Scholar Publishing Group
International Journal of Engineering Technology and Construction
https://doi.org/10.38007/IJETC.2021.020205
ISSN 2789-7176 Vol. 2, Issue 2: 52-61

Car Detection and Maintenance Technology Specialty Launches Innovation and Entrepreneurship Education Thoughts and Measures

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Keywords: Automobile Inspection and Maintenance, Practical Teaching, Reform, Innovation

Abstract: In order to meet the global energy and environmental challenges, the development of new energy vehicles has reached a consensus. With the rapid development and popularization of new energy vehicles, the maintenance of new energy vehicles and the training of skilled workers in new energy vehicles are currently facing new challenges. The new curriculum of new energy vehicle inspection and maintenance technology will be built, and the new energy vehicle inspection and maintenance technology training mode will be innovated, so that the trained technical workers can practically carry out the maintenance and maintenance of new energy vehicles and adapt to the needs of the development of new energy vehicles. In response to the National Ministry of Education's call for deepening the reform of vocational education, this paper aims at the reform of the professional teaching system of automobile inspection and maintenance technology, and studies the project design and teaching method innovation of automobile inspection and maintenance practice teaching, aiming at improving the professional practice of automobile inspection and maintenance technology. Teaching Quality.

1. Introduction

Innovation and entrepreneurship education is the need of the times, economy and social development. Innovation and entrepreneurship education is the inherent requirement of the reform of talent training mode. Innovation and entrepreneurship education is the inevitable mission of colleges and universities to exercise educational functions. Establishing and perfecting the innovation and entrepreneurship education system of colleges and universities, and cultivating students' innovative spirit, entrepreneurial awareness and innovative entrepreneurship will also become the call of the times. In China's current vocational education system, automobile maintenance vocational education occupies a more important position. Therefore, how to do a good

job in the training of professional technicians in automobile inspection and maintenance and improve the level of technical talents in this industry in China has become an important part of our special research on vocational education. In the actual research process, we found that the innovation and reform of the talent training model played an important role in the improvement of the quality and efficiency of professional talent training. Therefore, we have carried out targeted technical research in combination with the main problems in the technology of testing and maintenance technology, and provided support for the cultivation of such technical professionals in China.

2. Understanding the Relationship between Innovation and Entrepreneurship Education and Professional Education

2.1. The Content of Innovation and Entrepreneurship Education

There are three main understandings of the connotation of innovation and entrepreneurship education in China: (1) equating innovation and entrepreneurship education with innovation education; (2) equating entrepreneurial innovation education with entrepreneurship education; (3) understanding innovation and entrepreneurship education as innovation The combination of education and entrepreneurship education. Improving the employability of college students is the core of the innovation and entrepreneurship education in colleges and universities, and it is the basic food intake for college students to start their own businesses. Innovative entrepreneurship education pays more attention to the cultivation of students' consciousness and ability. It is not a simple skill training. Colleges and universities should be supported by intelligence, creatively carry out innovation and entrepreneurship education, and teach the curriculum system according to the students' hobbies. The traditional mode of teaching.

2.2. The Connotation of Professional Education

Professional education is also an important part of higher education, in order to better cultivate the high-level talents who can meet the needs of society and serve the economic construction.

2.3. The Relationship between Innovation and Entrepreneurship Education and Professional Education

Innovative entrepreneurship education and professional education are interrelated, inseparable, mutually infiltrated and mutually reinforcing. Professional education is the foundation of innovation and entrepreneurship education, and innovation and entrepreneurship education is the in-depth enhancement of professional education. Innovative entrepreneurship education is more about paving the way in professional fields, and the requirements for professional support are relatively high, so as to lay a good foundation for the later innovation and entrepreneurship. Students can cultivate the awareness and psychological quality of innovation and entrepreneurship through innovative entrepreneurship education, and enhance students. The practical theory applies the knowledge learned in the textbook to the actual situation to meet the actual needs of professional learning. Professional innovation, entrepreneurship education and professional education are all important components of higher education, with the same goal, and cultivate a large number of outstanding and high-level talents for the society.

3. Status of Innovation and Entrepreneurship Education at Home and Abroad

3.1. The Development of Innovation and Entrepreneurship Education in the United States

In the United States, innovation and entrepreneurship education is carried out at different stages of the students. For example, at the university level, students are selected from the first grade to enter the innovation and entrepreneurship education institutions. The institution provides excellent environment, equipment and platform support for students' innovation and entrepreneurship. Teachers from enterprises are also appointed as instructors for innovation and entrepreneurship education. In the field of innovation and entrepreneurship education, the institution provides students with a wealth of innovative entrepreneurship courses, and also provides many innovative entrepreneurship training programs for students.

3.2. Development Status of German Innovation and Entrepreneurship Education

Many engineering universities in Germany have carried out outstanding innovation and entrepreneurship education. These schools have designed different modules of entrepreneurship projects in the course. Students can seek entrepreneurial inspiration in these projects, find entrepreneurial business opportunities, and implant innovative and entrepreneurial education in the curriculum. These research universities have gradually embarked on the development path of “entrepreneurial universities”. Some universities have gradually accepted innovation and entrepreneurship education and started to practice, which has enabled German universities to enter a rapid development track. Many “entrepreneurial” universities have been born, leading and supporting the economic development and social development of Germany as a whole. In addition, the German government attaches great importance to the development of innovation and entrepreneurship education in universities, and gives financial support to university students in the financial field. For example, the German government has provided 260 million euros to set up high-tech enterprise venture funds; it has united 200 universities in Germany and 50 honorary enterprises. To jointly support the entrepreneurial competition of college students. Through these methods and methods, we can effectively promote the entrepreneurial ability of college students.

3.3. Development Status of Innovation and Entrepreneurship Education in Hong Kong

In Hong Kong, China, the SAR government attaches great importance to the innovation and entrepreneurship education of college students. They provide entrepreneurs with funds and loans, provide entrepreneurial information and introduce business opportunities. At the same time, the Hong Kong Special Administrative Region Government's policy of innovation and entrepreneurship is very good, providing entrepreneurs with a good entrepreneurial atmosphere and entrepreneurial environment, such as the Hong Kong Special Administrative Region undergraduate business plan, for entrepreneurship

Students provide 100,000 Hong Kong dollars interest-free loans, provide entrepreneurial guidance and professional information services; provide 500 million yuan of social innovation and entrepreneurship development funds for social enterprises in the Hong Kong Special Administrative Region; Hong Kong Special Administrative Region Government has not yet provided different enterprises to 10 The business loan of 300,000 yuan; at the same time, the Hong Kong Special Administrative Region Productivity Promotion Bureau, the Hong Kong Special Administrative Region Trade Development Council, and the Hong Kong Science and Technology Park provide a

good external environment for the cultivation of students' awareness and ability of innovation and entrepreneurship.

4. Investigation on the Status Quo of Innovation and Reform of Automobile Inspection and Maintenance Professional Technicians

4.1. Purpose of the Survey

Through the questionnaire survey the main measures for the innovation and reform of automotive inspection and maintenance professionals, mainly around the satisfaction of the current training model and the recommendations of the current training model, and through the analysis of the results to innovate and reform the automotive inspection and maintenance professional and technical personnel The main measures to provide relevant information basis.

4.2. Questionnaire Survey Development Steps

(1) Establishment of the survey site

This survey is aimed at the main measures for the innovation and reform of automobile inspection and maintenance professionals. In order to reduce the difficulty of carrying out survey activities, this survey is mainly carried out in this city, in order to facilitate the development of survey activities and ensure that enough survey results are done. Data is used as support, so it is determined that the location of the survey is the automobile inspection and maintenance major of the city's colleges and universities, and 3 colleges and universities with different reputations are randomly selected for the survey. Since this activity is mainly aimed at colleges and universities in the city, the results are not universal Therefore, the results of this time cannot explain the main measures for the innovation and reform of automobile inspection and maintenance professionals in other regions.

(2) Determination of relevant parameters

The establishment of the number of questionnaires is the most basic step of the survey activity, because the number of questionnaires is related to the validity of the survey results. If the number of questionnaires is set too low, the results of this survey will be questioned because the base of the data is not large enough, and the results of the survey are not large enough. It is universal. The number of questionnaires is set too high, and the difficulty of the questionnaire survey activity increases. Therefore, the number of questionnaires this time is set to 200 according to the minimum sample size proposed by the experts and the technical conditions of this survey.

(3) The distribution process of the questionnaire

The issuance of this questionnaire is mainly divided into two stages. The first is the issuance of the questionnaire, and the second is the recovery of the questionnaire. In order to ensure that the results of this survey have greater authenticity, the recovery of the questionnaire will be completed after the questionnaire is issued. Recovered in the next six days, given time to fill out the questionnaire completely. 189 questionnaires were recovered, and the recovery rate this time was 95%.

4.3. Data Processing

(1) When performing correlation analysis on the collected data, the data must be classified and sorted. This will not only increase the utilization rate of the data, but also promote cross-data

analysis. Therefore, the main consideration is the completeness and accuracy of the data. First of all, about data integrity. When the questionnaire is delivered to the sample subject for completion and collection, some sample items are arbitrarily completed, or their selection cannot be completed, which will cause some data sorting problems, but because the retrieved data accounts for the majority, So deleting the lost data means deleting the lost data. Secondly, the precision and accuracy of the data. When conducting an audit, the main consideration is to check whether these data are inconsistent with other choices, or the principle that conflicts with it should be selectively removed but retained as much as possible.

(2) The main meaning of a correlation relationship in the objective correlation analysis method is to generally refer to a certain relationship between various objective phenomena, but they are not strictly corresponding to each other in quantity. There are two main forms of determining the relevant properties of objective phenomena here: qualitative analysis and quantitative analysis. The main purpose of qualitative analysis is to rely on the scientific theoretical knowledge and practical experience of the researcher to accurately determine whether there are correlations between various objective phenomena. Or what kind of factor, the subjectivity of this analysis method is relatively strong. Among them, the commonly used calculation formula is expressed as:

$$r = \frac{S\text{^}2\,xy}{Sx\,Sy} = \frac{\Sigma(x - \bar{x})(y - \bar{y})/n}{\sqrt{\Sigma(x - \bar{x})\ \text{^}2/n}\sqrt{\Sigma(y - \bar{y})\ \text{^}2/n}} \tag{1}$$

$$r = \frac{n\ \Sigma xy - \Sigma x\ \Sigma y}{\sqrt{n\ \Sigma x\text{^}2 - (\Sigma\bar{x})\ \text{^}2}\sqrt{(n\ \Sigma y\text{^}2 - (\Sigma\bar{y})\ \text{^}2)}} \tag{2}$$

5. Analysis of Survey Results

5.1. Satisfaction with the Current Reform Measures

The questionnaire is used to investigate students' satisfaction with the current reform measures. The results of the survey are shown in Table 1:

Table 1. Satisfaction with the current training model

	A college	B college	C college
Dissatisfied	42%	44%	43%
general	33%	32%	34%
satisfaction	25%	24%	23%

It can be seen from Figure 1 that the students are not satisfied with the current innovation and reform of automotive inspection and maintenance professional and technical personnel. The dissatisfied people accounted for more than 42%, and the average people accounted for about 32%. From this it appears that the reform of the current training model is necessary.

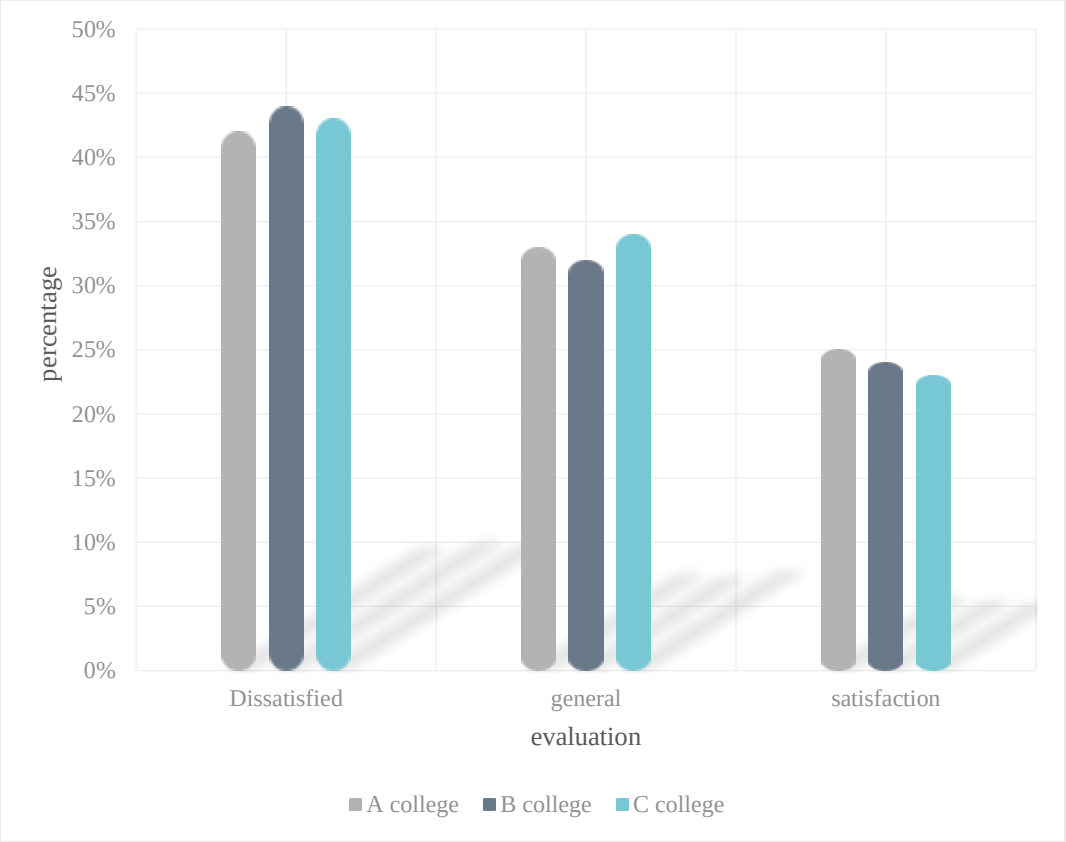

Figure 1. Satisfaction with the current training model

5.2. Suggestions for the Current Training Model

Through the questionnaire survey of students and teachers' suggestions on the reform of the training model, the results of the survey are shown in Table 2:

Table 2. Suggestions for the current training model

	A college	B college	C college
Teaching is determined by post, academic work alternates	45 %	46%	48%
Cooperation effectiveness needs to be improved	36%	33%	32%
Guidance to students in a timely manner	19%	21%	20%

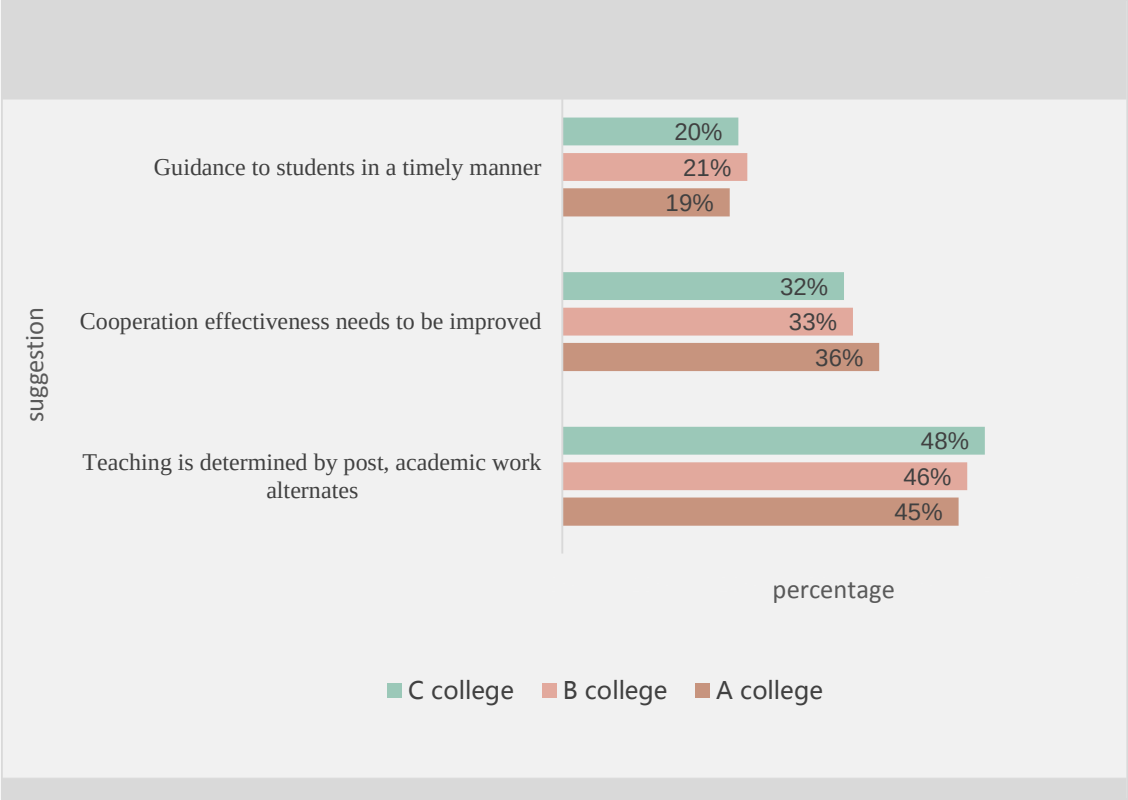

Figure 2. Suggestions for the current training model

It can be seen from Figure 2 that more than 45% of students and teachers in the suggestions given believe that schools should train talents based on the needs of the enterprise, rather than divorce the actual talent needs and emphasize theory rather than practice.

6. The Main Measures for the Innovation and Reform of Professional Technicians in Automobile Testing and Maintenance

In the process of training professional talents for automobile inspection and maintenance technology, we carried out research on innovation and reform measures based on the main problems encountered in personnel training. In practice our main work measures are as follows.

6.1. Based on Demand and Technology, Improve the Talent Training Mode

Automobile testing and maintenance technology training is a professional and professional vocational education content. Therefore, students' interest and attention to learning directly affect the quality of students' learning. Therefore, we need to develop innovative educational methods based on the needs of students for vocational and technical learning. (1) Pre-class research work. Before the beginning of the education work, we need to conduct effective pre-class research on the technical issues of the students' technical education, the technical difficulties and key issues in the study. The development of pre-school research has the following two functions in the education process: on the one hand, educators can obtain the difficulties and key contents of students' learning through research content, conduct targeted technical guidance and education, and improve the

detection and training of students. Maintenance technology level. On the other hand, pre-school research can provide further data support for teaching reform and improve the effectiveness of reform. (2) Improve the pertinence of teaching. In the process of technical teaching, educators should avoid a "one size fits all" approach to education, but focus on the problems and needs of students in technology and theoretical practice. If some students have more problems with the maintenance operation of the vehicle's electronic control system, educators should focus on such issues and improve the technical level of such students. (3) Give play to the role of students in the practical operation. The student practice industry is the evaluation standard that best shows the effect of students' technical learning. Therefore, educators should pay attention to the inspection and evaluation of the actual operation industry after the completion of the actual operation, find the actual problems displayed in the actual operation industry, and conduct student technical problems and needs analysis to provide support for the next stage of technical education.

6.2. Integrate Teaching Resources and Build a Teaching Platform

In the process of education innovation and reform, we should fully tap internal resources and strength, and carry out effective integration. The main working methods include the following points. (1) Excavate internal technical resources and build a technology platform based on the internal technical resources of the institutions. If combined with the existing testing equipment, the colleges can carry out information transformation, and then improve the information technology level of detection technology on the basis of reducing the cost of information transformation. In this process we need to do the following three tasks. First, in the process of mining internal technical resources, we can't keep the rules tightly, but we are brave in innovation in the technology of traditional technology, and indeed improve the level of teaching and practical skills. Second, technological innovation should not be blind. It can cooperate with professional technical research institutions or enterprises to improve the pertinence of technological innovation. The third is to rationally plan the cost of technology integration, and indeed play the educational auxiliary role of technological transformation. (2) Integrate educational talent resources. In the technical education of colleges and universities, the technical and theoretical expertise of technical educators are different. Therefore, in the process of technical education, we can set up a reasonable technical education position for each educator, which is to give full play to its technical advantages in technical education, and thus to improve the professional orientation of technical education. For example, we can hire professional testing and maintenance technicians from the automobile maintenance enterprises to serve as practical assistants for the poor performance of teachers. In the teaching, teachers are responsible for explaining, teaching assistants to carry out practical demonstrations, and exerting their respective teaching advantages, which is a good technical teaching reform content. (3) Construction of a professional internship education base. In the professional technical education of automobile inspection and maintenance, qualified institutions can build a practice education base outside the school to provide students with a simulated playground. Compared with the traditional practical classroom education, the internship education base is closer to the auto repair enterprise operation site, and is more suitable for the application of various new auto repair technologies.

6.3. Build a High-Level Education Team

In the process of innovation and reform of professional and technical personnel education, we need to build a high-level education work team. In actual work, the composition of this team should

include the following people. Professional educators with a certain knowledge of auto repair theory; technical workers and technicians with many years of experience in automobile inspection and maintenance; professional and technical researchers. In order to cultivate this team, we need to do the following work in the management process. (1) Pay attention to the introduction of technical talents. In the talent training work, we need to cooperate with the auto repair enterprise and the professional research department to introduce professional technical operations, research and other talents for my use and improve the technical ability of the education team. (2) Do a good job in on-the-job education. In the training of talent teams, we should actively cultivate internal teaching and technical backbones within the institutions, carry out further on-the-job education and training, improve their technical teaching level, and improve the technical education technical training strength within the institutions.

7. Conclusion

Innovative entrepreneurship education and professional education are inextricably linked, and the two are interrelated and mutually reinforcing. Incorporate the educational concept of innovation and entrepreneurship into the teaching of professional training programs, professional courses and professional practice, strengthen the integration of professional education and innovation and entrepreneurship education, and build a combination of automobile maintenance technology, research and application, teaching and innovation and entrepreneurship. The new system has a great role in the cultivation of college students' practical innovation ability, employment competitiveness and sustainable development potential.

Funding

This article is not supported by any foundation.

Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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