

# RESEARCH ON THE OPTIMIZATION STRATEGY OF KEY EVENTS TO PRECISELY CULTIVATE AND ENHANCE COLLEGE STUDENTS' CREATIVITY

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**Abstract:** Based on the prominent importance of the cultivation and improvement of college students' creativity for the country, enterprises and individuals, a theoretical model for the cultivation of college students' creativity is constructed based on the six key links of creativity cultivation, such as entrance education, undergraduate tutors, classroom teaching, second classroom activities, academic lectures and study research groups. Finally, from the perspective of precise cultivation, the paper puts forward the systematic strategy of creativity cultivation of college students.

**Keywords:** college students; creativity; critical event optimization; precise cultivation

Human beings are entering the era of creativity. Creativity is becoming more and more important to countries, enterprises and individuals, and cultivating and attracting creative talents has become an important measure to build competitive advantages. As an important base for cultivating creative talents, colleges and universities also extensively carry out innovative education in educational practice, such as adding creative, practical and research courses to develop college students' creative potential and improve their innovative ability. The development and popularization of these innovative education courses make the cultivation of creativity become an important task of university education, and the enthusiasm of college students in innovation and entrepreneurship is constantly improving. In terms of stimulating college students' interest in scientific research and cultivating creativity, the "University Students Challenge Cup" and the colorful "Second Classroom" activities widely carried out in colleges and universities play an important guiding role, and also make the innovation and entrepreneurship of colleges and universities fully carry forward. However, while making great progress in cultivating college students' creativity, we should also see some problems still exist. In the practice of innovative education in schools, there are still problems such as improper innovative education methods, lack of systematic design of innovative education courses<sup>[1,2]</sup>, weak innovative consciousness of college students and lack of innovative ability, which result in the lack of scientific and logical guidance of innovative education in schools. In the practice of specific innovative education, the mistake of "herding sheep" education is often made<sup>[3]</sup>. In fact, the cultivation and promotion of college students' creativity should be based on scientific innovative thinking, and a systematic innovative education system should be built. It is necessary to solve the difficulties and challenges encountered in the process of innovation from all aspects of innovative education. Therefore, based on the importance of the cultivation and promotion of college students' creativity, this paper builds a theoretical model for the cultivation of college students' creativity, and

from the perspective of precise cultivation, puts forward a systematic cultivation strategy for colleges and universities to improve college students' creativity through key events, and finally analyzes the discussion-style teaching practice and curriculum resource condition guarantee for promoting the improvement of college students' creativity.

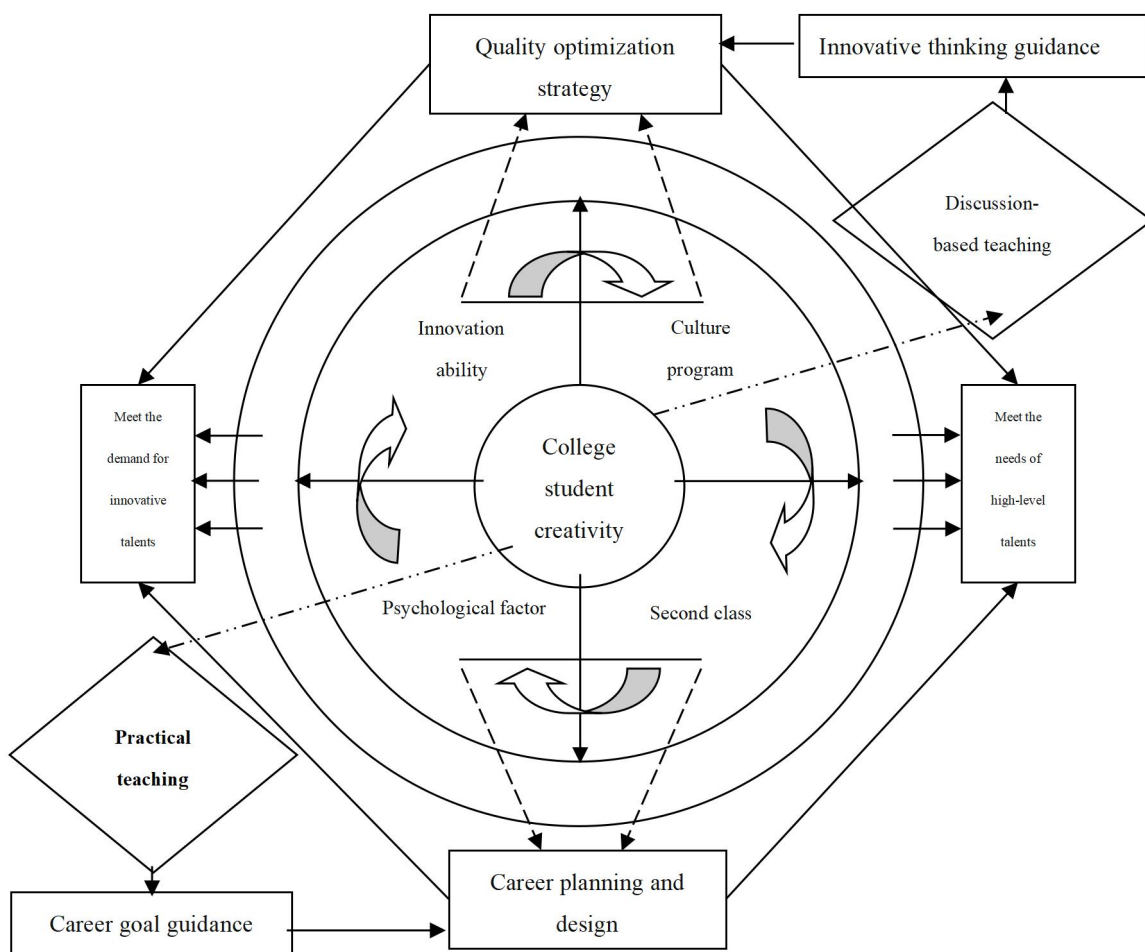
## 1. THE COMPREHENSIVE ANALYSIS MODEL OF THE PROCESS OF IMPROVING THE CULTIVATION QUALITY OF COLLEGE STUDENTS' CREATIVITY

As a teaching method highlighting "inspiration" and "research", discussion-based teaching has always been regarded as an important teaching training mode to enhance college students' creativity. This method emphasizes teacher-student interaction and encourages students to explore independently<sup>[4]</sup>. Due attention is paid to the key nodes of creativity cultivation in the teaching process<sup>[5]</sup>. With this as the core concept, universities often attach great importance to practical teaching modes such as the second classroom, innovation competition and entrepreneurial project planning in terms of cultivating innovative thinking and consciousness. It is believed that in the aspect of cultivating college students' creativity, it should be combined with the "commercialization" process, rather than just staying in the early stage of the creativity process, more attention should be paid to the subsequent transformation process of the results. This practical teaching mode poses new challenges to college students' practical operation ability, team cooperation ability and strategic planning ability<sup>[6]</sup>, meanwhile, it greatly exercises their comprehensive innovation ability and lays a practical ability foundation for training high-level talents to meet social needs. Obviously, for the cultivation of college students' creativity, both of these are indispensable and complement each other.

On the one hand, the development of seminar courses has laid a good foundation of innovative thinking for practical teaching. Under the guidance of innovative thinking, practical teaching can move forward according

to the path of creativity enhancement, rather than just staying on the surface of practice. The practice of innovation is mostly full of uncertainty, and it is difficult to accurately predict what may happen in the future. However, it also provides students with good innovative thinking ability with more opportunities, and students with good innovative thinking training can more easily grasp these innovative and entrepreneurial opportunities, and more easily achieve success. Innovative thinking gives college students more efficient decision-making ability to "do the right thing" and makes their choice of innovation and entrepreneurship direction more forward-looking. On the other hand, practical teaching can make the "right thing" done more efficiently by "doing it right" and truly transform it into the "commercial" outcome of innovation and entrepreneurship. In which, practical teaching can make

the creative process "feasible", "controllable" and "accessible" by means of simulation, experiment and project planning, so as to play a good role of goal guidance. This is closely related to the career planning and design of college students, which mainly depends on the psychological factors of college students and the second classroom arrangement and other factors. The role played by colleges and universities is mainly reflected in the arrangement of practical courses and practical projects, which often has little influence on the concrete operation. As for discussion-based teaching, it can bring students' continuous interest in innovation through the guiding role of innovative thinking, which is conducive to the improvement of students' creativity. The specific theoretical model framework is shown in Figure 1.



**Figure 1.** Comprehensive analysis model of training quality optimization process for improving college students' creativity

In summary, the cultivation and improvement of college students' creativity should be carried out from two aspects. On the one hand, the optimization strategy of college students' cultivation quality is mainly reflected in the discussion-based teaching mode guided by

innovative thinking, which pays attention to the setting of college students' innovation ability and cultivation program. On the other hand, it focuses on the field of career planning and design of college students. It is a practical teaching model based on career goal guidance,

focusing on the second classroom of college students and psychological factors related to innovation. Obviously, there is a complementary relationship between the two. The two basically cover the whole process of creativity cultivation, which not only focuses on creative thinking and inspiration of innovative consciousness in the early stage of creativity cultivation, but also focuses on how to implement the "commercialization" process after the formation of innovative plans. Such an analytical framework makes the quality optimization process of college students' creativity training more systematic, more complete, and more in line with the practical requirements of innovation and entrepreneurship. At the same time, the innovation education in colleges and universities is not only limited to the theoretical research in the "ivory tower", but also can be implemented into the innovation practice of the whole social economic life. How to make better use of the educational resources of colleges and universities to cultivate and enhance the creativity of college students in the concrete teaching practice? This requires attention to key events in the training process from the perspective of precise cultivation, so that the cultivation process can highlight key factors and achieve the effect of "getting twice the result with half the effort". Here's a closer look.

**2. ANALYSIS OF KEY EVENTS OF QUALITY OPTIMIZATION STRATEGIES FOR PRECISE**

**CULTIVATION TO IMPROVE COLLEGE STUDENTS' CREATIVITY**

In order to better highlight and evaluate the optimization effect of university students' creativity cultivation governance, the key events in the optimization strategy were analyzed. Firstly, the key events affecting the cultivation of creativity of college students are identified. According to the preliminary investigation among college students, the factors affecting their creativity are summarized into six key events, such as entrance education, undergraduate tutors, classroom teaching, second class activities, academic lectures and study research groups. These six factors almost cover the whole process of the cultivation of college students' creativity, and all have a significant impact on the improvement of creativity. Then, through the description of the best or worst situation of these key events by college students to analyze the causes of this behavior, and then evaluate the influencing factors; Finally, the key event analysis table is listed, which will be the starting point of the key event analysis of the optimization strategy of college students' creativity improvement. Through the analysis of key events, the main influencing factors of the quality optimization process of college students' creativity can be obtained, which can provide reference for the further development of relevant countermeasures and suggestions. Table 1 shows the key events analysis table.

**Table 1** Analysis table of key events of precision training quality optimization strategy to improve college students' creativity

		Best-case scenario				Worst case scenario			
		Actual result	Expected result	Gap	Effect evaluation	Actual result	Expected result	Gap	Effect evaluation
Key events	Entrance education								
	Undergraduate tutor								
	Classroom teaching								
	Second classroom activity								
	Academic lecture								
	Learning research group								

After the key event analysis table is designed, students can be surveyed, mainly for college students from grade two to grade four. Through typical individual interviews and random sampling survey, we have three findings: The first is that the impact of these key events is different at different grades, with the lower grades being better assessed by admissions, undergraduate tutors, and classroom instruction, and the higher grades being better assessed by second classes, academic lectures, and study

groups. Therefore, the cultivation of creativity needs to be adjusted according to different grades, rather than using a unified program; The second is that there is still a large gap between the expected results and the actual results of admission education and undergraduate tutorial system. That is to say, students have high expectations for these two key events, but the actual results fail to meet their expectations. Therefore, in the training program, special attention should be paid to the

important role of these two links, which should not only be regarded as an essential procedure, but should really play the role of guiding innovative thinking, and lay a good foundation for the cultivation of the whole process of creativity. The third is that students reflect the three key events of practical teaching based on the lack of on-campus teaching nurturing power, so it is necessary to use their own advantages to combine with other universities and social forces to jointly complete practical teaching, and it is necessary to deeply explore the effect of social network on the enhancement of creativity.

### 3. DISCUSSING TEACHING PRACTICE AND GUARANTEE OF CURRICULUM RESOURCES TO ENHANCE CREATIVITY OF COLLEGE STUDENTS

To improve the creativity of college students is a systematic project, which requires the cooperation of colleges, teachers, college students and the society to achieve high performance. But there is no doubt that in many key events, the discussion-based teaching must play an important role. Seminar teaching is a kind of teaching mode and teaching method which combines research, discussion and other teaching methods. It is to solve the problem as the center, through the teacher layout discussion topic, students independent search information, research, discuss the problem, so as to put forward the solution to the problem, not only make students master the knowledge and skills, more important is the cultivation of creativity of college students. In the process of practical teaching, we comb through domestic and foreign research literature and practice status of discussion-based teaching, based on the current status and problems of discussion-based teaching for college students, and put forward targeted reform suggestions on discussion-based teaching practice:

(1) Set up seminar courses or increase seminar teaching content for freshmen, conduct scientific research training for them, and cultivate their research interest and awareness of academic norms. Take the "Management" taught by the author as an example, the main teaching objects are freshmen, most of whom do not have the consciousness of scientific research, but have the enthusiasm to explore new knowledge. Therefore, in the teaching process of "Management", I mainly enhance the effectiveness of discussion-style teaching from four aspects. First, I recommend relevant newspapers and books for students to read. In addition, I wrote a book report according to the meaning of the topic, the main content, the main conclusion and the reading impressions, and chose appropriate time to share the reading in class. The main purpose of this is to enhance students' knowledge and academic awareness, because only by seeing classical literature can we have a deep understanding of academic norms. Sharing and discussion in class can further expand the idea and scope of knowledge. Second, two or three questions will be prepared for students to preview and prepare before the new class, and then discuss in the next class. This

method not only promotes the formation of students' self-thinking habits, but also cultivates their ability to search and sort out materials and analyze problems with theoretical knowledge. Third, let students form a team to write the entrepreneurship report. Entrepreneurship report is closely related to planning and decision-making in the course of Management. After teaching some collective decision-making methods, the entrepreneurship report is written through the process steps of planning. This not only applies the knowledge learned in the textbook, but also realizes the problems that team management may encounter. The combination of theory and practice improves the creative knowledge reserve and practical experience of college students. Fourth, change the teaching language from the original "identity language" to "behavior language". The former includes general descriptions for the category label of scientists such as "scientists will not be overcome by problems", while the latter refers to action-oriented language descriptions such as "doing science means exploring the world and discovering new things" [7]. More recent studies have shown that the above two different language patterns have a heterogeneous impact on students' participation in scientific research [8]. According to our research conclusion, compared with identity-oriented language, behavior-oriented language is more effective in promoting undergraduates' interest in scientific research participation, which is mainly reflected in value identification, research interest and expected research efforts. In college education, especially undergraduate scientific research education, college teachers should pay attention to the effective use of behavior-oriented language, and strive to establish the idea of "taking scientific research participation as a normal behavior to improve their own innovation ability" among undergraduates through the subtle hints of scientific research behavior language, so as to give full play to the guiding role of the process and truly improve the continuity of undergraduates' interest in scientific research. Through the construction of behavior-oriented language environment, undergraduates are encouraged to take practical action to participate in scientific research projects in colleges and universities. Undergraduates should also, in a good behavior-oriented language atmosphere, take the initiative to continuously evaluate the dynamic self-efficacy of scientific research, strengthen the personal inner motivation of scientific research participation, adjust the mentality of scientific research and study, and actively participate in the teacher-student interactive research projects.

(2) Actively encourage undergraduate students to participate in scientific research projects. It is mainly based on two suggestions: First, it encourages undergraduate students to participate in teachers' research projects. For example, the school set up "joint research projects between teachers and students", or clearly stipulated in the establishment of school-level projects that undergraduate students should participate in, through these measures greatly promoted the enthusiasm of students to participate in scientific research. The establishment of "research assistant" and other positions can not only increase the opportunities for

undergraduates to participate in scientific research training, but also help teachers share part of the work. In order to further encourage students' interest in participating in scientific research, it is possible to combine the participation in scientific research projects with the evaluation of excellence and research maintenance, so as to truly reflect the importance of scientific research in teaching and promote the quality level of discussion-style teaching by scientific research. The second is to set up a separate scientific research project that undergraduates can participate in, and they can form an independent team to conduct project application, research and project closing. This has certain requirements for undergraduates' research ability and organizational ability, and this process can also exercise students' ability to solve problems. For example, the university has set up a training program for college students in innovation and entrepreneurship, in which many undergraduates have been well trained, successfully concluded the project and achieved certain scientific research results. However, there are also some problems in practice, such as low display of scientific research results. In the future, it is necessary to strengthen the guidance of teachers in the process and improve the assessment indicators of final items, so as to try our best to cultivate and improve the scientific research and innovation ability of college students in the long term.

Of course, the improvement of the discussion-based teaching function of the cultivation of creativity of college students can not only stay at the level of suggestions, but also need to implement the policy, which requires further discussion on the guarantee of curriculum resources for the cultivation of creativity of college students. These problems mainly include two aspects: one is the guarantee of creative curriculum content resources, the other is the guarantee of creative curriculum condition resources.

(1) Guarantee of creative course content resources. This aspect is the most important guarantee condition of discussion-based teaching. From the current situation, there are not only fewer types of creative curriculum content but also low quality problems. The cultivation and promotion of creativity is a systematic project, not just a course of "Creative thinking" or "Entrepreneurial management". It needs more comprehensive knowledge to provide content resources, which may include psychology, organizational behavior, sociology, economics, philosophy and other disciplines. In the future, it is suggested to plan reasonable course content on the basis of following the law of creativity cultivation, and try to let students learn the essential law of creativity enhancement. Courses such as big data analysis, artificial intelligence and new media are offered so that students can grasp the pulse of The Times and the law of innovation.

(2) Guarantee of creative curriculum condition resources. This includes human resources, financial resources, material resources and time assurance. At present, various colleges and universities have basically invested a lot in financial and material resources for

creative courses, such as setting up innovation and entrepreneurship laboratories, innovation and entrepreneurship funds and various assessment and rewards. However, there are still problems with human resources and time conditions. One of the most serious problems may be the shortage of teachers for creative courses. Some schools have set up schools of innovation and entrepreneurship specifically to improve the shortage in this aspect. However, teachers often come from different schools or outside the school, which makes teachers lack a strong sense of belonging, thus causing insufficient investment in course teaching and some problems in management. However, there are also insufficient teachers in other colleges to offer creativity courses, which is not only the problem of curriculum setting but also the problem of teacher recruitment. In the future, more emphasis can be given to teachers of innovation and entrepreneurship in the recruitment and training of teachers, and more efforts can be made to recruit mentors from off-campus enterprises, so as to give full play to the educational demonstration role of off-campus mentors with rich industry experience and improve students' innovative practical ability. In addition, for the guarantee of time conditions, some courses related to creativity are usually arranged in the second semester of the third grade and the first semester of the fourth grade. In this period, most students need to consider employment, internship, postgraduate entrance examination, postgraduate education and other things, so they pay less attention to classroom learning and are easy to be distracted by other things. Therefore, from the perspective of practical arrangement, we need to have a reasonable arrangement for the creativity course, and try to arrange the corresponding course in the first and second grade. At this time, don't worry about students' lack of ability or inability to understand the course content. From my personal teaching practice, students in lower grades have stronger creative learning ability, higher enthusiasm, and will be more focused and devoted. They are more willing to explore new things, to try new things, willing to learn new knowledge, so through appropriate teaching methods to guide lower grade students to practice innovation and entrepreneurship, which is of great significance for universities to enhance the creativity of college students.

#### **4. CONCLUSION AND SUGGESTIONS ON THE QUALITY OPTIMIZATION STRATEGY OF PRECISE CULTIVATION TO ENHANCE THE CREATIVITY OF COLLEGE STUDENTS**

This paper focuses on the application of the discussion-based teaching model and the practical teaching model in the process of cultivating college students' creativity, as well as the research on the optimization strategy of key events in the process of cultivating and enhancing creativity in school. In addition, it focuses on the analysis of the discussion-based teaching practice to analyze the cultivation process of creativity and the guarantee of curriculum resources. This is especially important for universities to enhance the creativity of college students

through education and teaching reform. It is an important but novel topic to improve the ability of innovation and creation by cultivating the research ability of college students. The research of this paper is consistent with the principle of carrying out discipline adjustment and strengthening quality education in colleges and universities. It also has important practical guiding significance for the reform and transformation of teaching in colleges and universities. From the research logic and conclusion of this paper, we can see that the cultivation quality of college students' creativity should be "two-pronged". We should not only attach importance to the important role of discussion-based teaching in guiding thinking, but also attach importance to the guiding role of practical teaching in guiding career goals. In the concrete practice of teaching reform, it is necessary to put forward corresponding reform measures and suggestions according to the difference of influence of different grades and different key events. From the system point of view, we mainly from the society, universities and college students three levels of countermeasures and suggestions.

From the social level, it is necessary to strengthen the guidance of the government to students' innovative and entrepreneurial spirit, advocate innovative professionalism, and further increase the demand for high-level innovative talents. It can be seen from the conclusion of this paper that the external social network will have an important impact on the effect of practical teaching. Therefore, colleges and universities need to combine their own curriculum characteristics to build the alumni network that is conducive to practical teaching and the school-enterprise network based on the construction of practice base. From the perspective of colleges and universities, they can create a good atmosphere for innovation and creation by optimizing curriculum setting, classroom teaching mode, second classroom activities, learning lectures and learning research groups, strengthen the interaction between teachers and students, improve the participation of college students in scientific research and innovation initiative, and improve the training quality of college students' innovation ability. In particular, it is necessary to set up corresponding teaching reform key points by grade, carry out in-depth reform in entrance education and undergraduate tutorial system, and give full play to its important role in guiding innovative thinking mode. In strengthening the construction of scientific research and education team, institutions of higher learning should give full respect, trust and concern to the scientific research and education personnel for undergraduates, vigorously commend and reward the

individuals and teams who have devoted themselves to the scientific research and education of undergraduates for a long time, and solve the worries of the scientific research and education personnel with institutional guarantee to ensure that they have more time and energy to devote to the scientific research and education. This can improve the shortage of teachers in creativity courses, promote each other between scientific research and teaching, meet the needs of students to contact the research frontier, and lay a good foundation of human resources for the overall discussion-based teaching practice. From the perspective of individual college students, they need to do a good job in self-assessment, strengthen their internal motivation for scientific research, establish the "ambition" to make original contributions to the discipline by means of inquiry [9], and enhance their ambition to become scientists through the training of creative thinking [10]. Through participation in scientific research, students should constantly improve their thinking ability and problem-solving ability, and constantly adjust their mentality to promote the development of students' social ability through effective interaction between teachers and students in research activities such as joint research [11]. In this process, it is also necessary to constantly adjust and optimize personal career planning, find a balance between the social needs and the cultivation of one's own abilities, and always pay attention to the changes in social science knowledge and talent needs while strengthening one's basic research ability, so as to truly grow into a high-level creative talent. To sum up, for the cultivation of creativity of college students, school education, as the main body, needs to provide resources for every key node of the discussion-style teaching practice. Coupled with the good creative atmosphere established by the guidance of social demands and innovative spirit, the creativity of college students will be continuously enhanced, and then feed back to the society and colleges and universities, forming a virtuous cycle.

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