Research on the Educational Path of Undergraduates' "Tutorial System" from the Perspective of Complete Credit System

Junwei Yang[1,*]

[1]Beijing Institute of Technology, Zhuhai, Zhuihai, Guangdong 519088, China
Corresponding author. Email: 283509705@qq.com

ABSTRACT
Undergraduate tutorial system is an important way and key measure for the deepening of education and teaching reform in colleges and universities, and optimizing the education of people and talents. The implementation of the full credit system in colleges and universities gives students more freedom to choose, and puts forward higher requirements and challenges for teachers' teaching quality and teaching level. In this context, through the analysis and research on the concept and characteristics of the full credit system, the problems faced under the full credit system, and the education situation in combination with the implementation of the tutorial system, focusing on the cultivation of students' core abilities, the author aims at constructing a four-in-one "circular education" system with "mentor system" plus "moral education guidance, wisdom guidance, practice guidance, and self-guidance".

Keywords: complete credit system, tutorial system, autonomy

I. INTRODUCTION

The complete credit system is a teaching management system that adopts a diversified education model and a more flexible process management method, which is based on the prerequisite of course selection, and takes credits and grade points as the unit of measurement of the quality and quantity of students' learning in order to achieve the necessary graduation credit standards.

At present, the credit system adopted by most colleges and universities is the "annual credit system", which is not a true complete credit system. The Beijing Institute of Technology, Zhuhai, has implemented the complete credit system from the 2016 freshmen. The complete credit system requires to meet the individual needs of students, maintain the autonomy of students to "select subjects, courses, class hours, and teachers", and truly delegate power to the hands of students, allowing students to independently carry out "selecting majors, courses, class hours, and teachers" according to their own conditions and career development plans to achieve the goal of talent training.

The modern tutorial system originated from Oxford University in the United Kingdom in the 14th century. Since its inception, it has been regarded by Oxford people as one of the most effective and valuable

teaching systems, and has since enjoyed the reputation of "the jewel in the Oxford crown". After entering the 21st century, a number of key colleges and universities such as Peking University and Tsinghua University have strengthened the top-level design of undergraduate talent training and tested the undergraduate tutorial system, which has achieved initial results [1]. The Business School of Beijing Institute of Technology, Zhuhai has implemented a tutorial system for undergraduates since 2013, innovating student management and education methods, which is more conducive to enhancing the quality and level of talent training.

II. FEATURES OF THE COMPLETE CREDIT SYSTEM

A. Choosing course independently

Curriculum is the core content of the implementation of the complete credit system, and autonomous course selection should be the most prominent feature and point of the credit system. For students, the biggest impact of the credit system reform is that they have greater autonomy in choosing courses, providing students with greater autonomy. It will help students set personalized goals and learning plans according to their own needs, stimulate learning initiative and enthusiasm, and make teachers' teaching and students' learning more targeted. It can also promote the all-round development of students and

improve their overall quality and ability. On the other hand, students are required to choose their own choices, and they must have a clear understanding of their own career planning. For teachers, the credit system requirement can provide a large number of elective courses for students to choose, thereby satisfying more students' elective requirements. At the same time, students' self-selection of courses poses a challenge to the teaching level and quality of the teachers, and there is bound to be a two-level differentiation, which will also help enhance teachers' awareness and initiative of competition, and improve teaching quality, teaching effectiveness and standard.

B. Choosing major independently

Under the complete credit system, students can independently decide to choose a major or direction. Students can choose their own majors or cross-professionals according to their personal hobbies and career planning. This will help students formulate individual learning plans based on their own interests and hobbies, and truly realize the subjective initiative of "interest and love to learn".

C. Flexible educational system

In terms of the school system, students can complete the required credits ahead of time. When the credits accumulate to a certain level and meet the minimum graduation credit requirements for a certain major, students can apply for a graduation certificate for that major. If students also meet the degree-granting requirements of the major, they can also apply for the degree and graduate early. They can also take a break from school to start a business or join the military, and then continue to complete their studies. Students can arrange the learning process independently. According to the three to seven-year flexible educational system, students can independently plan the length of study and study progress.

D. Choosing teachers independently

Students can choose teachers independently. If the same course (referring to the same course code) is started by multiple teachers in the same semester, students can choose their own teachers when the class capacity permits. Whether it is the choice of courses or the independent choice of substitute teachers, the ultimate goal is to improve the level and quality of course teaching, and promote the teacher's self-improvement and crisis awareness. Therefore, it is necessary to establish an evaluation mechanism for teachers. A reasonable evaluation mechanism will also encourage teachers to actively change teaching methods, teaching content and teaching methods, and attract students to serve students with high-quality teaching content.

E. Sharing of information and teaching resources

Against the current "big data" background, the management and application of the complete credit system is inseparable from the support of information management methods and management platforms. Therefore, the establishment of an efficient, flexible, high-quality, and convenient information management platform is the primary task of achieving complete credit system management. The open education educational administration management platform is established based on the academic year credit system model. The platform takes professional management as the core, and integrates the available resources (courses, majors, teachers, tutors) of the whole school. Then, students in the colleges of science and engineering can enjoy the management, economics, humanities and other social science curriculum resources of the liberal arts or the humanities and the arts. Conversely, liberal arts students can share modern science and technology curriculum resources such as astrophysics and big data in science, creating an atmosphere and conditions for cultivating interdisciplinary talents. It is also conducive to the mutual recognition of credits between schools such as exchange students or visits.

III. PROBLEMS FACED BY STUDENTS UNDER THE COMPLETE CREDIT SYSTEM

A. Blindly choosing courses and lack of autonomy

Because students are not clear about related teaching plans, training programs, or their own positioning, they will "blindly choose courses" when selecting courses, and they will have no planning. They choose some courses that are easy to get credits or relatively less demanding courses, which is not conducive to the formation of a complete learning system and knowledge system, and will correspondingly affect learning interest and learning quality. Therefore, the teachers of each elective course needs to explain to the students the content and direction of the course before starting the course, so that students have a general understanding of the course and can find the courses they are interested in, so that they can choose related courses according to their personal needs. When explaining the teaching content, it is best for teachers to expand the majors involved in the course, and make reference suggestions for course selection according to the actual situation of each student, so that students can choose a course that suits them based on different combinations of suggestions.

B. Career planning is not clear enough

The complete credit system requires sufficient general basic courses and elective courses to meet the needs of students. This requires that the unit must have enough teachers and courses for students to choose

from. If students are not up to or not interested in the courses, to a certain extent, it will affect the students' course selection and future career development plan. Therefore, it is a must to ensure sufficient teacher resources to build a course teaching team to increase the supply rate and opening rate of courses. At the same time, it is also necessary to strengthen the school's hardware facilities as an important guarantee for the opening of the courses.

C. The ability of self-management and self-education has decreased significantly

After the implementation of the complete credit system, the course selection is entirely up to the students themselves, which also leads to a weakening of the class concept, lack of organizational concepts and collective supervision. The students' ability of self-management and self-education has declined significantly.

D. The ability of interpersonal communication and adaptability has decreased

From a high school student to a college student, the change of role inevitably requires the development of the body and mind to be consistent with it. After entering college students, the first thing college students will face is the adjustment to college life and interpersonal communication. Not only in life, but also in learning has undergone tremendous changes, especially in the way of learning. The university requires students to learn by themselves, and they must learn step by step like they were in a high school. The change of course selection will inevitably bring huge impacts and challenges to freshmen, and students are prone to problems such as barriers to interpersonal communication and reduced adaptability.

IV. THE DEVELOPMENT STATUS OF "TUTORIAL SYSTEM" FROM THE PERSPECTIVE OF COMPLETE CREDIT SYSTEM

In 2013, the Business School innovated the student management model and introduced the "tutorial system" at the graduate level into undergraduate education of Beijing Institute of Technology, Zhuhai. Starting from the grade of 2013, students of various majors freely choose professional tutors. Professional tutors must not only guide the students' studies, but also guide their lives, so as to better implement the modern education concepts of full-staff education, full-process education, and all-round education, and to better adapt to the requirements of quality education and the transformation of talent training goals. This kind of system requires the establishment of a kind of "guiding and learning" relationship between teachers and students, aiming at students' individual differences, teaching students in accordance with their aptitude, and guiding students' thinking, study and life.

Starting from the grade 2014, the Business School of Beijing Institute of Technology, Zhuhai has implemented a "four-in-one" teaching, learning assistance, and supervision system with tutors, instructors, class teachers, and professional teachers. The tutors "guide the learning", instructors and class teachers "supervise the learning ", and professional teachers and senior students "assistant the learning" to realize the "full-staff education" education system. From the second half of 2015, that is, the second semester of more than 850 students in the grade of 2015, the "full mentor" has implemented . All faculty members of the Business School will assign students to "tutor guidance", with an average of 15-20 students per tutor.

In order to further strengthen the construction of the style of study and teaching, the Business School began to set up an "academic tutor" system throughout the school after the admission of the 2019 freshmen, starting point-to-point professional education, study, life, teaching guidance, etc. from the moment they enter the university campus. ("Table I" and "Table II")

TABLE I.   REQUIREMENTS FOR THE SELECTION AND EMPLOYMENT OF STUDENT TUTORS IN THE BUSINESS SCHOOL

1	Need to love the job and dedicate, be noble, and have strong sense of responsibility.
2	Full-time (part-time) teachers on the payroll.
3	Teachers who have a clear research direction, have presided over a school-level project in the past three years, published one or more core academic papers, or organized students to participate in various college student competitions to win prizes can arrange a relatively large number of students.
4	In principle, those who fail in the annual assessment or have been punished shall not serve as tutors in the current year.
5	The appointment of the tutors shall be carried out in the way of individual application, examination and approval of the college (department) and filing.
6	In order to ensure the continuity of learning and carrying out activities, once the tutoring group is established, it will not change in principle. The tutor should guide the teaching activities of the group of students until graduation. If the teacher goes out for study for a long time during his tenure or does not have enough time to guide the students due to physical health, etc., after review by the college, he can temporarily resign from the guidance team. Retiring teachers should merge or train young teachers to take over the work of this group one year in advance.

TABLE II. DUTIES OF TUTORS

1	Care about the overall development of students' moral, intellectual, physical, and beauty, help students establish a correct outlook on life and values, help freshmen to adapt to university life as soon as possible, and guide students to establish correct professional thinking.
2	Help students get familiar with the talent training program and student status management regulations of their respective major and neighboring major, and help students make personalized study plan and determine the study course of each semester according to the different characteristics of each student.
3	Care about and understand the students' study, life and psychological conditions, carry out targeted education and guidance, and cultivate the students to establish the spirit of hard study and rigorous attitude towards learning.
4	Guide students to solve practical problems with their professional knowledge, participate in various quality development projects such as competitions, innovation and entrepreneurship, enterprise and social practice, overseas study and study tour, and certificate examination.
5	Carry out scientific research activities based on the subject and research direction of the instructor, and apply for and participate in various scientific research activities, complete graduation thesis and graduation practice, etc.
6	Submit the guidance summary of this semester, the students' overall evaluation results of this school year and the guidance plan of the next school year at the end of each school year.
7	Establish an effective channel for contact and communication between tutors and students, and arrange a relatively fixed reception day and place for tutors.
8	Feedback students' opinions and suggestions on school teaching in time.
9	Interview with the supervised student or group coach once every two weeks, and organize at least 8 instructional exchange activities every semester. Among them, the second-year students need to have collective guidance 5 times per semester, and the third-year students need to have collective guidance 3 times per semester. Each time the guidance time is not less than 2 class hours.
10	Make mentoring plan

V. THE IMPLEMENTATION PATH OF "TUTORIAL SYSTEM" UNDER THE COMPLETE CREDIT SYSTEM

Here the author will take the Business School of Beijing Institute of Technology, Zhuhai as an example. The Business School now has 8 majors in information management and information systems, international economics and trade, public utility management, marketing, engineering management, logistics management, international business, and human resource management. There are more than 3,300 students engaged in student affairs management. There are only 7 teachers and nearly 500 students are managed per capita. The workload of student management is large, and it is difficult to provide timely and comprehensive guidance to students in all aspects of thinking, life, study, and psychology. Faced with this problem, the Business School takes precision education as the orientation of talent cultivation, and builds a "tutorial system" + "circular education" as a talent cultivation model, and explores a path of education model that is suitable for its own development and has a certain demonstration. At the same time, learning from the OBE concept of educating people, it implements the orientation + action "circular education" model, and transforms the traditional teacher-centered education into student-centered education, to achieve the purpose of students' ability training. It needs to focus on the cultivation of students' core abilities, and strive to build a "circular education" system with four links of moral education, wisdom, practice, and self-direction, forming an effective PDCA (plan, do, check, and act) education circular.
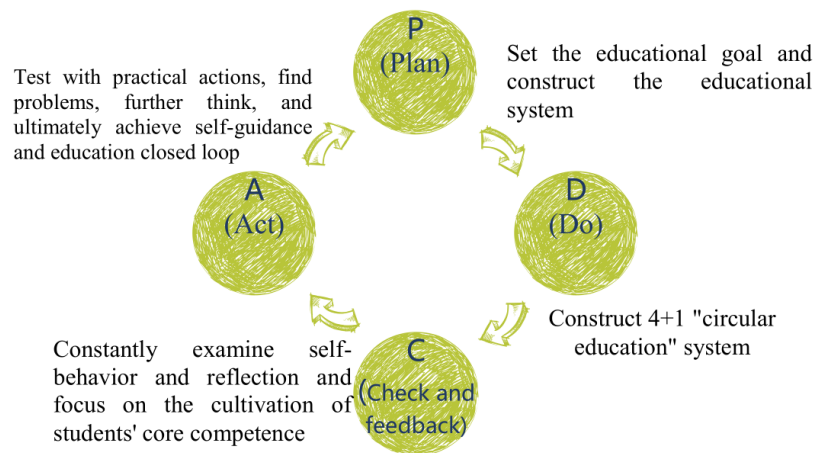

Fig. 1. PDCA education circular.

A. *Leading by moral education and cognition*

As a tutor, it is a must to pay attention to "FYE-first-year education in university". People who have no morality do not stand in the world. The foundation of education lies in morality. It is necessary to help students establish a correct outlook on life, world outlook and values. Only by correctly and objectively knowing oneself, facing oneself, changing roles, and strengthening the foundation can the schools better find their own development direction.

B. *Wisdom as the guidance, the teachers and students grow together*

Teachers are the people of preaching and teaching knowledge and solve puzzles. As tutors and guides for students to grow and become talented, while preaching and teaching professions, it is necessary to pay attention to the cultivation of teamwork and education. The tutors can select some excellent tutor assistants or advanced role models from their senior students to implement mutual help and integrative education, so as to better enable students to be more advanced and cultivate students' excellent habits. According to the actual situation, multi-level and multi-structured education need to be carried out in the process of educating people, implementing grid management, precise policy implementation, and guidance.

C. *Practice as the lead and innovation and the carrier*

According to the current status of networked thinking and networked survival of college students, tutors should pay more attention to the use and integration of network resources, use the Internet and new media such as Weibo, WeChat, and actively build an "online and offline" leading platform for university births, thus combining theory with practice, linking online and offline development, and uniting knowledge and action. For example, tutors can organize students to go to the grassroots to carry out social practice research, public welfare volunteer services, build learning platforms and learning libraries, improve the construction of class WeChat public accounts, etc., which can not only enhance students' sense of social responsibility and honor, but also cultivate students' teamwork and organizational skills.

D. *Self-leading and comprehensive development*

Under the complete credit system, what should be paid more attention on is the improvement of self-management and self-education ability. Tutors should seize this opportunity to cultivate students' self-management, self-service and self-education abilities, so that students can be more clear about their own life development direction, take the initiative to exert themselves, and maximize self-worth.

VI. CONCLUSION

The original intention of the undergraduate tutorial system should be to promote the all-round development and all-round success of students. This requires continuous optimization of the tutorial system and the construction of the faculty team, perfecting the construction of the tutorial system and incentive measures, broadening and strengthening the construction of the communication platform and carrier for teachers and students, so as to truly be able to learn and teach by words and deeds. As a result, it further stimulates students' inner motivation and innovative vitality. Therefore, it is necessary to establish a feedback mechanism to continuously communicate, exchange and reflect on the problems found in the education system in order to better achieve the effectiveness of circular education.

References

[1] Hu Hongwu, Lao Chunyan, The Difficulties and Countermeasures of the Implementation of Undergraduate Tutorial System Education Model [J]. Educational Review, 2019 (3): 56. (in Chinese)

[2] Xiong Guanghong, On the Practice and Exploration of the Reform of the Complete Credit System in Local Universities [J]. Education Modernization, 2019 (in Chinese)

[3] Wu Lishuang, Exploring and Analysis on the Diversified Tutorial System of Undergraduate Students in Local Colleges and Universities [J]. China Higher Education Research, 2014 (5). (in Chinese)

[4] Deng Xiaolong, Yang Xixiang, Zhu Bingjie, etc. Research and Comparative Analysis of the Practice of Undergraduate Tutorial System in China and Foreign Countries [J]. University Education, 2020, (6). (in Chinese)

[5] Shan Juan, Wang Xiao, Probe into the Guiding Principles of Teachers in the Implementation of the Undergraduate Tutorial System [J]. Journal of Lanzhou Institute of Education, 2019, 35(12). (in Chinese)

[6] Zhang Libo, Research on Practical Problems and Countermeasures of Tutorial System for Undergraduates in Local Universities [J]. After-school Education in China, 2019, (15). (in Chinese)