The Concrete Realization of Informationization in Construction Engineering Management

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Abstract: In China, the projects of construction engineering have always occupied a large proportion in the market. Because our country has a large population and the country is vigorously promoting economic development and improving people’s quality of life, the volume of demand and quality for various buildings are also increasing. In order to meet the market demand for buildings, more and more enterprises are engaged in construction engineering projects. If these enterprises want to stand out among the numerous competitors and become the best, they must do a good job in project management. In the information age, computer has become a good helper for people in production and office work, which can effectively improve the production efficiency and work efficiency. Therefore, in the work of construction engineering management, the information technology should also be applied to help managers better grasp the situation of whole project engineering, so as to be able to do a good job in the next step of planning and adjustment according to the actual development of the project. Therefore, the application of information technology in construction engineering management has very high value.

Keywords: Informatization; Construction; Engineering management

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1. Significance of Information Application in Construction Engineering Management

First, manage objective in real time. Through the full application of information technology, we can easily send the management data generated in the construction engineering management to the project management personnel in time, so as to

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achieve the purpose of real-time management and improve the efficiency of project management. Second, meet the requirements of diversified management. Through the rational application of information technology, we can understand the actual construction environment and its corresponding construction conditions more deeply, which facilitates the personnel of construction engineering management to take a variety of targeted project management strategies, so as to make them more flexibly respond to various unexpected situations in the construction of construction projects. Third, management objective comprehensively. The application of informatization is helpful to coordinate the human, financial and material resources needed by the same construction engineering, and at the same time, it can form a complete unity, so as to manage all aspects and links of construction engineering management in a more comprehensive way, ensure the smooth implementation of construction engineering and improve the management level of construction engineering.

2. Problems Existing in the Application of Informatization in Construction Engineering Management

(1) Difficulties in collecting data resources on the construction site
The variety and quantity of facilities and construction materials on the construction site are large, the number of personnel on site is also large. With the construction going on, the materials on the construction site are also constantly consumed and supplied, but there is no special personnel to supervise the quantity of these materials, the operation situation of equipment and the working situation of the personnel on the site in real-time. The above reasons lead to that the work of the data collection on construction site is very difficult in the process of construction engineering management. How to implement data collection and testing on many construction sites has become a big problem perplexing managers.

(2) The information literacy of the project team needs to be improved
If we want to apply the information technology in the construction engineering management, we need the project team members to have a high level of information literacy, especially the project management personnel. However, in fact, although the members and managers of these project teams have a high level of professional knowledge related to construction management, they do not have a high level of information literacy. The main reason for this problem is that in the past, these project team members and managers did not receive the systematic promotion training of information literacy, and they did not predict that the current work needs to apply information technology capabilities at that time. Therefore, when the country trained
personnel of construction engineering management, it did not emphasize the importance of information literacy. Nowadays, the cultivation of efficient project management personnel has begun to pay attention to the cultivation of the ability of information literacy, but it still needs to take some time for these talents to be the backbone of the work. The current situation of project team in China is that most of the project team members and managers do not have high information literacy.

(3) The platform of information management system needs to be further improved

Information management system is a platform that all walks of life are striving to build, and each industry needs to design the platform according to the actual needs of it. In the construction industry, although the platform of information management system has been designed and processed, the construction enterprises will feel great limitations when using the information management platform. This is mainly because many functions for managing construction engineering are not reflected on the platform. The functions of the system of the current construction engineering information management are too simple, it can only meet the basic needs of management, so it doesn’t play a big role.

3. The Strategy of the Application of Informatization in Construction Engineering Management

(1) Trying to use artificial intelligence and Internet of things technology

For real-time supervision of diversified and numerous materials and equipment on the construction site, as well as highly mobile personnel, we can try to use artificial intelligence and Internet of things technology. In the construction site of the construction engineering, intelligent monitoring equipment can be installed and connected to the project management office to realize the on-site monitoring in the office. At the same time, the function of artificial intelligence identification can be used to automatically identify the equipment and materials on site to realize real-time monitoring, and the system can automatically summarize and analyze the information such as the running status of field equipment, the usage of materials and the working status of staff and recorded them in the computer. For abnormal equipment, materials and personnel, the system will automatically send out early warning to remind the management personnel, so that the management personnel can go to the site to deal with the problem or conduct command in the office. Although the construction of such an intelligent system needs to cost a certain amount of cost, it can effectively reduce the waste of cost in the construction process, and can continue to be used in future projects, so it is of great value to consider comprehensively.
(2) Training for improving the information ability of the project team

The bidding unit of construction engineering can assess the information ability of the project team, and improve the requirements of the bidding unit when bidding. Therefore, the bidding enterprise needs to organize the project team to carry out the training of information ability improvement, so as to help each member master the office skills of using information technology, especially the project manager who must master the systematic information technology level and be able to skillfully use the common office software such as project, word, excel, PowerPoint, so as to facilitate the work of information management of construction engineering.

(3) Building a perfect information management system platform

Enterprises engaged in the construction industry should strive to build a perfect information management system platform and increase the functions of the system. By using the system, it is best to be able to manage the entire process of the project and help project management personnel to use the various functions of the system to manage construction personnel, manage materials and equipment, manage costs, manage time schedule, talk with shareholders, organize internal meetings, carries out risk management and milestones records. This will effectively improve the efficiency and level of construction engineering management.

4. Conclusion

The development of science and technology brings new opportunities for all walks of life. For construction engineering, the information technology can help the management personnel of construction engineering effectively improve the management level and efficiency of the project, so that the management personnel can more comprehensively grasp the situation of the project, can timely discover the risks and problems existing in the project, deal with the problems timely, and they can also effectively save the project cost through scientific management and even shorten the project time by improving the construction efficiency to avoid the problem of project overdue. The problems to be solved in the application of information technology in construction engineering include that the collection of data resource in construction site is difficult, the information literacy of project team needs to be improved, and the information management system platform needs to be further improved. The solutions to these problems is to try to use artificial intelligence and Internet of things technology, carry out improvement training of project team information ability, and construct a perfect information management system platform.
Works Cited


