

Reform of Applied Talents Training Model from the Perspective of “Four Regressions”

Longying Pei, Luxi Jiang*, Luping Liu, Heng Xu, Changlu Jia

Xinjiang Institute of Technology, Akesu 843000, Xinjiang, China. E-mail: luxijiang123@yeah.com

Abstract : In the context of the continuous advancement of higher education reforms, the education system of teaching students in accordance with their aptitude and categorized training is constantly maturing. Research-oriented and application-oriented talents have established corresponding training models around actual work needs and personal career development. For the cultivation of application-oriented talents, promote the “four regressions”, adhere to the improvement of comprehensive ability under core literacy, in the curriculum system setting, knowledge point related exercises, exploratory classroom establishment, professional integration in various fields, and modern educational technology application carry out in-depth reforms and innovations to meet the real and long-term needs of the future skill application talent market, and accelerate the high-quality development of the application-oriented talent training model and system.

Keywords : Core Four Regressions; Applied Innovative Talents; Training Mode

The concept of “four regressions” was put forward at the National Undergraduate Education Work Conference of Colleges and Universities in June of 2018. The meeting emphasized that we must adhere to the student-oriented approach and promote education work to “return to common sense, return to essence, return to original intentions, and return to original intentions. “Dream” points out the fundamentals for building a world-class first-class undergraduate education system. It also has a very important guiding significance for the talent training mechanism of applied universities. It takes the four regressions as the principle and takes the craftsman spirit to form and craftsman talents. Cultivating as the goal, taking the party’s leading ideas of higher education in the new era as the general program, speed up the application of compound talents with solid theory, strong skills, and excellent comprehensive literacy.

1. Challenges facing the teaching of applied professional courses

1.1 Knowledge points are widely distributed, and the systemic connection is not strong

Many application-oriented majors have rich content and extensive knowledge points in curriculum settings, but they lack overall arrangements. Different disciplines and courses are set independently, and there is a lack of effective communication and connection between each other, resulting in a lot of duplication of content, and some content. Nothing is involved, and vacancies are formed. Such scattered knowledge points are not formed into a system and become a mess of sand. When students are learning and mastering, their thinking is not clear, and there is no logic and direction. As far as teaching is concerned, it is an effort to ensure that students learn and master the methods and skills of learning, and more attention should be paid to the learning process, rather than staying on a few knowledge points. The current course teaching lacks a more reasonable, comprehensive and scientific system framework, does not sort out a clear path for students to learn, and cannot guide students to connect and analyze different knowledge points, give play to association and innovation, and realize effective integration and analysis of knowledge points. The question may only start from a single knowledge point of the course, which has certain limitations. Therefore, the problem-solving ability is weak,

Copyright © 2021 Longying Pei et al.

doi: 10.18686/ahe.v5i2.3343

This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

and there will be greater pressure before the exam.

1.2 The method of class teaching is solidified

As far as the current applied majors are concerned, theoretical courses are boring, teachers blindly speak, students passively listen, lack of effective interaction, and teachers do not reserve opportunities for students to think and try effectively, which gradually reduces students' interest^[1]. Tired of the long-lasting teaching method, coupled with the strong curiosity and desire of young students to explore, are easily attracted by new things and ideas, which may cause students to pay attention to online games, chat, and online shopping, drama series and other social entertainment activities, thus ignoring classroom learning. In particular, teachers in some schools use textbooks during class, and they rarely understand the students' learning status and achievements. Many students encounter problems in their studies and find it difficult to get effective answers and responses. Confusion and helplessness are never resolved. Under the fast-paced curriculum arrangement, it is difficult to adapt to the future learning requirements, confidence is frustrated, and gradually the idea of giving up occurs.

2. The key points of reforming applied talent training methods around the “four regressions”

2.1 Strengthen the overall planning and relevance of knowledge content

The form of curriculum knowledge is as believed in the system theory. It is timely and independent of each other, but also interrelated. Different knowledge points are interrelated and mutually causal, and cannot exist independently of any other elements. For example, in the professional application course of automobile maintenance, because the automobile is an indivisible whole, the various internal module systems are also closely related, so the maintenance of each component must also be an organic integration of the whole, so in the professional course design, attention should be paid to the integration of knowledge points, orderly and reasonable crossing, and multiple forms of series and parallel connections, and a systematic combination arrangement, hierarchical classification, so that students can establish systematic thinking and understand the knowledge points. Understanding is no longer a separate memory. It should be analogous and inferential. Only in this way can students be active in thinking and effectively respond to specific practical problems. At the same time, teachers should distinguish the similarities and differences between different knowledge points, make relevant distinctions and unify, avoid confusion and repetition of knowledge points, and more importantly, prevent the lack of recognition of identity, leading to gaps in knowledge teaching, bury certain hidden dangers for students' later application practice. For students, teachers should actively guide students to establish a knowledge network and organizational structure, while focusing on important and difficult issues, with clear levels, and orderly priority. Students themselves should also be diligent in thinking, actively integrate, adhere to the problem-oriented learning of the course, clarify the specific learning goals and tasks of each class, take the goals as the guidance, and under the guidance of the teacher's modular teaching strategy^[2]. The knowledge points of the capacity are subdivided, classified, and extended, so as to complete the learning purpose of accumulating less and more and breaking one by one. This also reduces the difficulty of learning and memory, exercises students' logical thinking ability, and learns the new.

2.2 Supported by information technology, strengthen the rich and diverse display of teaching forms

As early as the beginning of the last century, British educators put forward the proposition of curriculum coordination, carried out the design and application of integrated courses, and promoted the integrated development of professional courses. As for the current era of knowledge explosion, any applied major is connected to each other by a vast number of basic theoretical disciplines and different applied majors. In the process of effective integration of curriculum knowledge points, we must also pay attention to the form and skills of integration to help students more quickly and deeply participate in the teaching reform of curriculum integration, stimulate students' imagination and creativity, and improve students' problem response and processing power. Application-oriented majors have designed knowledge content in many professional fields. For some students without relevant experience and foundation, it is difficult to understand. In addition, it will be more difficult to achieve multi-disciplinary integration. At this time, school teaching is more difficult. It is necessary to make full use of the advantages of modern educational technology, take modern multimedia teaching technology as a pioneer in the transformation of the “four regressions” application courses, and use the current new artificial intelligence, big data, cloud computing and other new technologies to the abstract and complex knowledge is transformed into concrete things that are intuitive and vivid, and the corresponding knowledge points are derived from actual application cases. In this process, we pay attention to cultivating students' observation, understanding, judgment, logical deduction and psychic response. The application of artificial intelligence and big data can analyze the students' practical

performance in practical courses with detailed data, so as to accurately find the strengths and weaknesses of the student, and do a good job in the relevant aspects of low learning level. Targeted advice and guidance, timely help and standardization of students' habitual behaviors, and a good decision-making reference for the instructors also conform to the four "return" requirements of "return to essence" and "return to the original heart" and achieve a return to student-oriented original intention and essence.

2.3 Carry out cooperative learning and comprehensively enhance the comprehensive literacy of applied professionals

Applying what you have learned and learning for the practical needs of the society is a major reference goal for the training of applied talents. To achieve the construction of applied talents with good comprehensive quality, it is necessary to promote the moral quality, technical level, management ability and physical fitness of the talents. The cooperative learning here is designed for the problem of insufficient management ability of students. Management ability includes not only managing others, but also personal management, such as control, willpower, expression, cooperation, etc., all of which can be achieved through cooperation. Take the auto repair major as an example. In the theoretical class, the teacher can first raise topics, such as the characteristics of the body structure of small passenger cars and mainstream functions, organize 5~7 people as a group for discussion, and select the group leader as the group coordinator. In the end, the speaker is selected to explain the point of view. Teachers and classmates can ask questions. Teachers should not rush to judge whether they are correct or not, but focus on students' learning thinking methods and quality improvement. Discussion topics, without standard answers, can allow students to think divergently, collide with each other, and be active in discussion. It can also be included in the usual teacher and student assessment, so that the two can work together to achieve the return of basic knowledge and common sense in the teaching of applied talents. Return to humanism, return to goal dreams.

3. Conclusion

From the perspective of the "four regressions", the reform of the talent training model is carried out in three aspects, including the establishment of links and systems between knowledge points, so as to cultivate high-quality compound innovative talents with innovative capabilities and meet the needs of future emerging industries and new economies. It improves students' ability to use knowledge to solve problems, and greatly improves students' innovative ability and professionalism.

References

1. Wang J, Zhao P, Wang J, et al. Applied innovation from the perspective of "four regressions" the reform of new talent training model. *Education and Teaching Forum* 2020; (34).
2. Wang B. Application-oriented talent training in local undergraduate colleges and universities in the context of intelligent manufacturing policy. *Educational Theory and Practice* 2018; 38(18): 9-11.