Comparative Analysis of Undergraduate Tutorial System in Military and China Local Universities and Implement of Military Academy Enlightenment

Zhu Min, Xu Zijian, Wufei, Xie Xin, and Huang Huang
Naval University of Engineering, Wuhan, Hubei, China
Email: 474151851@qq.com

Abstract—**At present, many military and local universities in our country have carried out or are carrying out the undergraduate tutorial system. However, as an "imported product", the undergraduate tutorial system has not played its due role. By analyzing the development of the undergraduate tutorial system in local and military colleges at home and abroad, this paper summarizes the problems found in the implementation of the undergraduate tutorial system, which has some enlightenment and reference for optimizing the cadet tutorial system in military colleges and promoting the innovation of first-class undergraduate education. The tutorial system for undergraduate students in military academies should be based on a clear orientation and cultivate talents who can fight and be competent for military posts, expand and enrich guiding force through various channels, perfect the guidance method according to the actual situation, cultivate the campus concept of tutorial system, try to overcome the constraints of teacher dimension, system guarantee, cultural background and so on, establish undergraduate tutorial system suitable for the characteristic and development path of military academies, improve the quality of undergraduate training.**

Index Terms—**military academy, undergraduate students, tutorial system, post tenure.**

I. INTRODUCTION

Military academies are born and built for fighting, and they must engage in teaching around actual combat and focus on winning and educating talents. In the new era, the modernization of national defense and army has put forward higher and higher requirements for military talents, and the cadets are facing more and more pressure of post tenure, post transformation and development potential. Therefore, it is more urgent and difficult than ever before to guide students to strengthen their faith, adapt to the forces and improve their abilities. Draw lessons from the successful experience of the local higher education, this paper explores and puts forward for the implementation method of the tutorial system for military academies undergraduate students facing the post. It is a

specific measure to enhance the faculty education main body function, encourage students' learning motivation, close relationship between teachers and students, promote the training of students' post ability, and it has practical significance for innovating the talent training mode and improving the quality of talent training.

II. DEVELOPMENT OF UNDERGRADUATE TUTORIAL SYSTEM AT HOME AND ABROAD

A. Development of Tutorial System for Undergraduate Students in Local Universities

The undergraduate tutorial system in British universities has experienced three stages [1]. The first stage is the original undergraduate tutorial system (from the early days of Oxford University to the mid-14th century). At the beginning of Oxford University, students were allowed to enter the university at the age of 14. Therefore, in order to protect students' personal safety, supervise students' economic expenditure and regulate students' conduct, tutors appeared as "guardians and protectors", which did not rise to the institutional level at that time. The second stage was the classical undergraduate tutorial system (late 14th century to mid-19th century). At this stage, the college appoints tutors for each student and pays their salaries regularly. The undergraduate tutorial system becomes a formal system, and tutors instruct students in their studies, morality and life, among which religious theology is an important aspect. The third stage is the modern undergraduate tutorial system (the middle and late 19th century to the present). The undergraduate tutorial system became a teaching system in which each tutor supervised one or two students and agreed on a study plan with students. There were weekly tutor classes in which students completed papers, reading reports or other forms of homework before class. During the class, the tutor asked questions to guide students to think.

The undergraduate tutorial system in the United States is much later than that in Britain, with Harvard University as the representative. The undergraduate tutorial system

in the United States is not a teaching method, but a supplement to the teaching system, providing comprehensive guidance to students' academic life, etc., with a wide range of content that is supportive. Students, as mentees, receive the necessary course information guidance, moral cultivation guidance, and personal development guidance [2] from their tutors. As a training model and management system, undergraduate tutors are considered "both necessary and influential for students' personal success [3]", and play an important role in American higher education.

In the 1930s, Zhejiang University first introduced the undergraduate tutorial system, which achieved certain results. However, due to historical reasons, it was interrupted and restarted in the 1980s with the implementation of the credit system. In 2005, the Ministry of Education issued Several Opinions on Strengthening Undergraduate Teaching Work in Colleges and Universities, which stated that "universities with conditions should carry out the tutorial system actively and strive to provide high-quality and personalized services for students' all-round development". Since then, local colleges and universities have further implemented the undergraduate tutorial system.

Overall, since the undergraduate tutorial system is an "import product", it has the following problems in its implementation in local universities in China: first, the positioning is not clear, compared with the Anglo-American model, the function of the undergraduate tutorial system in China is given too much, some see the undergraduate tutorial system as a companion system to the credit system, some as the important measures of teaching reform, some as a way of talent training [4], and so on. The second point is the contradiction between mass education and elite education training. The ratio of students and teachers in domestic colleges and universities is too high, which makes it difficult to implement the undergraduate tutorial system which emphasizes individual guidance. Third, the operation mechanism is not perfect. The evaluation system that focuses on scientific research results makes the teachers less enthusiastic about the undergraduate tutorial system. The main problems are vague guidance content and weak operability, and the system incentive and supervision mechanism are not perfect.

B. Development of Undergraduate Tutorial System in Military Academies

The tutorial system is implemented in all the American military officer schools, which can be divided into formal and informal [5]. Formal mentors fall into three categories: first is the compulsory tutorial system for the students who violate the discipline, instructing them to reflect on their own behavior; second is to assign tutors for freshmen who are facing academic difficulties to help them with their cultural studies; the third is to arrange tutors for senior students who are excellent in their studies to conduct scientific research in their senior year.

In addition, there are a variety of informal mentoring systems in the academies, which include: guide students in extracurricular activities such as sports competitions or clubs; encourage faculty and team officers to invite students to their homes to establish lasting relationships with them; an academic advisor is assigned to each student and is generally in close contact with the student.

In the Outline of the *Plan for the Reform and Development of Military Academy Education before 2020*, the Central Military Commission has put forward clear requirements for the implementation of the undergraduate tutorial system and the strengthening of personalized training for students. Spirit, for the implementation of the military commission to speed up cultivating high-quality new type of military personnel, National University of Defense Technology [5], Former PLA Information Engineering University [6], University of Naval Engineering [7], the Naval Aeronautical Engineering Institute [8] and other institutions at the undergraduate level students are comprehensively carried out the tutorial system in practice. It has obtained certain achievements in the students' course contests, academic research, people behavior, psychological counseling, life difficulties, professional capacity requirements, career development planning, personalized development planning and so on.

However, in general, similar to local colleges and universities in China, the tutorial system in military academies has encountered similar problems in the implementation process, as well as the unique phenomenon of "unaccustomed to the environment[9]". From the perspective of teachers, heavy research tasks, frequent business trips, unclear guidance content how to implement are the main reasons that hinder the effective implementation of the tutorial system; from the perspective of students, heavy learning tasks, less free time, lack of initiative, and fear of disturbing the mentor are the main reasons not to contact the mentor actively.

III. POSITIONING OF UNDERGRADUATE TUTORIAL SYSTEM IN MILITARY ACADEMIES

In view of the problems and puzzles in the implementation of the undergraduate tutorial system in military academies, firstly, the orientation of the tutorial system in the whole four-year training process of cadets should be defined according to the training objectives of cadets and the training mode of cadets.

First of all, the tutorial system for military undergraduates is clear: it is not a means of "teaching" or "managing" cadets, but another platform and carrier of teaching and educating people, and educating people is its core responsibility. Take a student as an example, the first class is taught by the instructor; The second-class quality cultivation is realized by education and training plan and club construction. The cultivation of military and political quality is supported by the complete cadet brigades and cadet corps. Under the support of such a system, the

military academy carries out the undergraduate tutorial system, with the focus on the key word "growth", to grow into a talent who can fight and be competent for military posts.

On the one hand, it is not excluded to guide the specific content of the professional field familiar to the tutor because there are certain limitations. On the other hand, it pays more attention to the close cooperation between teachers and students, the spiritual communication and the spiritual infection during the guidance process. Third, the tutor is not only the teacher, but also the instructor for the joint teaching and training of troops, senior cadet or graduate student. The essence of the implementation of the tutorial system in military academies lies in: awakening and stimulating the students' thirst for knowledge and cultivating their ability of independent thinking and rational thinking through the close contact between the tutors and the students, feeling the tutors' wisdom and talent, learning the tutors' personality and life, and getting familiar with the army's experience and ability needs. The role of a tutor is mainly embodied in three aspects: providing guidance and help for students' academic and career development, providing psychological support for students and acting as a role model for students. Figuratively speaking, it is like your friend's child studying in a military school, he entrusts you with "good education" and "help to take care of" in the four years, acting as a guide for the career of the cadets and soldiers, a mentor for spiritual growth, and a good example of development and progress.

IV. IMPLEMENTATION OF THE POST-ORIENTED UNDERGRADUATE TUTORIAL SYSTEM FOR MILITARY ACADEMIES

According to the orientation of the undergraduate tutorial system in military academies, the implementation of the tutorial system at Oxford University [10] is used for reference: "The tutors and two or three students often get together, or sit in a small room to discuss with each other, or collect refreshments and drinks at the tutors' home to analyze difficulties, instruct students to cultivate, and answer students' personal questions." It is seen that the tutorial system can be carried out in military academies in various forms and flexible methods.

A. Determine the Implementation Form of the Tutorial System Based on the Guidance Content

Tutors need to pay more attention to the "growth" of students, and the content of guidance are based on the responsibilities and requirements of the tutor and the characteristics of each student.

First, it has stages. Students have different focus all four years period, tutors need to combine their own understanding and focus on students' ideological dynamic respectively during the entrance to army, academic learning, grade examination, joining the club activities, cultivating personal specialty, professional course study, conducting internship practice activities, and facing

different stages such as graduation assignment. The second is to reflect the breadth. Undergraduate students of different levels are classified, while it is inevitable that the tutor is more familiar with his/her professional field during the guidance, but not enough to grasp other aspects. For example, a tutor in a teaching and research section, may not be familiar with the faculty appointment and removal of part-time backbone related mechanisms. This aspect requires the tutor to strengthen learning, understand and more familiar with the growth path of students; on the other hand, it does not need to rigidly teach specific affairs, but gives more encouragement and support at the ideological level. Third, is to pay attention to effectiveness. In the process of guidance, the tutor should pay attention to what the trainees are thinking, what emergency events they will encounter and what they need most at any time, and give timely guidance to all kinds of inadaptations in their daily learning, training and life. This requires a more in-depth communication mechanism between tutor and cadre of trainee team, and a timely communication to solve the problem of the students' growth. At the same time, we found obvious ideological signs and behavioral differences, so we should educate, talk and solve them as early as possible, be responsible for the identity of the tutor and the individual students, and establish a good communication mechanism with the parents of the students.

TABLE I. TYPE IMPLEMENTATION FORM OF UNDERGRADUATE TUTORIAL SYSTEM IN MILITARY ACADEMIES

Mentor type	Mentor time	Mentor source	Mentor content
Academic advisor	Freshman to Senior	Faculty member of the teaching and research section	Professional study, ideology and morality
Post a mentor	Junior and Senior	Military instructor	Army posts and equipment development
The class teacher	Freshman and sophomore year	Postgraduate and senior undergraduate students	Military school life, learning methods, professional culture

According to this, the undergraduate tutors are divided into three types: one is academic tutors, mainly by the faculty of the teaching and research section, who are fully responsible for the ideological, moral cultivation and specific academic guidance of undergraduate students in the whole four-year of their university lives. Second, post tutors are mainly military joint teaching and training instructors, from the beginning of the junior year, military instructors are invited to exchange and instruct the students of each major on military posts and equipment development. Third, class tutors, who are basically doctoral students, master's students or senior undergraduates with excellent academic performance, play the role of "peers", and guide first and second grade students to get familiar with military school life, master learning methods and inherit professional culture as soon as possible in the early stage of undergraduate study.

Among them, academic tutor is the main body, and other tutorial systems complement and improve each other. The specific summary of the implementation of the undergraduate tutorial system in military academies is shown in Table I.

B. Enrich the Tutoring Method Based on the "Whole Process"

The so-called "whole process" refers to the tutoring of students from entrance to graduation, from the beginning to the end of each semester, from weekends to winter and summer holidays [11]. For example, students who just enter the military academy can quickly complete the transition from high school to university and from civilian to military under the guidance of academic tutors and class tutors, so that they can better adapt to the study and life in the military academy. In military academy after the study, participants contact professional courses, guidance of academic advisor, consult with the corresponding forces to select joint teaching and training instructors to serve as instructors for cadet positions, establish forces a point-to-point link between instructors and students, make students better, faster, more real understanding of forces and understand position, familiar with equipment. Through their own methods, mentors enable students to have a more profound understanding of life and society, history and reality, military situation and national conditions, and lay a solid foundation for the cultivation of personal character. Meanwhile, they can gradually enhance their cognition and interest in professional posts, thus opening the road of knowledge seeking in individual military schools and going deeper.

The main role of a mentor is to conduct informal "teaching" in the form of conversation and guidance, to give students overall guidance in their thoughts, studies, development and life, so as to influence students in their attitudes, concepts and goals. The guidance method of the tutor is flexible, not rigidly formal, and can be realized through various channels such as conversation, correspondence, mail and so on. At the same time, a mentor should put down his/her own shelves and treat the students as his/her family sincerely. He/she should be closer to students as their elder brother and understand the real thoughts. As a brother, communicating with students does not have to be in the classroom or laboratory, random walks, seminars, irregular parties, salons or even family dinner and other forms of communication, military post mentors can talk, remote interaction and other forms of irregular communication, is desirable. Students can feel the help of the mentor, willing to have in-depth communication with him, and it is a good method and a good measure to achieve the guidance effect as long as it does not affect the normal management norms of students. Taking the president afternoon tea activity of our college as an example, the president regularly invited students of all grades to the office to drink tea and had a heart-to-heart chat, students were restrained at the beginning, but with several small chats, students gradually relaxed, and they would communicate with the president about many ideas actively and seek guidance and help from the leaders.

V. CONCLUSION

For the purpose of implementing the tutorial system, Zhu Kezhen replied, "We make the tutorial system so that every college student can understand his or her responsibilities." For military cadets, it is to let them understand the duty to defend the country, cultivate the idea of loyalty and honor, know the reality of the army post, master the ability to use equipment. In order to make the undergraduate tutorial system more effective in the military academy, we remain to expand the rich guiding force through various channels, optimize evaluation and operation mechanism, foster the concept of tutorial system campus culture in the future, let students have a deeper and broader benefited range of benefits from both macro model design and micro professional practice.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Zhu Min wrote the paper; Others analyzed the data; all authors had approved the final version.

ACKNOWLEDGMENT

REFERENCES

[1] W. Zhirong, W. Sheng, and R. Weiwei, "Comparison and implementation of undergraduate tutorial system in Britain, America and China," *Heilongjiang Higher Education Research*, pp. 139-143, 2019.

[2] Y. Liya and Z. Guohong, "American academic tutor model and its enlightenment to China's undergraduate tutorial system," *Vocational and Technical Education*, vol. 39, no. 34, pp. 75-79, 2018.

[3] R. M. Crocker, M. Kahla, and C. Allen, "Fixing advising: A model for faculty advising," *Research in Higher Education*, pp. 2-9, 2014.

[4] J. Xifeng and L. Xiaoqiang, "Conflicts and solutions: Reflections on the implementation of undergraduate tutorial system in local colleges and universities," *Heilongjiang Higher Education Research*, pp. 64-67, 2011.

[5] P. Anchen, F. Yufang, and C. Qun, "Military academy undergraduate student tutorial system: Understanding, current situation and improvement," *Journal of PLA University of Technology (Military Science Edition)*, vol. 15, no. 5, pp. 57-62, 2014.

[6] N. Zhaoyang, L. Liping, and W. Feng, "Exploring the implementation model of undergraduate tutorial system for the cultivation of collaborative innovation ability," *Teaching Research*, pp. 26-28, 2014.

[7] L. Zhitao, H. Dong, and D. Jungang, "Common problems and countermeasures in the implementation of tutorial system for undergraduates in military academies," *Education of Naval Academies*, vol. 24, no. 3, pp. 55-57, 2014.

[8]   G. Huajun and Z. Xingdong, "Investigation and analysis on the implementation of undergraduate tutorial system," *Education of Naval Academies*, vol. 26, no. 5, pp. 18-20, 2016.

[9]   K. Chaoxiong, D. Jichao, and W. Xiaofei, "Journal of higher education research," *Journal of Higher Education Research*, vol. 38, no. 1, pp. 78-82, 2015.

[10] L. Maolin, "University of oxford: Tutorial system and cultivation of innovative talents," *Henan Education (Higher Education Edition)*, p. 56, 2006.

[11] H. Jianbo, "The tradition of ancient academy and the tutorial system of modern university undergraduates," *University Education Science*, pp. 74-79, 2019.

Min Zhu, born in October 1978, Anhui Hexian, PhD, Professor and Doctoral Supervisor of the School of Nuclear Science and Technology of the Naval University of Engineering.

He has long been engaged in teaching and research of nuclear technology and nuclear safety, and has presided over many projects such as the National Natural Science Foundation and pre- research.

Mr. Zhu won one first prize, three second prizes and two third prizes in the military science and technology advancement; one silver medal in the National Invention Exhibition and two bronze medals. He obtained 12 invention patents, three utility model patents, and seven software copyrights. He published two monographs and edited six textbooks. He published more than 50 academic papers by the first author, of which 26 were searched by SCI and EI.

Xu Zijian, born in December 1993, Jiaxing Zhejiang, graduated with a master's degree from Naval Aeronautical University, majoring in mechanical and electronic engineering. The author is an assistant experimenter in the college of nuclear science and technology, Naval University of Engineering.

He is engaged in scientific research and teaching in the field of nuclear safety and science, and has some research on the frontier technology in this field

Mr. Xu has participated in a number of "13th five-year plan" pre research projects and military research projects and military research projects, published a number of papers in EI and core journals.

Wu Fei, born in June 1981, Dangyang Hubei, Associate professor of the School of Nuclear Science and Technology of the Naval University of Engineering.

He has long been engaged in research and teaching in the field of nuclear safety and science, and has some research on the frontier t echnology in this field.

Mr. Wu obtained three software copyrights, and published more than 10 academic papers, of which 3 were searched by SCI and EI.