Integrating Legal Education into the New Engineering Talent Training

Shaoqi Jia 1, a, Xiaomin Sheng 2, b

1 School of Law, Hunan University of Technology and Business, China;
2 Institute of education, Tsinghua university, China.

Abstract. In China, integrating legal education into the cultivation of New Engineering talents is not only an innovation in the cultivation of engineering talents, but also a reflection on the mission of legal education. Legal education is neither law popularization and publicity, nor legal vocational education. The legal education in the cultivation of New Engineering talents should start from three aspects: the change of education concept, the implementation of integrated thinking and the scientific setting of curriculum.

1. Introduction

Facing a series of new situations, new challenges and new opportunities, such as the vigorous development of new economy, the bottleneck of core key technology and the fourth industrial revolution, how to cultivate high-level engineering talents needed by the country to implement strategic goals and tasks has become the "question of the new era" in the reform and development of China's higher engineering education. The basic characteristic of the new industrial revolution is a new form of interdisciplinary knowledge and technology. Accordingly, engineering education should be based on the goal of cultivating compound high-end talents and actively explore the integration with other disciplines. The relationship between science and technology and law determines that the more high-level engineering talents are cultivated, the more legal education is needed. The construction of new engineering provides an opportunity for the integration of legal education into engineering education.

2. Clarification on the connotation of legal education

2.1 Legal education is not propaganda for popularizing the law

In recent years, the training quality of engineering science and technology talents in China has been significantly improved, and the consensus of "seeing people and seeing things" has been formed. However, most of them focus on literature, history and philosophy, ignoring the law, degrading the rule of law literacy to legal common sense, and then understanding legal education as legal publicity. Reflected in the curriculum, it is that most engineering majors in colleges and universities only have ideological and political courses, no law courses or only one general law course. This is not a criticism of engineering education. Limited by the traditional discipline pattern, legal education also thinks that the training of engineering and scientific talents is "irrelevant to oneself". Even though there have been frequent discussions on "engineering law" and "science and technology law" in recent years, it is still rare for such contents to be systematically written into the curriculum materials of non-law majors.

Take the legal general course book independently compiled and published by colleges and universities as an example. Although there are more engineering students in the audience, due to the over-emphasis on the popularization of legal knowledge, the characteristics of interdisciplinary subjects are not obvious, the homogenization of teaching materials is serious, and the boundaries with social propaganda books are increasingly blurred. Undoubtedly, the superficial publicity of law popularization cannot and shouldn't replace the systematic legal education. Of course, legal education can play a role in popularizing the law, but it goes far beyond this. It can not be taken for granted that legal education in the training of engineering and science talents is the popularization of legal common sense. Legal education also thinks that the training of engineering and scientific talents is "irrelevant to oneself". Even though there are frequent discussions on "engineering law" and "science and technology law" in recent years, it is rare for such contents to be systematically written into the curriculum materials of non-law majors.

2.2 Legal education is not legal vocational education

If we think that legal education and legal vocational education in the training of engineering and scientific
talents are the same, it is from the extreme of replacing legal education with legal propaganda to the other extreme. For a long time, there have been many views in the society and legal field that legal education cultivates legal professionalism, which is actually a deviation in the cognition of the function of legal education. Legal education cultivates the quality of rule of law, which is not necessarily related to the legal profession. The rule of law is oriented to the whole society, not just to a certain industry or professional group. Engineering and scientific talents can also become legal talents if they have the legal literacy, which is not based on obtaining legal professional qualifications.

3. The integration of legal education into the training of New Engineering talents has multiple meanings

3.1 From the innovative practice of Xi Jinping's Thought on the Rule of Law

Xi Jinping's Thought on the Rule of Law is the fundamental follow-up of legal education and the cultivation of talents under the rule of law. Legal education under the guidance of Xi Jinping's Thought on the Rule of Law should be quality education, including vocational education and general education. At the same time, Xi Jinping's Thought on the Rule of Law has given the "rule of law" a milestone in the cultivation of talents under the rule of law, which has given it the historical mission and significance of the times, and the discipline of illegal science can not be separated from the rule of law, thus laying the ideological foundation and theoretical support for the formation of a community of education under the rule of law. Law is a highly practical discipline, and it is impossible to exist independently from other disciplines. Only openness, integration and innovation are the proper meaning of quality education and the fundamental way of evergreen development, which provides endogenous motivation and communication path for the formation of the legal education community. Constructing a community of legal education between different disciplines with legal education as the link is actually to integrate the legal literacy training of talents in other disciplines into the purpose of legal education, and to liberate legal education from the division of legal disciplines into the educational system of other disciplines. Therefore, integrating Legal education into the training of New Engineering talents is a typical and vivid innovative measure to implement Xi Jinping's Thought on the Rule of Law and promote the formation of a community of education under the rule of law.

3.2 From the necessary measures for development of higher education

Building a new pattern of higher education development needs high-quality compound talents. Talent cultivation is never achieved overnight. It is necessary to optimize the educational structure, discipline and specialty structure and talent cultivation structure that adapt to the new development pattern. New Engineering emphasizes the cross-integration and development of multi-discipline, multi-specialty and multi-field. As a social science, law should also be open to natural science, not only in knowledge resources and research materials, but also in legal education and engineering education. This is not a unilateral requirement. Numerous facts have proved that unfettered technology is dangerous, and it is unrealistic to completely resort to people's inner kindness in the choice of behavior. It is necessary to make them understand through legal education that "people are born free, but they are everywhere in chains." Therefore, integrating legal education into the training of New Engineering talents is not only an appropriate measure to focus on the "Tenth Five-Year Plan", but also a long-term consideration about the high-quality development of higher education under the new development pattern.

3.3 From the inevitable requirement of New Engineering education

Engineering talents who can be honored as "great country craftsmen" in the future should calmly respond to the new challenges brought about by the new industrial revolution, correctly handle the relationship between science and technology and people, have mellow humanistic feelings and correct value orientation, and especially can not do without legal education. Students can only obtain very limited legal knowledge from the ideological and political class. Some colleges and universities will offer an additional legal general course, but this can only guarantee the minimum level of "knowing the law", and cannot effectively help students understand the law, abide by the law, and use the law. It's hard to say that such an arrangement meets the high standards and new requirements of new engineering talents. There is a basic gap in legal education that suits the characteristics of engineering majors. Even if some people realize that engineering talents need to have certain legal literacy, there are no mature courses and teaching materials. This has become a serious issue. The reform of higher engineering education has to face it squarely. Legal literacy should be the proper meaning of the training goal of New Engineering talents. In view of this, Legal education should also be duty-bound to undertake this heavy responsibility.

4. Three steps to integrate legal education into the New Engineering talent training

4.1 Step one: change the education ideas

It is a brand-new subject for legal education to be integrated into the training of New Engineering talents. The essence of this is the cross-border educational concept and the all-round development of talents. The training goal of New Engineering talents needs to change from "one-sided" professional skills to "all-round" comprehensive
quality, and fully realize the importance and necessity of legal literacy. The ideal result is that engineering education consciously absorbs legal education and shows a new look of engineering talent training. At the same time, legal education must also follow Xi Jinping's Thought on the Rule of Law, and realize that non-law college students can also be Legal talents. Legal education should consciously extend the education object from law students to engineering students and even students in all disciplines, thus creating a new look of legal education.

4.2 Step two: clear the integrated thinking

Integrating legal education into the training of new engineering talents is a systematic project, and its core is to cultivate the legal literacy of new engineering talents. First of all, enable students to establish Socialism with Chinese characteristics's view on human rights, avoid falling into the trap of "only the West has human rights" by deepening their understanding of the legal protection of human rights, and correctly understand "people-oriented" in China culture with a long history. The second is to enable students to construct the legal thinking, which mainly includes the establishment of three consciousnesses: to establish the consciousness of legal authority to spontaneously confront the tendency of privilege brought about by technological leadership; establish awareness of legal norms, so as to automatically realize that scientific and technological innovation should not be hindered by law; establish a sense of legal responsibility to consciously restrict the development, utilization and management of science and technology. The third is to enable students to master legal knowledge suitable for engineering majors. As a result, it is necessary to innovate the teaching form, such as establishing the micro-specialty of "engineering and law," establishing the experimental class of "law and technology," and compiling the distinctive teaching material of "data law". Through these above measures, we could try to highlight the professional adaptability of knowledge content continuously, and teach students in accordance with their aptitude.

4.3 Step three: provide characteristic courses

All training objectives and teaching contents should be implemented in the course. Law courses integrated with the training of "new engineering" talents should be set up separately. The law school needs to reasonably arrange theoretical or practical courses, general or professional courses, compulsory or optional courses, and finally build a curriculum system suitable for the engineering specialty. More specifically, the practical learning needs of non-law majors should be fully considered in the setting of theoretical courses. Some courses can be considered to be diluted, such as philosophy of law, legal history and litigation law. The setting of practical courses should highlight the particularity of the training target group in the way and content of social practice, such as strengthening the trial observation of related cases and taking cases as a mirror. The setting of specialized courses should be distinguished from general courses and specialized courses in legal subjects. "Technological Innovation and Intellectual Property Law" and "Big Data and Network Security Law" can be set up to highlight pertinence and practicality. Elective courses can explore more frontier fields of engineering science with law, and further integrate the rules of natural science and social science. The whole curriculum system should be combined with the actual situation of colleges, and adhere to the goal, demand and problem-oriented.

5. Summary

The proposal of New Engineering provides an opportunity for China's Legal education to integrate into engineering education. Legal education is neither law popularization and publicity, nor legal vocational education. It should be carried out from three aspects: the change of education concept, the implementation of integrated thinking and the scientific setting of curriculum.

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References