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Study on the curriculum learning of robotics process automation in the era of artificial intelligence

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Abstract: The development of modern society has put forward higher requirements for the survival efficiency of enterprises. In order to improve production efficiency and save the cost of human resources, enterprises pay more attention to production process automation. In the context of the social demand for talents and the development of artificial intelligence, the specialty of robotic process automation has been born. Robotic process automation technology can perform repetitive and intensive mechanical work, which can reduce the pressure of enterprises and employees. It makes companies more adaptable to the trend of the artificial intelligence era. This paper provides an introduction to the robotics process automation program and explores the main points of improving the curriculum of this program in the era of artificial intelligence and other aspects.

Keywords: artificial intelligence; robotics process automation; professional curriculum

1. Preface

Robotic process automation technology allows companies to achieve greater profitability at lower cost and with less risk. Machines can be made to repeat monotonous tasks by simply replicating human behavior through software programs. This can save companies' human resource costs and reduce the chances of manual work errors. Therefore, schools should pay attention to the development prospects of robotic process automation and improve the quality of teaching in this field. Seize the opportunity of the era of artificial intelligence and update the curriculum content and teaching methods. Make progress in the teaching of robotic process automation and cultivate higher quality technical talents.

2. Introduction of robotic process automation

Robotic Process Automation, abbreviated as RPA, is a business process automation technology based on software robotics and artificial intelligence. Robotic process automation digitizes labor and replaces people with intelligent software to do highly repetitive tasks. The goal of robotic process automation is to automate some business processes and workflows that have a high level of repetition and high number of desktops in operation (Cui et al., 2022).

In today's era of rapid technological development, robotic process automation brings many benefits. First, robotic process automation increases operational efficiency. Controlling repetitive tasks through intelligent software and programs that adjust the production speed can save time in production. Second, it allows employees to unleash their potential. The mechanical and repetitive work at work is turned into a process automation program, and the automation program simulates human operation and automatically completes the relevant operation instead of humans through program control. By reducing mechanical and repetitive operations, employees can spend more time and attention on improving themselves and the quality of their work. Third, the accuracy of work can be enhanced. The process of executing and operating operations can be monitored and controlled in an integrated way. This reduces the error rate and increases the accuracy of work. Fourth, it can respond quickly to business requirements. The ability to operate through intelligent software and programs

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can break through time and space limitations and enhance the effectiveness of service work (Shang et al., 2022).

Robotics process automation is an emerging profession that relies on this technology to enrich and develop in line with the development of the times. It cultivates talents with high-quality information technology core literacy for the country. In the era of artificial intelligence, it is necessary to absorb the top technologies in the direction of information technology and enhance students' ability to use advanced information technology technologies to solve practical problems through teaching that combines theory and practice, so that students can adapt to the development of the times.

3. Problems of teaching robotics process automation

3.1 Slow update of course content

Robotics process automation is a newly emerged profession with the development of science and technology, so the content of this profession is closely related to the needs of science and technology and society, and its course content needs to be constantly updated and developed. At the current stage, the course content of this specialization is not perfect, and the speed of updating the course content is slow and lags behind the actual development of students (Yang & Wu, 2022). And the connection between theoretical knowledge practical courses needs to be further adjusted. Teachers explain theoretical knowledge and students carry out practice are separate, which is not conducive to students' understanding and application of theoretical knowledge.

3.2 Teacher strength needs to be further improved

Robotics process automation is an emerging profession, and teachers must first master the theoretical and practical knowledge in this area in order to meet the practical needs of students. At the current stage, the faculty strength of some schools needs to be further strengthened. Many teachers only favor one of the theoretical knowledge or practical ability, and are not able to develop both teaching abilities together. Therefore, schools should pay attention to the construction of the teaching team and improve the teaching level of teachers.

4. Improvement measures for the teaching of robot process automation professional courses

4.1 Optimize course content

To bring into play the teaching value of the robot process automation major and cultivate practical information technology talents for the society, it is necessary to optimize the curriculum content of this major. First of all, make accurate course orientation. Robotics process automation is a discipline that requires a combination of theory and practice, and the class hours of practical classes need to take up more than those of theoretical classes. Students need to have a lot of practical exercises to master the technical methods. Secondly, theoretical courses need to include knowledge about the basics of robotics and its applications, and the process of working with robots. The practical aspects of the course need to include the methods of using robots, the development and use of robotic process automation software and maintenance (Cai, 2022). Thirdly, it should be clear that the goal of the course is for students to understand the principles of how robotic automation works and to be able to use robotic process automation software in their future practical work or even to make relevant innovations. To allow a new development in robotic process automation. Fourth, in addition to relying on RPA technology to organize the teaching content, it is also necessary for students to learn the content of practical use cases of robotic process automation so that they can understand the specific practical applications. This will deepen students' understanding of the theoretical knowledge and enable them to understand the significance of robotic process automation, and promote students' active learning of related courses. The educational value of this profession is realized. Fifth, the variability of RPA is not strong, and these robots only repeat the corresponding actions according to fixed procedures and instructions, which cannot update themselves and are not able to make corresponding countermeasures in the face of changing environments. Therefore, they need to be monitored with artificial intelligence. Therefore, students also need to learn about artificial intelligence to reach the higher goals that society proposes to students in the era of artificial intelligence (Zhu et al., 2022).

4.2 Improving the level of teaching

As an emerging specialty, robotics process automation, teachers' teaching lacks experience, so in addition to the need to update the teaching content, they also need to improve the teaching level. First of all, teachers should go deep into the enterprises related to the application of robotic process automation to understand the actual situation and enrich the teachers' practical teaching content. Make the teachers' teaching can be very strong times. Secondly, teachers should learn theoretical knowledge of robotic process automation in depth. Only on the basis of understanding the theoretical knowledge can they explain to students and meet their needs. In addition, there is a need to learn about artificial intelligence to be able to integrate the content of artificial intelligence into teaching so that teachers can open students' minds and promote the opening of students' eyes for understanding and innovation (Song & Li, 2022). Third, teachers also need to consult experts in robotics process

automation research to increase the professionalism of their theoretical knowledge, so that they can master the most cutting-edge professional aspects of robotics to improve their teaching and bring students a better teaching experience.

4.3 Create a good learning environment

First of all, the experimental courses in robotics process automation need to be conducted in a specific environment, and schools and teachers should create a simulation system environment for students. Professionals are needed to go and design the simulation system for RPA operation according to the teaching content, which can allow students to perform practical operations and experience the application of theoretical knowledge in practice. The simulation system allows students to experience the convenience of the robotic system as a substitute for manual labor and motivates them to learn (Xiong, 2021). Second, to create a learning environment that describes a pleasant learning environment, robotics process automation requires students to be highly innovative, which requires them to remain inspired and talented to innovate. Learning in a depressing environment, students will feel stressed and become averse to learning. Therefore, teachers should create a relaxed and pleasant learning atmosphere, so that so students can actively participate in learning. On the one hand, it can increase the interactive learning between teachers and students, which requires teachers to come off the podium and participate in students' learning activities. Timely attention to students' learning, students should point out any improper operation in time to give students inspiration and inspiration. On the other hand, allowing students to cooperate and communicate with each other can solve most of the problems in the learning process, enhance the degree of independent learning, and enable students to learn from the strengths of others and enrich their creative inspiration.

4.4 Seize the opportunity of artificial intelligence to update teaching methods

Since the emergence of artificial intelligence, its application areas have gradually become extensive and its theories and technologies have been enriched. The integration of AI knowledge into the curriculum of robotics process automation can promote the further development of robotics process automation. Teachers should seize the opportunity of AI era to organize teaching and update teaching methods. First, students can learn more theoretical knowledge about robotics through artificial intelligence technology. This can facilitate students' learning of robotic process automation. Artificial intelligence is the act of simulating the human mind through computers to achieve a higher degree of exploitation of computers (Fu et al., 2021). By using artificial intelligence to investigate the actual needs of students, teachers then organize the teaching content and create intelligent courseware to provide students with a good teaching experience. Secondly, teachers can show students the use of AI and robotic automation in real life, take them to AI robotic automation competitions, and let them indulge their as well as their ingenuity to create. Allowing students to experience the value of robotic process automation can enable technological development and educational development to promote each other. Students will be trained to be high quality and practical talents in science and technology. Third, professionals in the field of artificial intelligence and robotic process automation can be invited to schools to give lectures. On the one hand, students can get in touch with the scientists and have them answer their questions, strengthen their ideals and beliefs, and improve their development. On the other hand, it can popularize the knowledge about robotics process automation, attract more students to study in it, and provide new momentum for the robotics process automation profession.

4.5 Conduct intelligent teaching evaluation

In order to adapt to the development of the times, the evaluation of students should be intelligently evaluated. Robotics process automation majors have more practical courses than theoretical courses, so the evaluation of students should be different from other majors. First of all, the evaluation of the results of students' participation in the simulation system, the observation of students' practical ability and application ability, and the evaluation of the results of students' practical courses are more important. In this way to motivate students to do hands-on work. Second, to make an evaluation of students' innovation ability, according to the analysis of artificial intelligence to determine the application value of students' innovation results, to promote students to carry out active innovation, in learning knowledge at the same time, can realize their own personal value. To develop the value of nurturing the robotics process automation profession. Through intelligent evaluation to help students recognize the shortcomings of the learning process, and teachers should give scientific and standardized guidance to enable students to reflect and promote the development of students.

5. Conclusion

The application of robot process automation is very wide, and in the era of artificial intelligence, the development prospect of this profession is even broader. Teachers should improve the teaching of this specialty, firstly, they should optimize the content of the curriculum. Secondly, they should improve their teaching level and update their teaching methods. Third, to provide students with a better environment for practice, so that students can carry out operational exercises. Finally, students should be intelligently

evaluated to bring into play the teaching value of the robotics process automation program.

Conflict of Interest

The authors declare that they have no conflicts of interest to this work.

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