

Cultivation of Innovative Thinking and Enhancement of Entrepreneurial Awareness in College English Teaching

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Abstract: With the rapid development of social economy and the acceleration of globalization, college English teaching needs to face the challenge of cultivating innovative thinking and entrepreneurial awareness while cultivating students' language ability. The existing college English teaching methods generally have problems such as focusing on basic language skills training and lack of innovative ability and practical ability training. To this end, this paper explores the specific strategies of incorporating innovative thinking and entrepreneurial awareness into college English teaching, and designs corresponding experimental research. First, the Task-based Language Teaching (TBLT) method is adopted to drive students to use innovative thinking in English language learning through practical tasks and projects, and improve their problem-solving ability. Secondly, the case teaching method is introduced to stimulate students' entrepreneurial awareness by analyzing and discussing practical cases related to language learning. Through cooperation with other disciplines (such as business, computer science, etc.), English learning is combined with knowledge in other fields to promote the development of students' interdisciplinary thinking and improve their comprehensive problem-solving ability. The results show that the experimental group students are comparable to the control group in terms of language ability, but show significant improvement in innovative thinking and entrepreneurial awareness. In terms of English writing scores, although there are some fluctuations, the score range is between 16 and 20 points, which is relatively stable overall, with the highest score being 20 points.

1. Introduction

Cultivating compound skills with innovative thinking and entrepreneurial awareness has become a key objective of higher education in the current climate of growing globalization and informatization. The traditional teaching style, particularly when it comes to teaching English in college, frequently emphasizes imparting language knowledge and developing fundamental language abilities while placing less emphasis on encouraging creativity and an entrepreneurial spirit. How to successfully include innovative thinking and entrepreneurial awareness in English teaching has emerged as a pressing issue in the education sector due to the growing demand for creative and enterprising skills in society.

This paper aims to study the cultivation path of innovative thinking and entrepreneurial awareness in college English teaching, and explore how to stimulate students' creativity and entrepreneurial potential through teaching design, innovation of teaching methods and interdisciplinary cooperation. Through empirical research, this paper hopes to provide a reference for the reform of college English education and promote the transformation of college English teaching from traditional language skills training to more comprehensive and innovative ability training.

This paper first introduces the research background and significance, and emphasizes the importance of innovative thinking and entrepreneurial awareness in college English teaching. Then, it reviews relevant domestic and foreign literature, analyzes the shortcomings of current teaching methods, and proposes a theoretical framework for cultivating innovative thinking and entrepreneurial awareness. The study techniques and experimental design are then thoroughly explained, including how the experimental and control groups are set up, which teaching models are chosen, and how the data is collected and analyzed. The experimental results section compares and contrasts the two student groups' performance in terms of language proficiency, creative thinking, and entrepreneurial savvy. The study's shortcomings and future research directions are covered, along with a summary of the research findings and recommendations for reforming college English instruction.

2. Related Work

Many scholars have conducted in-depth research and explored how to improve students' learning outcomes through innovative teaching methods and further promote the cultivation of their innovative thinking and entrepreneurial awareness. Paragae explored the application of innovative teaching strategies in foreign English teaching. Through literature research, data from authoritative journals at home and abroad were collected and qualitatively analyzed. The data found that innovative learning strategies emphasize student-centeredness, and students play an active role in the learning process and actively construct knowledge [1]. Fauziningrum et al. focused on analyzing the teaching methods of English teachers through qualitative analysis, descriptive research design, interviews, observations and literature analysis. The data found that both English teachers at MTsS Siulak Gedang used dictionaries and translation methods to teach vocabulary [2]. Fauziningrum et al. provided informative guidance for educators to conceptualize inclusive learning environments that meet the diverse needs of language learners by studying theoretical foundations, AI technologies, and learner-centered approaches. The results showed that AI is revolutionary in promoting personalized teaching, accessibility, and differentiated learning experiences, ultimately promoting the development of inclusive ELT (English Language Teaching) pedagogy [3]. Woodeson adopted a qualitative approach and conducted in-depth interviews with students and English teachers in schools in Krabi, Thailand, using content analysis and NVivo to analyze the data. The results found that students attach great importance to vocabulary learning. There were many reasons why they want to learn English vocabulary, such as the opportunity to receive scholarships. It was crucial for English teachers to develop appropriate strategies for students to learn new vocabulary [4]. Pun et al. conducted a comprehensive analysis and synthesis of the literature about the language difficulties that instructors and students encounter in secondary and tertiary English scientific courses, along with suggested coping mechanisms. They examined their findings from three study areas—applied linguistics, language policy, and scientific education—using a multidisciplinary approach [5]. Twenty Indonesian English as foreign language instructors were interviewed by Hidayat and Mason in order to learn more about the elements that motivate them to teach creatively. According to research, instructors do not naturally possess creativity, but they may

foster it by embracing new ideas and honing their creative teaching techniques [6].

With the continuous development of the education field, especially in the innovative practice of foreign language teaching, more and more research focuses on improving teaching quality, promoting student learning and teacher development. Matchanova and Rasulova provided practical suggestions for English teachers to improve teaching skills and enhance students' learning experience. These suggestions include keeping up with the latest teaching methods, integrating technology into the classroom, encouraging student participation, using authentic materials, providing feedback and self-reflection, developing cultural awareness, and improving personal language ability [7]. Hsu et al. explored the impact of AI image recognition technology and self-regulated learning on primary school students' vocabulary learning, self-regulation and learning anxiety. The results showed that the experimental group performed significantly better than the control group in vocabulary learning [8]. Cvilikaitė-Mačiulskienė et al. collected data through a questionnaire survey and found that 58.3% of Ukrainian students and 84.2% of teachers had experience using other languages. The survey showed that teachers and students believed that translation was an effective strategy to help understand grammar and vocabulary, and students also mentioned using gestures to explain unfamiliar vocabulary [9]. Zarrinabadi and Afsharmehr aimed to explore the thinking patterns of Iranian language teachers on language learning and teaching, and how thinking patterns affect their teaching practices. The results showed that teachers' thinking patterns were divided into fixed, growth and mixed types, and that teachers' thinking patterns affected their teaching strategies, homework assignments and praise methods [10]. Aliyyah et al. aimed to explore the views of Indonesian primary school teachers on the implementation of independent courses during the COVID-19 pandemic as an alternative to address learning loss. Four main themes were found: urgency, challenges, support, and teaching strategies [11]. Budianto et al. explored the TPACK (Technological Pedagogical Content Knowledge) level of 120 high school English teachers, 360 students, and 5 trainers in an online training program funded by the Indonesian Ministry of Education. Qualitative results showed that teachers need to be familiar with basic computer hardware, English teaching research, cross-cultural awareness, language problem-solving skills, learner engagement, and adaptation to multicultural events to promote TPACK practice and support language learning [12]. Although a large number of studies have explored the application of innovative teaching methods and technologies in English teaching, there is still a lack of in-depth research on the specific effects and implementation strategies of these methods in enhancing students' innovative thinking and entrepreneurial awareness [13].

3. Method

3.1 Analysis on the Current Situation of Innovative Thinking and Entrepreneurial Awareness in College English Teaching

In today's higher education, English teaching has become an indispensable part. However, with the rapid development of social economy and the continuous advancement of globalization, the traditional English teaching model has gradually revealed its shortcomings and cannot meet the needs of cultivating innovative and entrepreneurial talents. Therefore, how to integrate innovative thinking and entrepreneurial awareness in English teaching has become an important issue in current educational research. The college English teaching model has obvious differences in schools in different regions and disciplines, but it can be generally divided into two categories: traditional model and modern model.

(1) Traditional teaching model

The traditional college English teaching model is mainly teacher-centered, with lectures as the main form of teaching. Students mainly listen to lectures and take notes, and the learning process is

relatively one-way. Students are often in a passive state of acceptance, with little classroom interaction, and there is a lack of effective ways to cultivate innovative thinking. The teaching content is mostly grammar, vocabulary and basic language skills training, and rarely involves practical language application and the combination of interdisciplinary knowledge. Therefore, although students' English level can be improved to a certain extent, they lack practical application ability and critical thinking training.

(2) Modern teaching model

The modern English teaching model emphasizes the subjectivity of students, advocates a student-centered teaching concept, and focuses on students' active learning and independent exploration. Under this model, task-based teaching methods, cooperative learning, and project-based learning are more often used in the classroom, focusing on the practical application of language and diverse forms of interaction. Modern teaching pays more attention to cross-cultural communication, the cultivation of innovative thinking, and integration with other disciplines. This model can stimulate students' creativity and critical thinking, provide students with more opportunities to participate and think, and thus cultivate their ability to solve complex problems.

3.2 Application of Innovative Thinking and Entrepreneurial Awareness in English Teaching

With the development of the times, more and more educators have begun to realize the importance of innovative thinking and entrepreneurial awareness in college English teaching. However, although the cultivation of innovative thinking and entrepreneurial awareness has become part of the educational goals, there are still many challenges in the actual teaching process.

(1) Application of innovative thinking

The cultivation of innovative thinking emphasizes that students can think flexibly, break routines and seek new methods in the learning process. In college English teaching, the application of innovative thinking is often reflected in the following aspects:

Content innovation: Teachers stimulate students' interest and thinking in language learning by introducing novel teaching content, such as real cross-cultural communication cases and innovative language usage situations.

Innovation in teaching methods: Using a variety of interactive teaching methods, such as scenario simulation, role-playing, group discussion, etc., to encourage students to find problems, raise questions and seek solutions in communication.

Critical thinking training: Through classroom discussions and debates, we help students analyze different angles of the problem and cultivate their critical thinking ability.

(2) Cultivation of entrepreneurial awareness

The cultivation of entrepreneurial awareness is mainly through stimulating students' innovative spirit, teamwork ability and ability to solve practical problems. In English teaching, the cultivation of entrepreneurial awareness is usually carried out in the following ways:

Project-based learning: By allowing students to participate in real entrepreneurial projects or business case analysis, their business awareness and market sensitivity can be cultivated.

Interdisciplinary cooperation: Students are encouraged to collaborate with classmates from other disciplines to solve cross-disciplinary problems and cultivate their teamwork spirit and interdisciplinary thinking.

Combining language and business: By teaching business-related English vocabulary and expressions, we help students understand the global market and business environment and enhance their international perspectives.

3.3 The Integration Path of Innovative Thinking and Entrepreneurial Awareness in College English Teaching

As society's demand for innovative and entrepreneurial talents increases, the goal of college English teaching has gradually shifted from single language skill training to more comprehensive ability training. In this process, how to organically integrate innovative thinking and entrepreneurial awareness into English teaching has become an urgent problem for educators to solve. In order to achieve this goal, innovative thinking and entrepreneurial awareness can be effectively combined with English teaching through various methods such as interdisciplinary teaching, case teaching method and task-based teaching method.

First, interdisciplinary teaching provides a rich soil for the cultivation of innovative thinking and entrepreneurial awareness. In traditional college English teaching, students often only improve their English ability by learning the basic structure and rules of the language, but ignore the application of language in the actual society and workplace. Interdisciplinary teaching combines English language learning with other subjects such as economics, management, sociology, etc., which broadens students' knowledge and stimulates their innovative thinking. In this model, students can not only learn the language itself but also understand how to apply English in different practical situations and solve various problems that arise in cross-cultural communication. This learning method helps to enhance students' global vision and cross-cultural understanding, so that they can apply language more flexibly and come up with innovative solutions when facing a diversified world. At the same time, interdisciplinary teaching can also cultivate students' ability to solve complex problems, help them look at problems from different perspectives, and thus stimulate their entrepreneurial thinking.

Secondly, the application of case teaching method in college English teaching can also effectively promote the cultivation of innovative thinking and entrepreneurial awareness. By introducing real business cases or entrepreneurial stories, case teaching can not only improve students' English level in analysis and discussion but also exercise critical thinking and innovative thinking in specific situations. In the process of analyzing these cases, students not only need to master the professional terms and language expressions related to the cases but also need to cultivate their practical ability and comprehensive thinking ability through in-depth research on case background, problem analysis, solutions, etc.

4. Results and Discussion

4.1 Experimental Subject

Two groups of college English learners are selected, namely the experimental group and the control group. The experimental group receives teaching that includes the cultivation of innovative thinking and entrepreneurial awareness, while the control group continues to receive the traditional English teaching model.

4.2 Experimental Design

Experimental group:

Task-based teaching method: The experimental group participates in tasks based on practical problems and projects. The task design involves interdisciplinary cooperation (such as combining English with business, economics, etc.). Students need to analyze business cases in English and propose innovative solutions.

Case teaching method: We introduce real business cases or entrepreneurial stories, analyze the

innovation process of enterprises, and help students understand the combination of language application and entrepreneurial spirit.

Interdisciplinary cooperation: Students combine with other disciplines (such as management and economics) to conduct interdisciplinary discussions and cooperation to cultivate teamwork spirit and innovation ability.

Control group:

The control group continues to use the traditional English teaching model, mainly through grammar, vocabulary and basic language skills training, the classroom is mainly lectured by teachers, and students mainly listen and take notes.

4.3 Experimental Analysis

Language proficiency assessment assesses students' English listening, speaking, reading and writing abilities through final English exams or class performance.

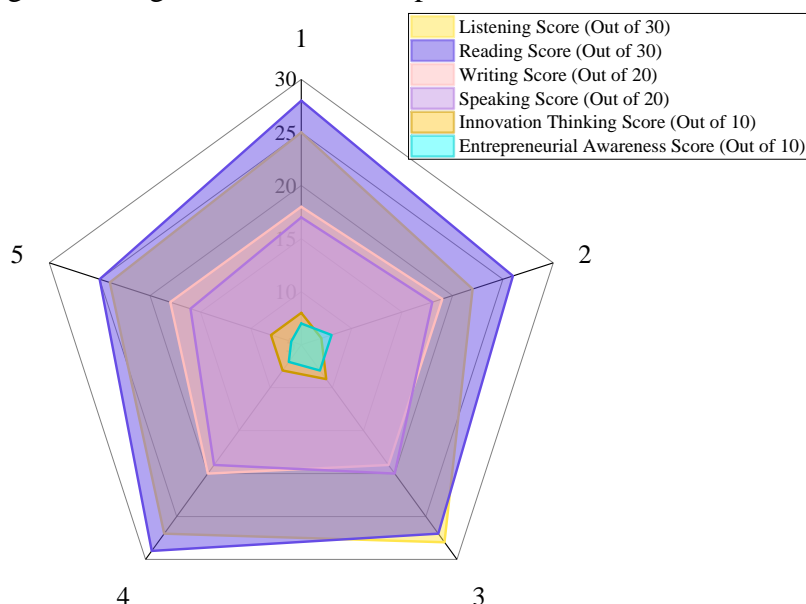


Figure 1. Language ability assessment of the experimental group

Students generally perform well in various language skills. First, in terms of English listening, most students score high, ranging from 24 to 28 points, showing that students can understand the listening materials well and have certain listening skills. Secondly, English reading scores are also outstanding, with students' scores generally high. Among them, student 3 and student 4 score 27 and 29 points, respectively, reflecting their strong reading comprehension ability and high reading skills. In terms of English writing scores, although there are some fluctuations, the scores range from 16 to 20 points, which is relatively stable overall, with the highest score being 20 points, indicating that students had good writing skills and could express their ideas effectively. In terms of English speaking scores, students score between 16 and 20 points, and most students are able to express themselves fluently, showing a certain level of oral ability, as shown in Figure 1. Overall, the language ability and innovation and entrepreneurship awareness of the experimental group students are greatly improved, reflecting the effectiveness of the experimental teaching method.

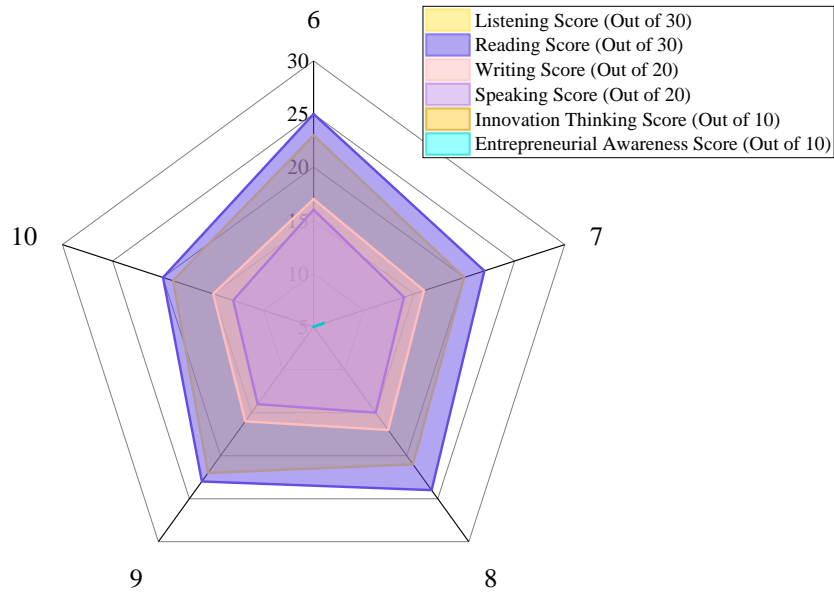


Figure 2. Language ability assessment of the control group

From the language ability assessment data of the control group in Figure 2, it can be seen that the students perform relatively low in various assessments, and there is a significant gap between the overall level and the experimental group. In terms of English listening scores, most students score between 19 and 23 points. The low scores may indicate that the students in the control group have certain deficiencies in listening comprehension and skills. In terms of English reading scores, students' scores are generally low, with the highest being 25 points and the lowest being 20 points, indicating that students' reading comprehension ability is relatively weak. In terms of English writing, students' scores are also scattered, with the lowest score being 13 and the highest being 17. The overall performance is not as good as that of the experimental group, indicating that their writing skills are relatively weak and their ability to express ideas is lacking. In terms of oral English, students' scores are generally low, with the lowest score being 13. Entrepreneurial awareness scores are also relatively low, with most students scoring between 4 and 6 points, indicating that the control group students lacked effective support in cultivating entrepreneurial thinking and business awareness.

The innovative thinking assessment evaluates students' innovative ability in problem solving and analyzes whether students can break through the traditional thinking framework.

Table 1. Evaluation of innovative thinking of the experimental group

Student ID	Number of Unique Solutions Proposed	Number of Times Traditional Thinking Was Challenged	Use of Innovative Methods	Interdisciplinary Thinking Performance
1	3	2	Yes	Yes
2	2	1	No	Yes
3	4	3	Yes	Yes
4	3	2	Yes	No
5	2	1	No	No

Students show certain breakthrough and innovative thinking. First, in terms of the number of unique solutions, most students are able to come up with multiple innovative solutions, with the highest being 4 and the lowest being 2, indicating that students are able to think of diverse solutions when faced with problems. Second, in terms of the number of breakthroughs in traditional thinking, students are generally able to break the conventional way of thinking, with an average of 2

breakthroughs, indicating that students have improved their flexibility in thinking. Regarding the application of innovative methods, some students are able to use innovative methods to solve problems, showing strong innovative ability, among which students 1, 3, and 4 successfully apply innovative methods, as shown in Table 1. Overall, the students in the experimental group are more active in innovative thinking, and are able to show strong innovative ability and interdisciplinary thinking when solving problems, reflecting the effective cultivation of innovative thinking by experimental teaching methods.

Table 2. Evaluation of innovative thinking in the control group

Student ID	Number of Unique Solutions Proposed	Number of Times Traditional Thinking Was Challenged	Use of Innovative Methods	Interdisciplinary Thinking Performance
6	1	0	NO	NO
7	1	0	NO	NO
8	1	1	NO	NO
9	1	0	NO	NO
10	0	0	NO	NO

From the evaluation data of innovative thinking of the control group in Table 2, students' performance in innovative thinking is relatively weak, lacking obvious breakthrough and innovation capabilities. First, in terms of the number of unique solutions proposed, most students can only propose 1 unique solution, with the highest being 1 and the lowest being 0, indicating that the students in the control group lack sufficient creativity and diverse thinking when solving problems. In terms of the number of times of breaking through traditional thinking, most students do not break through the traditional thinking framework. Only student 8 shows one breakthrough, and the other students do not show any behavior of breaking through conventional thinking, which shows the limitations of students' thinking. Regarding the application of innovative methods, most students in the control group (6 to 10) fail to successfully apply innovative methods to solve problems, indicating that there are obvious deficiencies in the cultivation and application of innovative thinking.

Quantitative data is evaluated quantitatively through students' test scores, task completion, project performance, etc.

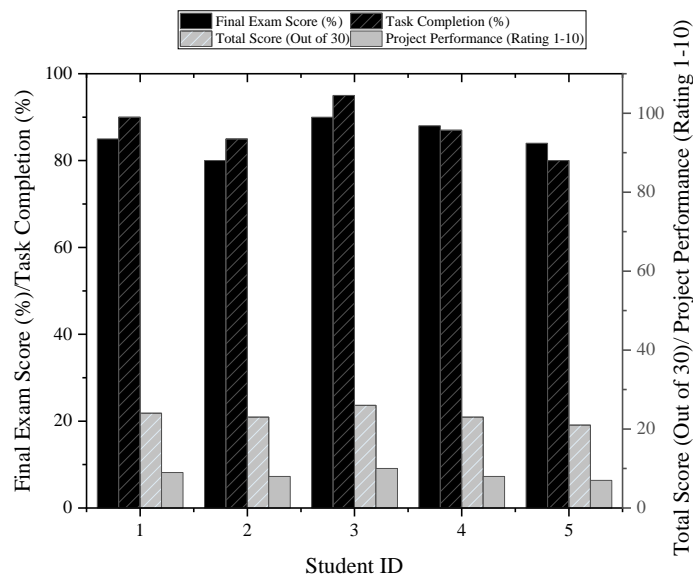


Figure 3. Quantitative data evaluation of the experimental group

In terms of final exam results, students 1 to 3 generally score high, with student 3 scoring 90%, the best performance. The final exam scores of other students are also above 80%, reflecting their strong English foundation and exam ability. In terms of task completion, all students perform well, with scores between 80% and 95%, showing that students are able to complete tasks on time and have a high degree of mastery of the task content. Regarding project performance, students 1 and 3 score higher, 9 and 10 points, respectively, indicating that they demonstrate high innovation and execution capabilities in project practice; the scores of the remaining students are mostly between 7 and 8 points, and the overall project performance is relatively excellent. In terms of total scores, students 1 and 3 score higher, 24 and 26 points, respectively, while the total scores of other students are slightly lower, but still show strong comprehensive abilities, as shown in Figure 3.

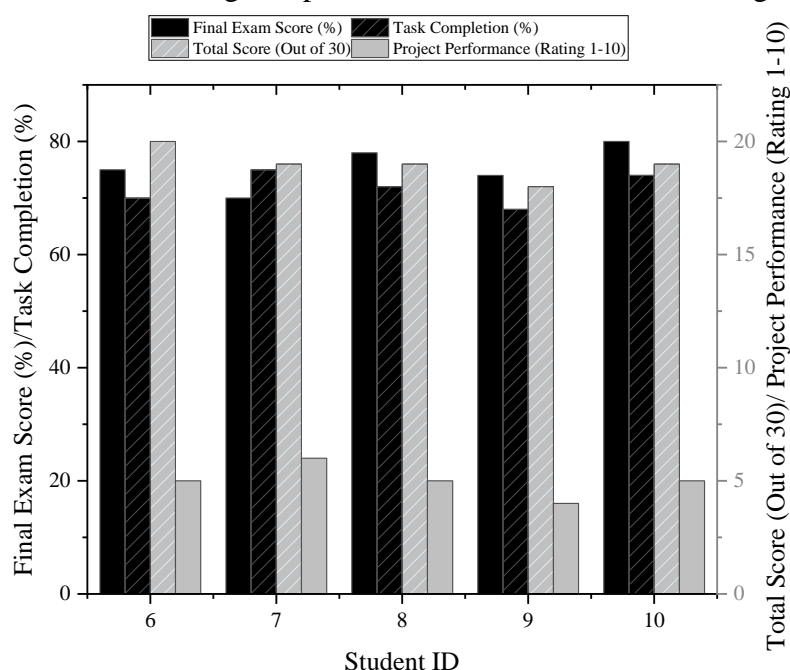


Figure 4. Quantitative data evaluation of the control group

From the quantitative data evaluation of the control group, students generally perform poorly in the final exam, task completion, and project performance. First, in terms of final exam scores, students' scores are generally low, with the highest being 80% and the lowest being 70%, indicating that the overall mastery of the English subject by students in the control group is relatively weak. In terms of task completion, there is also a large gap in students' scores, ranging from 68% to 75%, and the overall completion is relatively average, indicating that students have certain difficulties in the task execution process. Regarding project performance, students' performance scores are generally low, with most students scoring 5 points, the highest being 6 points, and the lowest being 4 points, indicating that students' innovation and practical ability in project practice are relatively limited. In terms of total scores, students' total scores are all low, with the highest being 20 points and the lowest being 18 points, indicating that the overall performance is not as good as that of the experimental group, and students' language ability, task execution ability, and project innovation are all relatively weak (as shown in Figure 4).

5. Conclusion

This paper deeply explores the cultivation path and effect of innovative thinking and entrepreneurial awareness in college English teaching. The research results show that integrating

innovative thinking and entrepreneurial awareness into college English teaching can not only effectively improve students' language ability but also promote the improvement of their comprehensive quality, especially in critical thinking, practical problem-solving ability and interdisciplinary thinking. The experimental group is better than the control group in the evaluation of language ability, innovative thinking and entrepreneurial awareness. Especially in the application of innovative methods and the performance of interdisciplinary thinking, the students in the experimental group show more creative thinking and practical ability. However, this study also finds that although certain results have been achieved in the implementation process, there are still some challenges. For example, teachers need to further strengthen their application of innovative teaching methods, and the cultivation of innovative thinking and entrepreneurial awareness still faces certain difficulties in combining theory with practice. Therefore, future research can further explore more flexible and diversified teaching models, combined with more practical projects, to promote the comprehensive improvement of students' innovation and entrepreneurial capabilities.

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