

Investigation on the Effectiveness of "Production-Oriented Approach" in Senior High School English Writing Expression Strategies

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ABSTRACT

Through a 16-week teaching experiment, this study examines the impact of production-oriented approach, which is based on the hypothesis of output-driven, input-enabled and teacher-student cooperative evaluation, on the senior high school English writing expression strategies from three dimensions of planning, conception and evaluation. After a semester of experimental teaching, the analysis of the questionnaire data is shown. First, the writing expression strategies of the experimental class and the control class have been improved to a certain extent, but the improvement of the experimental class is more obvious than that of the control class. Second, the writing expression strategies of the experimental class in the dimension of planning and execution have been improved significantly.

Keywords: teaching of senior high school English writing, English writing expression strategies, production-oriented approach

I. INTRODUCTION

Production-oriented approach (POA) is a teaching system put forward by Wen Qiufang and his team based on the situation of foreign language education in China. It consists of "learning-centered principle", "learning-using integrated principle" and "whole-person education principle", focusing on solving the problem of students' insufficient output power and separation of learning and using (Wen Qiufang, 2014). After more than ten years, many scholars have explored this system in many aspects and dimensions. In the aspect of empirical research, the researches on the influence of teaching methods on a single language skill account for the vast majority, while the researches on the influence of teaching methods on the learning strategy of a single skill are still rare. The research conclusions of single skill are mostly based on POA teaching, which improves students' learning interests and learning methods. Students' single language skills or language knowledge, such as vocabulary, listening, oral English, translation level, writing ability, thinking ability and independent learning ability are significantly improved compared with that of the traditional teaching mode (Zhang Wenjuan, 2017; Zhang Lingli, 2017 ; Qipin & Shi Xiaochun, 2016, etc.).

In recent years, the state has formulated and promulgated "National English Curriculum Standards

for Senior High Schools" (2017) and "China's Standards of English Language Ability". According to the survey, the current situation of senior high school English writing is still not optimistic. Based on the previous research status, the author selects 84 students from two parallel classes in a high school in Huizhou City as the experimental subjects, and conducts the experimental teaching for a semester (a total of 16 weeks). During the experiment, the experimental class adopts the POA teaching method for writing teaching, while the control class adopts the conventional writing teaching method, trying to explore the impact of POA teaching method on students' writing expression strategies.

II. REQUIREMENTS AND CURRENT SITUATION OF SENIOR HIGH SCHOOL ENGLISH WRITING

English writing plays an important role in senior high school English teaching and learning. On the one hand, it accounts for one sixth of the score of the college entrance examination, which is more than 25%. On the other hand, writing is a comprehensive form of language learning. According to "National English Curriculum Standards for Senior High Schools" (2017) (hereinafter referred to as the new curriculum standard), listening, speaking, reading, viewing and writing are five major language skills. Writing, as the only written

output skill, is an essential part of language learning. The improvement of writing ability can promote the improvement of other language skills and language knowledge.

The new curriculum standard describes the following quality requirements that students should meet when completing their studies in senior high school: "it is required to be able to briefly describe their own or others' experiences, express their opinions and give examples, be able to introduce major Chinese and foreign festivals and excellent traditional Chinese culture, be able to use vocabulary and grammatical structure to express the main meaning, be able to use the cohesive means of the text to build a written text, express meaning, and show the logical relevance of meanings, and be able to improve the expression effect with the help of multimodal discourse resources." (Ministry of Education, 2018)

The learning of comprehensive skill output cannot achieve the best effect without the application of learning strategies. And writing expression strategy is an important factor affecting writing ability and writing level (Ren Fenglei, 2006). English writing expression strategy is a kind of behavior specially adopted to achieve the purpose of expression or improve the effect of expression (Deng Jie, Deng Hua, 2017). The improvement of writing expression strategies can make up for the common problems in writing, such as insufficient vocabularies, improper use of grammar and sentence patterns, and lack of new ideas in content. According to the requirements of "China's Standards of English Language Ability" issued in 2018, senior high

school English ability should reach the fourth level of level 9 (Wang Shouren, 2018). Among them, the requirements of writing expression strategies are also explained in detail. This paper adopts the fourth-level scale of writing expression strategies as a questionnaire to test the difference of the effect before and after the experiment.

In the language classroom, students often master the input of knowledge better than the output, which also reveals the disadvantages of Chinese language classroom (emphasizing input and ignoring output, lacking the training of "learning" and "using", lacking the thinking of "teaching" and "learning", and the traditional and inefficient evaluation method). (Wen Qiufang, 2017). According to the survey (Chen Lingyun, 2009, Wang Ping, 2019, Wang Demei, 2019), the most prominent problem students encounter in the process of English writing is that they are not able to skillfully use writing expression strategies to guide their own writing except for language knowledge itself.

III. ENGLISH WRITING EXPRESSION STRATEGIES

O'Malley and Chamot (1990) put forward three kinds of foreign language learning strategies, such as metacognitive strategy, cognitive strategy and social / affective strategy, based on the research results of cognitive linguistics, which have been widely accepted by the academic community ("Table I").

TABLE I. LEARNING STRATEGY FRAMEWORK (O'MALLEY & CHAMOT, 1990).

Strategies	Specific contents
Metacognitive strategy	Self-planning, self-supervision, self-evaluation and self-regulation, etc. Management strategies of self-cognition activities
Cognitive strategy	Special and effective cognitive psychological activities or processes, Such as keyword extraction, logical reasoning, examples, etc.
Social / affective strategy	Interpersonal communication and emotional management strategies, such as mutual cooperation, seeking help, etc.

On this basis, Deng Jie and Deng Hua constructed a writing expression strategy framework based on cognitive processes in 2017. This framework became the scale of writing expression strategies in "China's Standards of English Language Ability" in 2018. They believe that this process mainly involves three cognitive activities of conception, composition and modification ("Fig. 1").

The writing is based on knowledge but influenced by strategies. Therefore, it is necessary to improve writing expression strategies for writing achievement. In the process of conception, students need to extract the knowledge they have learned and the knowledge they are learning in their minds, and organize the language or ideas they want to generate. The

composition is to convert ideas in the process of conception into words and write them down. The modification includes the examination and revision during the time of writing, as well as the self-assessment or revision according to mutual assessment and teacher assessment.

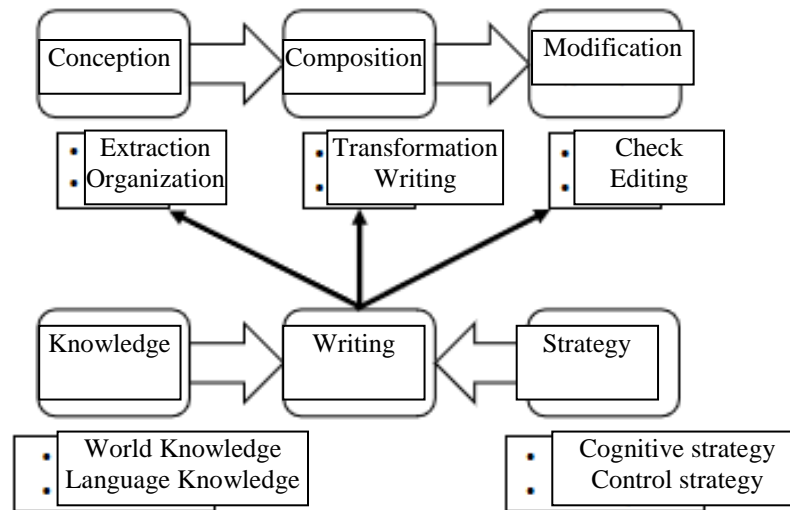


Fig. 1. Writing expression strategy framework (Deng Jie, Deng Hua, 2017).

IV. RESEARCH DESIGN

A. Research questions

In this paper, teaching experiment of 16 weeks is used to explore the influence of POA writing teaching and routine writing teaching on students' writing expression strategies.

This research mainly solves two research problems. First, compared with the input-output conventional writing teaching method, is the output-input POA writing teaching more conducive to improving students' writing expression strategies? Second, compared with the input-output teaching method, which writing expression strategies can be improved by output-input POA teaching?

B. Research objects

The subjects of this study are 84 senior two students in two parallel classes in Huizhou. There were 42 students in the experimental class and 42 in the control class. Before the experiment, two classes were surveyed before the questionnaire, so as to ensure that there is no significant difference. The pre-test average values of the experiment class are as follows: M planning (conception) =17.14, M execution (composition) =17.05, M (evaluation and remediation) modification =16.55; the pre-test average values of the experimental class are as follows: M planning (conception) =16.167, M execution (composition) =16.89, M (evaluation and remediation) modification =16.43; P planning (conception) =0.581, P execution (composition) =0.845, P (evaluation and remediation) modification = 0.814.

The experimental class uses POA writing teaching method, while the control class adopts conventional writing teaching method. The teacher is the author.

C. Research tool

In this study, the fourth-level scale of written expression strategy in "China's Standards of English Language Ability" is used. With factor analysis and expert test, it has good reliability and validity. This scale mainly collects students' evaluation of writing expression strategy ability.

The scale used in this paper is highly consistent with POA writing teaching design. In the input-enabled stage, the author will teach writing in terms of language knowledge, viewpoint content and logical coherence, roughly corresponding to the training of writing strategies in planning (conception) and execution (composition). The strategy training of evaluation and remediation (modification) fully corresponds to POA teacher-student cooperative evaluation.

The scale consists of 15 closed five-level items, including three dimensions of planning (conception), execution (composition) and evaluation and remediation (modification). Item 1, 2, 3, 4 and 5 belong to the dimension of planning (conception), item 6, 7, 8, 9, 10 and 11 belong to the dimension of execution (composition), and item 12, 13, 14 and 15 belong to the dimension of evaluation and remediation (modification).

TABLE II. KMO AND BARTLETT TEST OF WRITTEN EXPRESSION STRATEGY SCALE

Kmo and Bartlett test		
Kaiser-Meyer-Olkin measurement with sufficient sampling	The approximate	.774
	chi-square	283.233
Bartlett's sphericity test		
	df	105
	Sig.	.000

According to "Table II", the KMO value of the influencing factors of the written expression strategy scale is 0.774, and the significance test of Bartlett's sphere test is 0.000, less than 0.05, which negates the null hypothesis, indicating that there is a significant relationship between variables. The validity of the scale structure questionnaire is good, and can be used for subsequent statistical analysis.

TABLE III. ANALYSIS ON RELIABILITY OF WRITTEN EXPRESSION STRATEGY SCALE

Reliability statistics	
Cronbach's Alpha	number of terms
.869	15

According to "Table III", the total reliability of the writing expression strategy scale is 0.869, which is greater than 0.70. This indicates that the questionnaire has high internal consistency and good reliability, which can be used for subsequent statistical analysis.

D. Teaching design of POA writing teaching

The teaching experiment of POA writing lasted for 16 weeks, with two-hour writing class every two weeks. The writing class is held in the second, fourth, sixth, eighth, tenth, twelfth, fourteenth and sixteenth week. The teaching ideas of the eight writing class are shown in "Fig. 2". However, the specific tasks and the corresponding evaluation criteria change according to the different writing themes and task forms.

The experimental class strictly follows the teaching process of POA writing: output-driven, input-enabled, teacher-student cooperative evaluation. In the output-driven stage, multimodal discourse introduction is also adopted. However, the teacher consciously combines the topic with the actual use in real life or the real situation that may be encountered in the future, which overcomes the separation of learning and using and the separation of teaching and learning. Secondly, with the guidance of teachers, students discuss and share the topic in groups, which produces oral output. In this part, as far as classroom observation is concerned, students have high enthusiasm of discussion, and large and rich output. Finally, on this topic, students can have the limited writing. Then, they may feel the gap between the ideal output and the actual output in this process, and have a certain sense of frustration and "hunger" for

knowledge, which is essentially different from that of the conventional teaching method. In the input-enabled stage, teachers will explain the writing input materials from three aspects of language, content and logical coherence, and mainly use the mind mapping or debate to expand the content. And then, it can summarize the writing structure and logical coherence in the model text in the form of discussion. Finally, language knowledge by discussing or reading relevant materials can be obtained. However, the difference is that in the first stage, students have a preliminary understanding of their own lack of knowledge, and the selective learning will be carried out, making students improve their learning ability more accurately and efficiently. And teachers will give immediate feedback in the whole process to guide the whole selective learning to the direction of teaching objectives. After obtaining input-enabled materials, students write on a similar topic for a limited time. In the evaluation stage, students and teachers carry out three stages of cooperative evaluation on output results, which is quite different from the conventional evaluation method. Through this critical training, with the guidance of teachers, students make self-evaluation and have mutual evaluation, which will greatly improve students' thinking quality over time.

In the POA writing teaching classroom, teachers play a leading role to guide the teaching to develop in an orderly and efficient way in the direction of teaching objectives. At the same time, they do not neglect the main position of students, and students have many opportunities to discuss and evaluate in the classroom, so as to enhance students' sense of subjectivity in learning. In addition, teacher-student cooperative evaluation has achieved unexpected results in the experimental process. First of all, it is necessary to reduce the huge workload of the teachers, such as the evaluation one by one and sentence by sentence. Second, students are highly involved in the three stages of the whole evaluation, which also avoids the common phenomenon that students abandon after reading the compositions reviewed by teachers. Third, after three stages of teacher evaluation, self-evaluation, mutual evaluation and class evaluation, students have a deeper understanding of some grammatical errors, improper use of words and other issues, so as to avoid repetition.

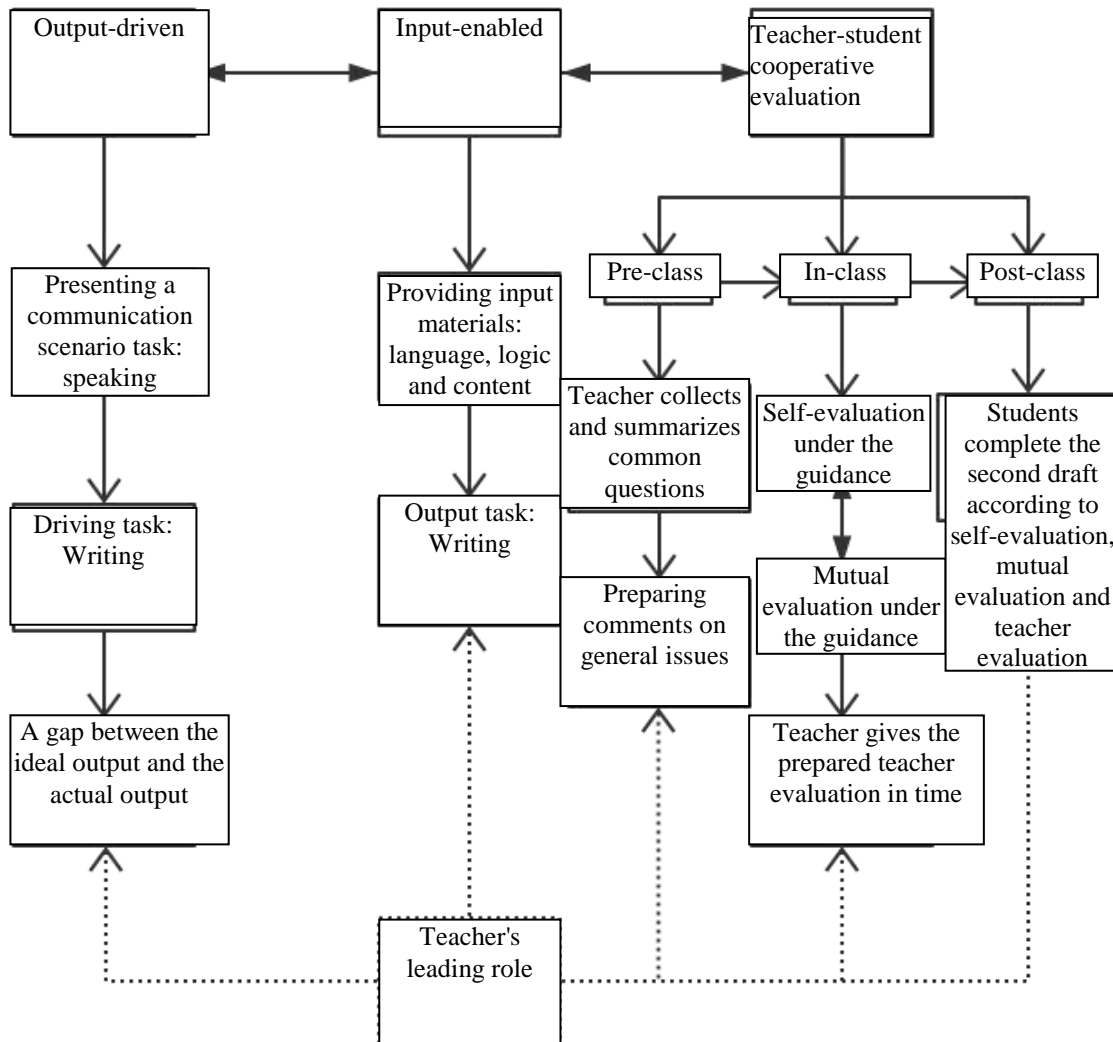


Fig. 2. Teaching process of POA writing.

E. Data collection and analysis

As a quantitative study, this paper mainly uses experimental methods and questionnaires. The experimental data were collected from questionnaires by the two classes of students in the first week and the 16th week. The class takes once every two weeks, with two hours. The experimental class is designed strictly in the form of POA output-driven — input-enabled — teacher-student cooperation evaluation, and the control class is designed in the form of conventional input — output — teacher evaluation.

SPSS21.0 was used to analyze the quantitative data of the differences in writing expression strategies between the pre-investigation of experimental class and that of the control class, the post-investigation of experimental class and that of the control class, the pre-

investigation of experimental class and the post-investigation of the control class, and the pre-investigation of the control class and the post-investigation of the control class.

V. RESEARCH RESULTS AND DISCUSSION

A. The overall influence of POA teaching on students' writing expression strategies

In the 16th week, the subjects of the two groups were investigated with the scale, and the independent sample t-test was used to make statistics on the planning (conception), execution (composition), evaluation and remediation (modification) of the writing expression strategies of the experimental class and the control class. The specific test results are presented and discussed as follows.

TABLE IV. POST-TEST INDEPENDENT SAMPLE T-TEST OF EXPERIMENTAL CLASS AND CONTROL CLASS

	CC (n=42)		EC (n=42)		MD	t	Sig.(2-tailed)
	M	SD	M	SD			
Planning (Conception)	16.810	4.3964	18.929	2.7532	-2.119	-2.647	.010
Execution (composition)	16.786	5.0872	19.143	4.0938	-2.357	-2.339	.022
Evaluation and remediation (modification)	16.619	2.6955	17.762	1.9731	-1.143	-2.217	.030

^a. *p<0.05

Through independent sample t-test of post-test data, this paper analyzes whether there are significant differences between the two classes in the three dimensions of planning (conception), execution (composition), evaluation and remediation (modification). In "Table IV", it can be seen from the post-test independent sample t-test that the mean value of each item is between 16.619 and 19.143, the item with the smallest mean value is the evaluation and remediation (modification) of the control class, and the mean value is 16.619. The item with the largest mean value is the execution (composition) of the experimental class, and the mean value is 19.143. The sig value of each item's t-test is less than 0.05, indicating that there were significant differences in the distribution data of the experimental class and the control class in the post-test planning (conception), execution (composition), evaluation and remediation (modification).

In the conventional writing teaching method, the teacher basically corrects the whole text sentence by sentence and sends it back to the students for reference

in the evaluation part, but the common phenomenon shows that the students "discard after reading" the corrected composition and put it aside without thinking too much. In the long run, students rely on the teacher's assessment and do not have the thinking of self-evaluation and peer evaluation, which is the main reason for the lowest mean value of evaluation and remediation (modification) of the control class. In the POA writing teaching of experimental class, the primary goal of the course is to achieve efficient output, so that the students in the experimental class are better in terms of execution (composition) strategies. In the classroom, the output-driven — input-enabled teaching order is used to stimulate the output, so that students have the motivation to express and accurately learn the language knowledge needed to express, which provides the possibility for the realization of efficient expression.

After learning that there are significant differences between the control class and the experimental class, this paper continues to analyze whether there are significant differences between the pre-test and post-test control class and experimental class.

TABLE V. PRE-TEST AND POST-TEST PAIRED SAMPLE T-TEST OF CONTROL CLASS

	N	M	SD	t	Sig.
Pair 1 Planning (Conception) (pre-test)- Planning (Conception) (post-test)	42	-.1429	3.6195	-.256	.799
Pair 2 Execution (composition) (pre-test)- Execution (composition) (post-test)	42	.0714	4.4524	.104	.918
Pair 3 Evaluation and remediation (modification) (pre-test)- Evaluation and remediation (modification) (post-test)	42	-.1905	3.5561	-.347	.730

According to "Table V", the mean value of three dimensions of planning (conception), execution (composition), evaluation and remediation (modification) of the control class is between -0.1905 and 0.0714, and the t-test p value of each item is greater than 0.05. It shows that there is no significant difference in improving students' writing expression strategies with conventional writing teaching methods.

According to "Table VI", the M value of the three dimensions of planning (conception), execution (composition), evaluation and remediation (modification) is between - 2.0952 and - 1.214, and the t-test p value of each item is less than 0.05. It shows

that there are significant differences in the POA teaching methods in improving students' writing expression strategies.

TABLE VI. PRE-TEST AND POST-TEST PAIRED SAMPLE T-TEST OF EXPERIMENTAL CLASS

	N	M	SD	t	Sig.
Pair 1 Planning (Conception) (pre-test)- Planning (Conception) (post-test)	42	-1.7857	4.6304	-2.499	.017
Pair 2 Execution (composition) (pre-test)- Execution (composition) (post-test)	42	-2.0952	6.5549	-2.072	.045
Pair 3 Evaluation and remediation (modification) (pre-test)- Evaluation and remediation (modification) (post-test)	42	-1.214	2.5137	-3.131	.003

To sum up, in terms of pre-test data, there is no significant difference between the control class and the experimental class in three dimensions of writing expression strategies. In terms of post-test data, there is significant difference between the control class and the experimental class. In terms of pre-test data, there is no significant difference between the control class and the experimental class in terms of writing expression strategies, and there is significant difference between the pre-test and post test data of the experimental class.

According to the data, compared with the input-output conventional approach, the output-input POA approach is more conducive to improving students' writing expression strategies.

B. The specific influence of POA teaching on students' writing expression strategies

VI. The author presents the proportion of the average value of each item of two classes before and after the test in the form of bar chart by using Excel table. The changes of any dimension can be clearly obtained from "Fig. 3". According to the change of the pre-test and post-test proportion of the experimental class, the change values of the three dimensions are 7.15%, 6.98% and 6.07% respectively, which is more obvious for the improvement of planning (conception) and execution (composition) dimensions.

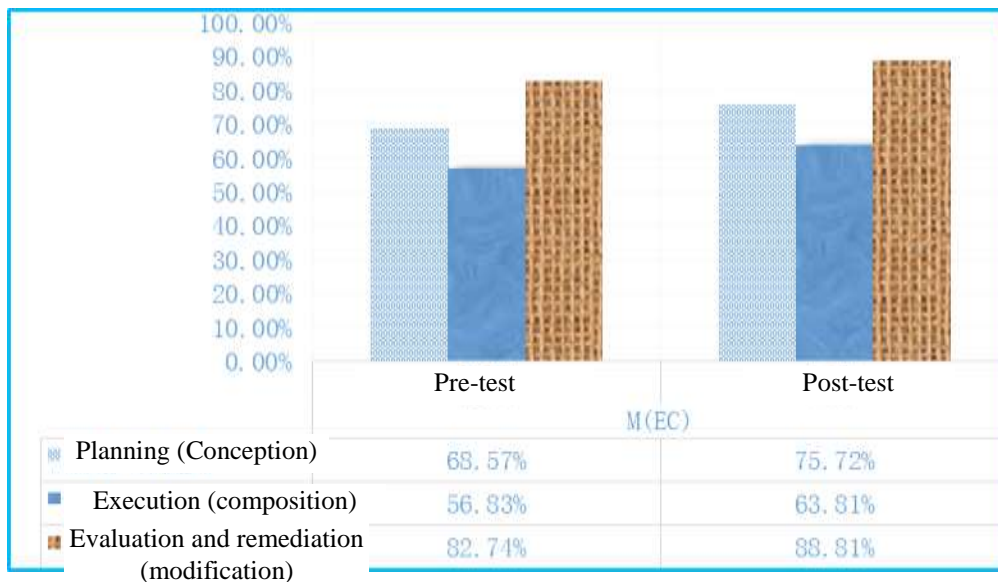


Fig. 3. Changes in the proportion of the mean values of pre-test and post-test experiment of the experimental class.

Among the specific strategies of planning (conception) dimension (item 1, 2, 3, 4 and 5), the item one is on the correct formulation of the article title; the item 2 and 4 are on the arrangement of the composition structure of the article; the item 3 and 5 are about the ability of the students to outline the main contents of the article. As there is no need to draw up composition in English writing of Guangdong college entrance

examination, the proportion of item 1 is generally low. In the teaching of the experimental class, the teacher divides the input-enabled stage into three aspects, that is, expanding it by brainstorming and topic debate, and then writing it in the form of mind mapping to achieve the content-enabled. Therefore, according to the questionnaire data of item 3 and 5, the proportion change more significantly. In terms of structure

promotion, the experimental class uses reading materials, such as example articles and articles on related topics. Through text reading, groups summarize the structure of articles, and then report in the group. In this way of continuous training, it also contributed to the promotion of students' strategies in the item 2 and 4.

Among the specific strategies of execution (composition) dimension (item 6, 7, 8, 9, 10 and 11), item 6, 7 and 10 evaluate the students' ability to write appropriate topic sentences, support their own opinions according to the reading materials and enumerate life examples, and belong to the summary listing of opinion content. Item 9 evaluates students' ability to arrange the writing structure according to time and space, primary and secondary order, which belongs to the aspect of logical coherence. Item 8 evaluates students' ability to use innovative proverbs or set questions to start. Item 11 evaluates students' ability to use pictures, colors or text modification and other multimodal text forms to highlight the important and difficult points. Similar to the teaching method of planning (conception) dimension, structural-enabled, language-enabled and content perspective facilitation are used to achieve high-quality output. However, there is no specific training for the writing of innovative beginnings, and the discourse form of college entrance examination English writing is limited to the text, so there is no significant difference in the promotion effect of item 8 and 10.

Among the specific strategies of evaluation and remediation (modification) dimension (item 12, 13, 14, 15), item 12 can evaluate students' ability to make composition modification with the help of others, which belongs to mutual evaluation or teacher evaluation. Item 13, 14, 15 can evaluate students' ability to make the articles better by word processing software or self-examination, which belongs to self-evaluation. In the experimental class, it is necessary to pay great attention to the evaluation link. Through the self-evaluation, mutual evaluation and teacher evaluation before, during and after class, students' thinking quality can be greatly improved. Through the dialectical perspective of criticism and learning, students' and their own composition output tasks can be seen, which enriches the form and significance of evaluation. The reason why the degree of promotion is not as big as that of the first two dimensions may be that students just come into contact with a new evaluation method, which requires time to transition from the original "fetchism" to critical, innovative and logical thinking.

VII. CONCLUSION

During the 16-week teaching experiment, the students in the experimental class are gradually familiar with the teaching process of output — input — cooperation evaluation, and their enthusiasm for writing

class is also growing. From the experimental data, the POA teaching method has achieved preliminary effect on the cultivation of students' writing expression strategies.

Compared with the traditional input-output writing teaching method, the POA output-input writing teaching method is more conducive to improving students' writing expression strategies in three dimensions: planning (conception), execution (composition), evaluation and remediation (modification). Although many scholars have done empirical research, the production-oriented approach is effective in improving the output skills, but it needs to test its impact on the writing performance itself, which still needs a long time of experimental teaching to verify.

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