar teaching through appropriate teaching design?

3.2. Research Subjects

This study focuses on junior high school's English grammar issues, so junior high school students and English teachers are the subjects of this research. One hundred junior high school students are randomly selected for testing, and three English teachers in junior high school for cooperation and interviews.

3.3. Research Instruments

This study applies tests, questionnaires, and interviews to collect data. Besides, SPSS, the data analysis tool, are also used to assist us in the process of analyzing testing data. In addition, other studies also make significant researches through specific instruments, such as the experimental methods and results in the teaching of three-dimensional grammar teaching practices.

3.4. Research Procedures

Based on the ideas and hypotheses that have been proposed, Julu County Middle School in Xingtai City is selected for investigation and testing. Below are main focuses on the process and result of data collection.

Firstly, the process of the data collection. A combination of tests, questionnaires and interviews will be used to collect and organize data in this study. First, 100 junior high school students are divided into two groups, the experimental group and the control group. At the same time, the test is divided into two kinds: (1) pre-test: pre-test A, pre-test B; (2) Post-test: post-test A, post-test B. The pre-test will be performed after the use of traditional grammar teaching designs or previous three-dimensional grammar teaching designs; The post-test will be conducted by three-dimensional grammar teaching with more practical instructional design advocated by this study. The experimental group is tested for pre-test A and post-test A; The control group was tested for pre-test B and post-test B. Finally, the test results are analyzed, compared and systematically summarized. In addition, separate interviews will be conducted with students and teachers, and the results will be summarized and analyzed.

Secondly, the result of the data. In the process of this experiment, the test questionnaire questions participated by the students were obtained from the English textbooks, questions from examinations and related teaching materials, which better ensured its reliability. To further ensure its validity, it is verified with pre-test A and post-test A in the control group. The following two figures provide us with more intuitive data, which will be further analyzed one by one.

Table 1: Descriptive Statistics

	N	Min	Max	Mean	SD
Pre-A	50	60.00	90.00	73.6000	8.75051
Post-A	50	60.00	90.00	80.0000	8.80631
Pre-B	50	20.00	70.00	42.6000	13.37222
Post-B	50	40.00	80.00	61.0000	10.15191
N(VALID)	100				

The tests were completed in both the control and experimental groups, the results are compared as shown in Table 1.

In the pre-test A and post-test A, it can be seen from the figure that there was a small change in the average score of students before and after the test, but it was also within reason for the effect of

teaching and learning. At the same time, during the interviews, the teachers and instructors also agreed with this reasonable small change after jointly analyzing the data. Some teachers in the interview also mentioned that this situation is normal in the control group class of this school.

In the pre-test B and post-test B, it can be seen that the average test score of the experimental group is 42.60 and the standard deviation is 13.37 under the traditional grammar teaching or the previous three-dimensional grammar teaching, while 61.00 of average test score and 10.15 of standard deviation after applying the design of our practical three-dimensional grammar teaching, which has a significant improvement.

In addition, due to the difference between the average scores of students in the randomly selected experimental group and the control group, in order to better validate the test results, this study first performed normal distribution analysis and correlation analysis of the data, and then used analysis of covariance(ANCOVA), which is shown in the following Table 2.

With the post-test as the dependent variable, the group as the fixed factor, and the pretest as the covariate, it can be seen $p < 0.05$ based on the tabular data, so the pedagogy used in this study is reasonable for the experimental group.

Later, the data were analyzed for normal distribution and covariance prior to the independent samples t-test. Subsequently, an independent samples t-test was performed in this study. Table 3 shows that the grouping variable $p < 0.05$ indicates that the experimental treatment has a significant effect on the posttest score after adjusting for the difference in pre-test scores.

In addition to testing students, this study also collected some textual data on teaching through interviews with junior high school English teachers. The data mainly reflected the following aspects: the richness of teachers' grammar teaching methods, students' sensitivity to grammar knowledge points, and the correlation between students' grades and grammar learning. These data are the problems encountered or the experience summarized by junior high school English teachers in the actual teaching process. Therefore, these are practical help to the analysis of students' test scores and the improvement of subsequent research methods.

Table 2: Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	10693.923 ^a	2	5346.961	72.225	.000
Intercept	8681.981	1	8681.981	117.274	.000
Group	504.891	1	504.891	6.820	.010
Pre-test	1668.923	1	1668.923	22.543	.000
Error	7181.077	97	74.032		
Total	514900.000	100			
Corrected Total	17875.000	99			

a. R Squared = .598 (Adjusted R Squared = .590)

Table 3: Independent Samples Test

		Levene-Test		T-Test						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Post-Test	Equal variances assumed	1.226	.271	9.997	98.000	.000	19.000	1.901	15.228	22.772
	Equal variances not assumed			9.997	96.083	.000	19.000	1.901	15.227	22.773

4. Results and Discussion

By collecting and analyzing data from tests and interviews, many problems existing in traditional grammar teaching or in previous three-dimensional grammar teaching are found. The following will be divided into three aspects to further elaborate: cognition of grammar teaching; present situation of grammar teaching; problems in the use of three-dimensional grammar teaching.

4.1. Cognition of Grammar Teaching

Cognition refers to the process of people acquiring knowledge or applying knowledge, or the process of information processing, which is the most basic psychological process of people. Cognitive function is a complex mental activity process. When a person's cognitive function changes, there will be a series of changes including thinking, emotion, will, and behavior.

In the study of cognition, two psychological aspects will be further elaborated as followings: disregard for grammar teaching between teachers and underdeveloped language cognition between students.

Firstly, disregard for grammar teaching between teachers. Personal teaching preferences of teachers have an inseparable and important influence on students. In the course of the interview, it has been learned that some junior high school's English teachers themselves have two main problems: lack of interest in teaching English grammar; being confused about how to teach English grammar. For one thing, they lack interest in teaching English grammar. In the course of talking to the teachers interviewed, it is learned that some English teachers were not interested in learning grammar or did not think it was necessary. As a result, they despise teaching English grammar or even not teach it at all. Cognitive deficiencies like this can also have a profoundly negative impact on junior high school students as the students couldn't yet have a systematic understanding of language learning. For another, they are confused about how to teach English grammar. There are some teachers who are not resistant to learning and teaching English grammar, but due to lack of teaching experience, there are cases where they only focus on the form of teaching and ignore the students' understanding. In this case, teachers will gradually become confused or even tired of grammar teaching, and then ignore it, which also has a negative effect on students' English grammar learning.

Secondly, underdeveloped language cognition between students. Compared with these problems of teachers' cognitive deficiencies, students' cognitive confusions tend to be easier to detect. According to the data of student tests, the main reason why some junior high school students do not perform well in English grammar is that they are currently in the cognitive development stage of language learning. In other words, they are currently unable to find a feasible method of language learning just by themselves, and greatly rely on the guidance of teachers. For example, they may tend to be in the process of overgeneralization or hypercorrection in language acquisition without the correction of teachers. Besides, some students tend to fail to make a full use of image schema, which is regarded as one of the helpful cognitive tools. In addition, students' interest in learning English also plays an important role, which can also be cultivated in cognitive process.

4.2. Present Situation of Grammar Teaching

In the course of the interview, some junior high school English teachers clearly understand the necessity and importance of English grammar teaching, but they are also troubled by how to better impart knowledge in the actual teaching process. Besides, due to the lack of proper instructional designs, junior high school English grammar classes have become more dull, rigid and boring. This has a serious impact on the quality of English grammar teaching and learning, and also the critical

period of language acquisition for students. Among these situations, the most prominent one is the shortage of appropriate grammar teaching design. There are mainly two more concrete manifestations of this kind of situation: immoderate formalization of teaching and researching activities, and ineffective transformation of academic research results.

Firstly, immoderate formalization of teaching and researching activities. Teaching and researching activities in schools are designed to help teachers better communicate teaching experiences and innovate teaching methods together. However, in the course of the survey, the vast majority of teachers mentioned that teaching and researching activities were more of a formality, and that most of them only talked about teaching progress or simple teaching problems, and rarely touched on or discussed systematic teaching methods in English grammar.

For one aspect, limited topics in discussions. In teaching and researching conferences, many teachers often simply recorded the topics of the meeting or the brief discussion about how to teach English, but there is a lack of in-depth analysis and summary on each section of English especially on grammar teaching. Besides, meeting minutes also tend to be superficial or do not address a specific solution or actual plan. In addition, in the test questions, students have to “choose words that can only be used as nouns or verbs”, which mainly tests students’ contextual awareness to see if they can relate the form, meaning and use of words, such as from “water” to “watering”. Through these kinds of questions, teachers can make a full discussion about promoting students’ ability with associative memory in the teaching and researching activities.

For another, repetitive themes and contents. Many teaching and researching activities lead to repeated discussions on the same topics or contents, lacking of creative ideas and perspectives. Such kind of atmosphere will not help to make substantial progress on English grammar teaching and learning. Many ideas talked on meeting about English grammar teaching only stay at the theoretical level, without specific practical application in combination with the actual teaching situation. Teachers sometimes discuss a lot of theoretical grammar teaching knowledge at the conference, but there is a lack of effective strategies or methods to translate this kind of knowledge into practical teaching and has little influence on helping innovate English grammar teaching.

Secondly, ineffective transformation of academic research results. In domestic research, Liu Wei (2011) was an early researcher in the application of three-dimensional grammar teaching theory in Chinese English classrooms^[7]. So Challenge Principle proposed by Larsen Freeman in 2001 didn’t systematically studied in domestic research. And several teachers interviewed in this study also mentioned this dilemma. Based on this fact, some profound questions can also be found in the course of interviews with teachers. Below some findings are illustrated.

For one aspect, disjunction between research results and teaching practice. Several teachers believe that some research results of English grammar teaching are too theoretical and difficult to integrate with actual teaching, which makes it difficult for teachers to apply them to practical English grammar teaching. For another, insufficient professional development of teachers. Some teachers lack the awareness and ability to understand and apply the latest research results, and are unable to effectively translate the research results into effective teaching strategies in actual English grammar teaching. Besides, for some teachers, there are a lot of stressful or extracurricular tasks. As a result, teachers mentioned that they rarely have dedicated time on teaching research and output.

Therefore, the effective transformation of academic research results needs to be placed at an important point. And more teachers also need to be encouraged or helped to have specific time in researching, especially on grammar teaching.

4.3. Problems in the Use of 3D Grammar Learning

According to the research, students in junior high school are prone to boredom during the

learning of English, and it is more common in learning English grammar, which can be named the mental fatigue. In the course of this study, this kind of situation also frequently occurred. Next, this section gives a general introduction to its current problems, which includes mental fatigue and incorrect use of grammar practices.

Firstly, the current problems of mental fatigue. According to the data of questionnaire, students tend to experience the following situations when they experience mental fatigue in the study of English grammar. For example, not being active in class; showing boredom in the face of learning tasks; declining interest in English learning. In the process of communicating with students, many students also mentioned these problems in their study. They are clearly aware of the necessity and importance of English learning, but they unconsciously feel fatigue and powerlessness. Sometimes, they also have persistent depression due to problems with English grammar learning.

Secondly, incorrect use of grammar practices. Based on literature researches and practical researches, there are a lot of problems about improper use of grammar activities between teachers, which also influence the affection or attitude of junior high school students.

According to the data reflected in the questionnaire, mechanical exercises are the most significant problems confused many students. Traditional grammar teaching is often based on mechanical exercises, requiring students to repeatedly finish a lot of fill-in-the-blanks, corrections, or conjunction-sentence questions. However, this kind of mechanical practice tends to make students feel bored, which may also lead to mental fatigue. In addition, in the process of school teaching, students often need to participate in various forms of tests and examinations, and the fierce competition between students also increases students' anxiety and stress to a certain extent.

Besides, lack of appropriate teaching methods. As mentioned earlier, the importance of teachers' teaching methods also has an impact on students' psychology. Traditional grammar teaching is often based on rote memorization, which lacks interest and vividness, and then makes students feel tired and mentally fatigued. Previous three-dimensional grammar teaching is also less mature and lacks a more practical instructional design. What's more, improper grammar teaching methods may cause improper learning methods between students. Some students do not find their own learning methods, which leads to inefficient learning of English grammar, and in turn leads to more fatigue in the learning process.

To sum up, there are many problems of English grammar teaching reflected from the data, most of which need to be solved correctly and timely. Therefore, the next chapter gives more suggestions, especially the design and application of three-dimensional grammar teaching.

5. Suggestions for the Application of 3D Grammar Teaching

This chapter focuses on the application of 3D grammar teaching by providing more applied suggestions in three aspects.

5.1. Promoting Teachers' Professional Ability

One of the main reasons for the shortcomings of English grammar teaching in the past is the lack of professional competence of teachers, which leads to the lack of practical three-dimensional grammar teaching design. Based on the problems reflected in the data, teachers' professional ability can be promoted mainly from the following aspects.

Firstly, teachers' professional training. According to the data, several teachers share their great interest in their experience of professional training and regard it as a meaningful supplement to their professional ability. Schools can organize special training courses to help English teachers master the latest grammar teaching methods and tools, and provide regular professional development courses to keep teachers stay aware of the latest teaching theories, techniques and methods,

especially on the theory and practice of three-dimensional grammar teaching. During this process, it is important to focus on the teachers' key tasks, increase the scientific research ability and level of teachers, and avoid the teaching and researching process being a mere formality.

Secondly, effective transformation of academic research results. It's urgent to conduct demonstration courses and seminars to cultivate teachers' academic exploring spirit. Schools can organize demonstration courses and seminars on 3D grammar teaching in schools or educational institutions, and invite experts, scholars and experienced teachers to share the latest teaching concepts, methods and practical experiences. What's more, tailor-made instruction is also necessary, which can be achieved through regular tutoring, one-on-one instruction, online forums. In addition, schools can establish a teaching resource library. A special teaching resource library is encouraged to be created to collect and organize teaching materials, courseware, lesson plans, activity design, etc. related to 3D grammar teaching. These resources can include validated and evaluated teaching cases and instructional designs to provide teachers with reference, save their teaching preparation time, and improve their teaching efficiency.

5.2. Creating Real 3D-Oriented Situations in Classes

The problem of the current junior high school in English grammar classes is to find a suitable and effective grammar teaching design. So as to significantly improve the current situation, it is necessary to create a 3D-oriented situation in classes based on the concept of three-dimensional grammar framework proposed by Larsen Freeman, as shown in Figure 1 and Figure 2. As shown below, form, meaning and use can be presented by themselves and also be interdependent with each other. And the design of 3D grammar teaching ought to take these three factors into consideration. Just as Larsen Freeman mentioned, in order to arrive at a complete understanding of any one of the units, it must be described from all three perspectives, not just its "prototypical home".

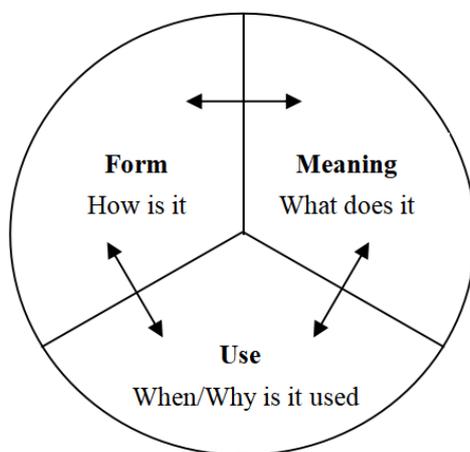


Figure 1: The Three-Dimensions of Grammar

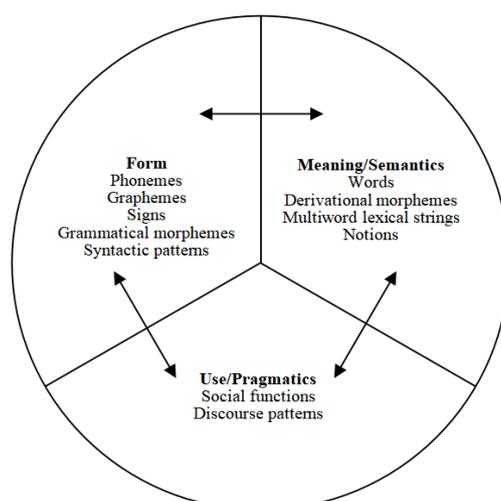


Figure 2: The Connotation of the Three-Dimensional Grammar Framework

Instead of introducing the teaching design of “form, meaning and use” in the three-dimensional grammar teaching separately, some ideas and references are provided for the teaching of the whole class at the macro level in this part. In the course of teaching and interviewing, most of the students also have a strong curiosity about online web resources, which will be further talked about in the next section, especially digital activities and grammar games. And the game part can be applied to any part according to the actual situation. In addition, teachers can help students develop pragmatic awareness in the process of teaching English grammar in junior high school, that is, consider the influence of different language forms on the communicative effect in language communication. Through analysis of real language materials or simulated communicative situations, students are guided to understand the differences in grammatical structures under the combination of different communicative meanings. Besides, teachers can also help students develop pragmatic strategies to adapt to different communicative situations. This may include the development of contextual adaptation, politeness of speech, language change, etc. At the same time, students are encouraged to reflect on the relationship between English grammar choices and communicative effectiveness. Through group discussions or writing reflections, students can think deeply about the role of grammar in expressing meaning and achieving communicative purposes.

By employing these methods, it is expected that students will be able to understand and apply grammatical rules and meanings in real contexts, and improve their language skills and communicative effectiveness. And the 3D grammar teaching can be applied in a better atmosphere.

5.3. Adopting Diverse Teaching Activities from Digital Resources

Liu, J. (2023) introduced six teaching activity samples, which help cultivate grammatical competence^[2]. With the rapid development of science and technology and the popularization of the Internet, the field of education is gradually ushering in a revolution. More flexible and interactive digital education models receive voice of praise in the process of English grammar teaching and learning, such as Grammarly, Kahoot.

First, teachers can guide students to use AI-powered grammar learning platforms, which are capable of analyzing students’ grammatical errors in writing in real time and providing feedback from the three dimensions of form, meaning, and use. AI-based teaching systems can dynamically adjust teaching content and difficulty according to students’ learning progress, error patterns, and cognitive styles. Teachers can also utilize these platforms to design personalized three-dimensional grammar learning paths for each student. The future direction of three-dimensional grammar

teaching should be a human-machine collaborative teaching model. With the assistance of GAI, teachers can be freed from some repetitive tasks and devote more energy to instructional design, context creation, and students' emotional support.

In short, the use of diversified teaching activities from digital resources for three-dimensional grammar teaching is not only in line with the development trend of today's education, but also better meets the needs of students in the process of grammar learning, and provides new possibilities for the innovation of language education.

6. Conclusion

Traditional grammar teaching occupies an important place in the teaching of English grammar in junior high school. However, under the guidance of the new curriculum standards and new concepts, the three-dimensional grammar teaching has become more and more prominent. This thesis conducts a full evaluation and investigation in the form of literature review, data collection and analysis, etc., to dig deep into the problems existing in the previous three-dimensional grammar teaching, and to provide more practical suggestions for the design of it.

Through the research, it is found that the present grammar teaching has the several problems. These problems include both the student and the teacher, both psychological and realistic. In order to solve these complex problems, both education researchers and front-line teachers need to continue to explore in long-term practice. The recommendations of this paper also need to be adjusted according to the actual situation in the implementation process to better serve the English grammar classes in junior high school. In addition, it is also needed to continuously find problems and conduct research in the actual teaching process to come up with a more regular Three-dimensional grammar teaching design.

Three-dimensional grammar teaching is an effective way to improve students' comprehensive language "form, meaning and use", and is an effective way to improve students' English grammar learning ability and ultimately cultivate their interest in English learning. In this process, teachers need to continuously improve their professional skills, create authentic language situations, and integrate a variety of teaching activities. Educators should actively advocate and support the application of Three-dimensional grammar teaching to promote students' all-round development in language learning and improve the quality of teaching.

In the research process of this paper, many problems are also encountered, such as the selection of test subjects and the analysis of text corpus. At the same time, the metacognitive factors of the students also need to be considered during the test, which may interfere with the achievement of real results. In addition, this paper has not been more concise in terms of literature selection. And the suggestions put forward in the last part are relatively limited, which still need to be continuously verified and improved in practical teaching and learning. Therefore, in future research, the systematic collation and research of literature ought to be emphasized. Problems arising from practice and feedback and suggestions from teachers and students ought to be more incorporated. And the comparative analysis of traditional grammar teaching and three-dimensional grammar teaching ought to be studied at a deeper level, too.

In summary, it is expected that the problems and recommendations found in this thesis will be helpful to teachers and students in the process of testing and learning English grammar. It is also expected the three-dimensional grammar teaching can burst out more creativity in the junior high school English grammar classes. At the same time, it can be continuously improved and perfected, and then better help teachers and students in English grammar teaching.

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