

Training System and Research of General Aircraft Maintenance Talents under the New Situation

Yang Qiong, Li Xiaoyu

Xi 'an Aeronautical Polytechnic Institute, Shaanxi, Xi 'an, 710089

Keywords: New situation; General aviation; Maintenance talent; Training system

Abstract: Under the new situation, the general aviation professional high-skilled and high-quality talents are scarce. Especially in the field of general aviation maintenance, it is the key to realizing the long-term development of the industry by effectively cultivating comprehensive talents in the industry standard. Therefore, in the practice of general aviation maintenance personnel training, breaking through the bottleneck of talent cultivation and providing more outstanding talents for the sustainable development of the navigation industry has become a major task of colleges and universities. Based on this, this paper mainly analyzes the training system of general aviation maintenance personnel under the new situation.

1. The current situation of general aviation maintenance personnel training under the new situation

The types, levels and methods of personnel training in the field of general aviation maintenance are different from the general civil aviation maintenance field, which has certain diversity and complexity. Moreover, at present, most of the training of general aviation maintenance personnel in China is concentrated on the microscopic perspective of personnel training, that is, from the analysis level of training projects, contents, and methods. There are two main ways of training talents, one of which is aviation colleges. However, the colleges and universities have relatively limited professional level in the maintenance of aircraft maintenance personnel, which cannot meet the needs of multi-level and diversified talents in the industry. The second is that peer companies use the general aircraft manufacturer service mechanism to conduct short-term special category training for employees, which is quicker and less costly. However, it is impossible to form a long-term talent training mechanism [1].

2. The training system of general aviation maintenance personnel under the new situation

2.1 Identifying talent training goals for market needs

Based on the characteristics of the general aviation industry, we can clarify the training objectives of general aviation maintenance professionals through market demand. That is to cultivate high-skilled, high-quality comprehensive talents. As for the current general aviation industry in China, it is still in the initial stage of development. The general aviation maintenance

profession should conduct a comprehensive industry investigation and study on this, fully understand the talent demand situation of the industry enterprises and the requirements for the skills and quality of aircraft maintenance personnel, and related certificates. Based on the goal of skills development, we can clarify the scientific and feasible talent training plan, formulate a complete syllabus and plan, compile professional teaching materials, and build a general aviation maintenance professional course system that is consistent with the actual situation. And on the basis of the course structure, it can also pay attention to the latest developments in the field of general aviation maintenance in real time. According to this, the curriculum construction and content are moderately adjusted, and the latest knowledge, technology, crafts, methods and methods are incorporated into the curriculum construction to ensure that the aircraft maintenance professionals after professional training can quickly adapt to the working characteristics of the navigation industry in the shortest time. Requirements to ensure aircraft safety and stability.

2.2 Developing a scientific and feasible talent training program

The personnel training program design is based on the relevant standards of the general aviation maintenance industry. The general aviation maintenance profession should keep pace with the times, obtain industry job requirements and standards from a development perspective, and control the development direction of new technologies, knowledge, and processes, and improve and optimize them. By adopting effective measures, we will train outstanding talents with good professionalism, high practical operation skills, and ability to serve the frontline of general aviation maintenance. At this stage, in view of the unfavorable phenomenon of the continued downturn in the development of China's general aviation industry, we should continue to deepen the exploration of diversified training models according to civil aviation maintenance standards. At the same time, it is also possible to cooperate with enterprises to form an order-based training mode, and adopt a dual-certification teaching mode to mobilize students' enthusiasm and initiative. When the general aviation maintenance market is in a benign state of operation, students are gradually pushing the market to choose their own jobs [2].

2.3 Constructing a specialized core curriculum system

Colleges and universities can try to sign cooperation agreements with aviation aircraft maintenance companies, establish a productive training base for aircraft maintenance training centers within the institutions, and give full play to the advantages of both sides. School-enterprise cooperation can jointly realize the teaching linkage and comprehensively improve students' professional quality and basic ability. Colleges and universities can also integrate the concept of school-enterprise cooperation in daily teaching activities, so that students can adapt to the corporate job model when learning, close to the actual needs of enterprises. For the example of the "General Aircraft Model Maintenance" course, universities and enterprises can jointly build a curriculum R&D team. Through the combination of the professional curriculum teacher experience and the technical personnel experience of the college, the specific standards of the curriculum can be formulated, and the enterprise resources can be shared. Develop practical training specific projects. In the teaching process, scientific design teaching progress and time, you can invite enterprise technicians as a guide to help teachers complete teaching tasks. Through the active participation of enterprises in teaching, we can effectively achieve the integration of teaching and production, so as to cultivate more excellent compound talents for enterprises. In addition, under the school-enterprise cooperation mode, professional curriculum teachers can also gain more production practice experience and improve their comprehensive practical operation skills and professional qualities.

2.4 Strengthening industry professional talent training

Focusing on internationally renowned companies and following the principle of resource sharing and two-way win-win, universities can attract diversified investment in corporate funds and aviation materials. The colleges and enterprises jointly build a general aviation maintenance practice training base that integrates students' practical training, training, and vocational skills appraisal to meet the needs of students' professional skills training and realize the seamless connection between internal practice training and post production internship. [3].

2.5 Sharing resources with commercial aircraft manufacturers

On the basis of government investment and enterprise investment, universities should further cooperate with general aircraft manufacturers to ensure that enterprises can provide general aircraft and aircraft equipment for colleges and universities, and cooperate with each other to conduct comprehensive training for general aviation maintenance professionals. As for the situation that China's low-altitude openness is gradually forming, foreign general-purpose aircraft manufacturers are looking forward to opening up the Chinese market as soon as possible. Providing aircraft and aviation equipment for colleges and universities is also the main way for general aviation manufacturers in other countries to understand and enter the Chinese market. Through the provision of related equipment, the colleges and universities are closely connected with the aviation aircraft manufacturers, and through active cooperation between the two parties, effective communication and training for the general industry maintenance professionals. At the same time, according to the specific planning of the project, the colleges and universities can also invite enterprise experts from well-known aircraft manufacturing industry to serve as professional teaching professors to form a strong general aviation maintenance teaching team. In this way, institutions and enterprises can share teaching resources to achieve a win-win situation.

2.6 Modular teaching based on model modules

Through the model module, the problems of the current general aviation maintenance personnel training courses and the poor adaptability of the market industry are solved. Through the modular teaching form, based on professional skills, in terms of model maintenance, select the most representative general aviation aircraft as the carrier, carry out the training of professional skills and compound talents, and clarify the basic skills teaching links and grades. The carrier clarifies the basic ability to cultivate [4].

2.7 Introducing flexible teaching mechanism

Colleges and universities choose flexible teaching mechanism, break through the traditional teaching mode, and effectively solve the phenomenon that the formulation of talent training programs is seriously out of line with the market dynamics, thus achieving the organic integration of talent cultivation and market demand. First of all, flexible talent selection, that is, students and professionals to make two-way choices. The university conducts a comprehensive investigation of the blindness of the students and the market demand. The students and the students choose in both directions to mobilize the students' enthusiasm for learning and improve the adaptability of market demand. Secondly, the flexible talent training model sets clear and specific directions for the market, formulates feasible talent training programs, and adopts a combination of basic and professional, market and module, and adjusts the market dynamics. Thirdly, the flexible curriculum module, through the combination of primary and advanced, the combination of system and reinforcement,

selects a feasible talent training program for market demand. For the "General Aircraft Model Maintenance" course, the division is based on the combination of high-level and advanced, and the system and reinforcement combine two modules to adapt to the market uncertainty. And through the market requirements as a benchmark, universities can further determine the specific level of the module as well as the content of the course, the difficulties, the core and so on. Finally, adapt to the flexible talent training operation mechanism, and provide students with various channels through the dual-track system to help acquire more relevant knowledge.

2.8 Building a sound maintenance personnel manufacturing system

We can build a navigation and maintenance personnel license system that is sound and adapt to the needs of China's industry, in order to meet the diversified requirements at all levels, reduce the pressure on general aviation maintenance personnel to obtain certificates, thereby stabilizing the general aviation maintenance group and promoting the long-term stable development of general aviation enterprises. At present, China's existing aircraft maintenance personnel license examination outline content is mainly oriented to the operation of aircraft, the assessment knowledge area and depth are largely beyond the scope of general aircraft maintenance work requirements. Moreover, the general aircraft maintenance work tasks are diversified and include various types of models. Based on the license management rules, a professional category of license holders can only repair the aircraft of this professional type. If the company contains multiple types of aircraft, then the required talents will be more diversified. This requires universities to comprehensively train a variety of aviation general-purpose maintenance personnel on the actual needs of industry enterprises. However, some aviation companies have clearly pointed out that aircraft maintenance personnel must have a number of professional and multi-type certificates, which directly increases the difficulty for aircraft maintenance students to obtain certificates. In this regard, universities can cooperate with enterprises to divide certificates into transport aircraft maintenance. Certificate and general aircraft maintenance certificate. In the case of transport aviation, the existing certificate system is still used, and in the case of general aircraft maintenance, a special certificate is established, that is, the ME and AV type certificates are set [5].

3. Conclusion

In summary, if China's low-altitude open, general-purpose aircraft will be able to fly freely, China is bound to become a major general aviation country, and will also achieve a huge transformation. Regardless of how General Aviation develops, security has always been key. Comply with the development trend of aviation industry, and build a high-standard, high-demand general aviation maintenance professional personnel training mode, which is conducive to the safe and stable flight of general aviation. This requires that colleges and universities must actively adopt diversified measures to train comprehensive aircraft maintenance professionals to provide more talents for the long-term development of the aviation industry.

Acknowledgement

Research and Reform of "MS" General Aircraft Maintenance Talent cultivation mode on the Base of Vocational Ability Training (NUMBER: 18XHGX-015)

References

[1] YAN Ying, SHANG Yong-feng. *Research on the Training Mode of General Aviation Maintenance Talents*[J]. *West China Science and Technology*, 2014(7): 92-93.

- [2] Ren Yanping, Deng Honghua. *Exploration of Constructing Professional System of General Aircraft Maintenance in Higher Vocational Colleges*[J]. *Science and Education Journal (Chinese Journal)*, 2013(8):41-41.
- [3] Zhang Liu, Gong Wei, Xue Jianhai. *Training of General Aircraft Maintenance Talents from the Perspective of Collaborative Innovation of Schools and Enterprises*[J]. *SME Management and Technology*, 2015(9):207-208.
- [4] He Yanbin, Zhou Yujing, Xue Jianhai. *Political and school-enterprise collaborative innovation based on industry standards for general aviation maintenance personnel training* [J]. *Science Chinese*, 2015 (30): 209-210.
- [5] Huang Xuanhong. *Exploring the training of maintenance personnel to help the development of general aviation in China* [J]. *Education and Teaching Forum*, 2014 (2).