

The Application Research of 5E Instructional Model for English Writing Teaching in Senior High School

Ruiting Li*

China West Normal University, Nanchong 637000, China

Abstract

Under the background of the English New Curriculum Standard, it is particularly important to develop and cultivate students' key competence. Especially in the context of the new college entrance examination reform, the English writing section has changed accordingly, and it is more important for teachers to teach the English writing. This paper explores how to promote the teaching of English writing in high school through the 5E instructional model, and finds that in the process of integrating this teaching model with writing teaching, teachers need to understand the basic connotation of the five steps of engagement, exploration, explanation, elaboration and evaluation, and flexibly use the teaching method in the light of the students' actual needs and the objectives of the English curriculum.

Keywords

5E Instructional Model; English Writing; English Teaching; Writing Strategy.

1. Previous Researches on the 5E Instructional Model at Home and Abroad

1.1. Definition of 5E Instructional Model

The 5E instructional model is a scientific inquiry-based instruction that not only arranges inquiry activities, but also assists students in actively exploring knowledge as well as seeking understanding of scientific knowledge to satisfy their curiosity (Wang, J.Y, 2010). This model has been reformed several times and eventually became the five stages, which have a wide range of applications in the BSCS biology curriculum in the United States.

First, the purpose of the "engagement" stage is to spark curiosity and interest in students, and teachers need to pay attention to and understand the students' thought processes during the learning activities. This student-centered phase should be a motivational period that can create a desire to learn more about the upcoming topic. Students may brainstorm an opening question or ask themselves: "What do I already know about this topic?" (Lena Ballone Duran, Emilo Duran, 2004).

The second stage is the "exploration", in which the teacher encourages students to manipulate and guide them in their own exploration of knowledge, always with the teacher playing the role of a listener. The third stage is the "explanation", in which the teacher uses students' prior knowledge to encourage them to clarify facts and explain related foundational concepts. In the fourth stage of elaboration, the teacher understands the students' level of knowledge, gives them opportunities to think, and encourages them to apply it to new problem situations. In "evaluation" stage, students need to conduct a multidimensional evaluation approach to summarize their experiences and reflect on the shortcomings in their writing (Shi Yu, Chen Yao 2023).

1.2. Overseas Research Status

The concept of 5E teaching model can be traced back to the ancient Greek period when Socrates proposed the “question and answer method”. This method uses a non-traditional approach, using continuous questioning of students to guide them to actively think and explore the meaning of the questions, thus constructing the corresponding knowledge concepts. Later, during the French Enlightenment, Rousseau proposed the teaching of discovery, which he believed had the ultimate goal of developing children’s reasoning and judgment to form an independent personality that was not dependent on authority. In the late 19th and early 20th centuries, the American educator Dewey proposed the concept of learning by doing, believing that “learning by doing” was the beginning of children’s natural development process, and that simply teaching book knowledge would lead to students’ lack of the ability to explore on their own and their inability to fully master the skills of learning. He believes that “learning by doing” is the beginning of children’s natural developmental process. Therefore, it is based on students’ interests and personality development that can promote self-exploration. Since then, Bruner has proposed the theory of discovery learning from the content of education, that is, through self-discovery problems, exploring theories of knowledge based on existing knowledge experience, not directly applying knowledge without understanding it, and exploring the process of relevant concept formation by discovering the laws behind it to improve the ability of independent learning (Zhang Meng, 2022).

From 1957 to 1977, American scholars Robert Karplus and J. Myron Atkin proposed the basic prototype of the 5E teaching model, which includes three steps. Through further application, it was found that it placed too much emphasis on students’ independent self-construction and had certain difficulties in the process of independent inquiry, so it evolved into “preliminary inquiry,” “concept introduction,” and “concept application.” (Wang, Jing Ying, 2010.) Near the end of the 1980s, the American Association for Biological Research, in a curriculum called “Science for living intergrating science technology and health,” found that setting up a realistic curriculum would be a good idea (Bybee, R.W., Taylor, J.A., and D.M., 2010) which includes five steps: engagement, exploration, explanation, elaboration and evaluation (Taylor, J.A. et al., 2010-6-10).

After that, most of the research on the 5E model was focused on validating and expanding the content. (Eisenkraft, 2003) further refined the 5E teaching model by combining the time for activating students’ pre-conceptual knowledge, expanding the introduction session into two parts: motivation and introduction, and adding an extension session after the evaluation session to form the “7E teaching model” (Emoilio D Lena D. Jodi H., 2011).

1.3. Domestic Research Status

Since the birth of the 5E teaching model in the 1980s, scholars in China have begun to pay attention to the learning status of students in the classroom teaching process and realized the importance of guiding learners to acquire knowledge understanding through inquiry in the teaching process, which has provided corresponding guidance for subsequent teaching (Zhang Meng, 2022). The current research on 5E teaching model in China mainly includes theoretical and practical research. The theoretical research started in 2002, and (Ma Wenkui, 2002) introduced in detail the theoretical basis and the specific process of implementation that had been used in the United States.

The 5E teaching model is widely used and effective in secondary school biology courses. After that, Wu Chengjun and Zhang Min (2010) elaborated the definition and connotation of the 5E teaching model, as well as the different behavioral requirements for teachers and students in each stage of the 5E teaching model, and combined with the analysis of some teaching examples, they concluded that the essential feature of the 5E teaching model is the students’ independent construction.

The motivation for students to construct concepts on their own comes from the collision between new knowledge and old concepts formed by the teacher's intention to set up tandem problems and create realistic situations (Wu, Chengjun, Zhang, Min, 2017) systematically sorted out the connotation and characteristics of the 5E teaching model, analyzed various teaching practice cases based on the 5E teaching model in China, summarized the current situation and problems of the application of this model, and depicted the future research direction and content of the 5E teaching model. (Hu, Jiuhua, Gao, Chong, 2017).

The 5E teaching model is currently used more in the teaching of science subjects and is most commonly used in my physics, chemistry, biology, and mathematics subjects. For example, on the basis of the connotation of STEM education and the analysis of eight aspects of localized STEM education, such as teaching mode, learning style, and educational foundation, Zhao Chengliao and Zhao Wenjun (2018) designed a 5E teaching process including participation, inquiry, and processing with "inquiry" as the core, aiming to build a 5E inquiry-based teaching model that can be used in STEM education classrooms. The aim is to build a 5E inquiry-based teaching model that can be used in STEM education classrooms (Zhao, Cheng-Ling, Zhao, Wen-Jun, Jiang, Zhi-Hui. ,2018).

2. Conclusion

2.1. Findings of the Study

The use of this model has reshaped the atmosphere and mode of the original writing classroom and transformed the thinking mode of most students' writing. The model has reshaped the atmosphere and mode of the original writing classroom, transformed the thinking mode of most students' writing, and stimulated students to participate in writing inquiry with a variety of writing inquiry activities as the main line. The students' enthusiasm and initiative in writing have been increased, and the overall writing level has been significantly improved. At the same time, group cooperation and peer-to-peer writing activities are conducive to complementing each other's strengths and making progress together. In this kind of classroom, teachers train students to create, discover, analyze and students' ability to create, discover, analyze and solve problems, thus improving their writing ability and performance. In addition, students in the 5E writing classroom In addition, in the 5E writing classroom, students continue to accumulate their own writing materials, learn others' ways of thinking and improve their own writing methods. In addition, in the 5E writing class, students continue to accumulate writing materials suitable for themselves, learn others' ways of thinking and improve their own writing methods, discover their own writing problems in mutual evaluation and self-assessment, and improve their written expression from multiple angles and at multiple levels. In summary, the 5E Teaching Model is a new way of teaching.

To summarize, the application of 5E teaching mode in high school writing teaching is an effective teaching method, which can stimulate students' interest in writing and promote their writing skills.

It can stimulate students' interest in writing and promote students' writing exploration, which also promotes the teaching effect of teachers and the improvement of students' writing performance.

2.2. Pedagogical Implications

Teachers must focus on guiding and inspiring students in the teaching process. 5E teaching mode requires students to give full play to their autonomy in the teaching process to participate in writing activities, so teachers should guide students at different stages of the teaching activities in a timely manner to help students solve the obstacles affecting the next step of the activities, and promote them to carry out effective writing exploration.

In traditional writing teaching, teachers always teach in a non-modal way, such as reciting model texts and templates in a mechanical way, which is unable to give full play to students' innovative and creative thinking, and the stereotypical mode affects the development and progress of students' writing thinking mode. 5E teaching, on the other hand, allows students to fully explore and explore the writing task, so that they can take the initiative to find their own writing ideas and ways of thinking. Therefore, in this process, teachers should not only act as preachers and explainers, but also play the role of guides. In the group activities, pay attention to the performance of students at all levels, help them solve the problems in the exploration in a timely manner, and guide them appropriately in order to let them have a better sense of participation and achievement in writing. At the same time, appropriate encouragement and attention can help students stimulate their original knowledge and overcome their fear of writing.

At the same time, high school students in the inquiry activities are more attention and effective guidance, so as to better implement the advantages of the 5E teaching model to each student and improve the writing ability of all students. Finally, teachers should reflect on the shortcomings of the 5E teaching mode in writing teaching after teaching. After each lesson, teachers should reflect on the shortcomings of the 5E teaching mode in writing teaching. Teachers should record and reflect on the problems and deficiencies in the actual teaching situation. Summarize the strengths of the practice through reflection so as to improve the teaching of writing. The teacher should summarize the advantages of the practice through reflection, so that the advantages can be carried forward in the subsequent teaching. At the same time, the shortcomings found in practice will be utilized to At the same time, the deficiencies found in practice are used to reflect on the problems, including the design of teaching activities, student participation and initiative in the teaching process and student interaction. Therefore, teachers can continuously improve their teaching level and professional skills through teaching reflection to promote the application of the 5E teaching model in actual teaching.

References

- [1] Wang, Jingying: A review of the American inquiry teaching model, Shanghai Educational Research, (2010)No.4,p.61-63+51.
- [2] Lena Ballone Duran & Emilo Duran: The 5E Instructional Model: A Learning Cycle Approach for Inquiry-Based Science Teaching, The Science Education,(2004).
- [3] Shi Yu, Chen Yao : Cross-unit integration of project-based learning in the "5E" teaching model, English Teaching and Research in Primary and Secondary Schools (2023)No.328,p.33-38.
- [4] Zhang, Meng: Application of 5E teaching model in high school English grammar teaching (Ph.D, Sichuan International Studies University,China 2022).
- [5] Bybee&R.W.Taylor&J.A.etal:The BSCS 5E Intructional Model.Origins, Effectiveness and Applications (2010),p.6-10.
- [6] Ma, W. K: The "5E" teaching model in American BSCS textbooks, Foreign Primary and Secondary Education, (2002)No.4,p.39-40.
- [7] Wu, C.J. & Zhang: M: Connotation, examples and essential features of the "5E" teaching model in American biology, Curriculum-Materials-Teaching Methods (2010)No.6,p. 112.
- [8] Hu, J. H. & Gao, C: Teaching practice of the 5E teaching model in China and review of its research progress in foreign countries, Chemistry Education, Vol.38(2017) No.1, p.5-9.
- [9] ZHAO Cheng-Ling & ZHAO Wen-Jun & JIANG Zhi-Hui: Design of 5E inquiry-based teaching model for STEM education, Modern Educational Technology, Vol.28(2018)No.3, p.106-112.