Research on the Design of Preschool Education Management Information System Based on Computer Technology

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Abstract. Excellent preschool education can cultivate children's interests. Preschool education can help children adapt to study life in advance. This kind of education mode can create a new and independent learning environment for children. Many educators believe that pre-school education is the preparation stage for children to enter the campus. The revival of preschool education has improved the speed of computer education management information system [1]. This paper mainly describes the construction goal of preschool education information management system. Finally, this paper describes the main process of the design of education management information system.

Keywords: Computer, Preschool Education, Management System

1. Introduction
At present, the society has a great demand for talents. This has led to the forced improvement of educational efficiency in many schools. Many parents hope that their children can get education from childhood. There is no doubt that this can help children improve their competitiveness in society in the future. Preschool education has become the choice of many parents. Experts believe that preschool education is the most important auxiliary means for children's cognition of knowledge. According to a large number of studies, we can find that the learning potential of infants is very huge. This is also the main reason why many preschool education classes are popular in the society.

The concept of educational information management was first put forward by foreign scholars in the 1990s. The application of management information system in preschool education is an important research object. With the rapid progress of information technology, experts also use relevant technology to accurately design preschool education management information system [2]. People pay more attention to the personalized design of educational administration system (see Figure 1). On this basis, this paper describes the construction framework of the education system and the main objectives of the phased construction of the system. Finally, this paper puts forward the specific steps of the design of preschool education information system.

2. Analysis of the main objectives of the information management system of preschool education
2.1. Information control of offline classes
The main object of the establishment of education information system is the class of offline preschool education. The line includes ordinary training classes and kindergartens in various regions. Information system must fully grasp the overall information of offline education class. The information includes the status of the children, the information of the kindergarten teachers, the charge information of the kindergarten and the teaching conditions of the kindergarten. Each offline class must be independently input into the education information system.

2.2. Monitoring of regional education development
Education is not unchangeable. China is vigorously promoting the progress of primary and secondary school students' teaching [3]. Education information system must control the progress of education in various regions in time. The system must accurately grasp the specific direction of the progress of the national policy of preschool education. On this basis, the information system must expand the resources of children's teaching. The information system must also limit the admission conditions in time.

2.3. Safety supervision of young children
We know that preschool education can improve children's ability of autonomous learning. Children's learning problems must be paid attention. However, kindergartens must ensure the safety of children. In recent years, many kindergarten accidents have been reported in the news. As a result, many parents do not believe in the quality of kindergarten supervision. Therefore, the education information system must carefully examine the security of kindergarten.

2.4. Preschool education management resource database
Nowadays, the emergence of online courses breaks through the limitations of traditional preschool education. Parents can help their children master basic subject knowledge through online courses. The information management system of preschool education can set up a resource management platform of curriculum. Many parents can register users in the information system. The user name can use the child's name. Parents can find the corresponding early education courses in the resource platform.

3. The structure of information system construction and system construction by stages
3.1. Information system architecture
According to the previous analysis of the structure of education information system, the system architecture should mainly include two levels of construction and four levels of application. According to the characteristics of different regions, we can divide the construction environment into national and provincial levels [4]. According to the administrative level, we can divide the application level into national level, provincial level, municipal level and county level. After that, we need to consider the internal construction of the system.

3.2. Main objectives of phase II Construction
According to the above description, the second phase construction of the system must expand the daily supervision and management of preschool education. Moreover, the system can use the memory system to copy the historical data of preschool education. According to the analysis of the data, this can help the information system effectively implement dynamic supervision. In addition, the information system needs to accurately collect the curriculum resources of preschool education in the network. This is conducive to the construction of resource platform.

3.3. Construction of data acquisition system
The main goal of the application of data acquisition system of information system is the management data of preschool education institutions, teacher management data and system management data. The data acquisition system can be divided into different parts according to the regional level. The first is the provincial data acquisition system [5]. The second is the municipal data acquisition system. The last one is the county-level acquisition system. These three systems will collect different information about preschool education according to different regions.

3.4. Progress analysis of system construction
In the first step, designers need to investigate the development of preschool education in various provinces and cities. This approach is also known as the survey of educational needs. In the second step, the designer needs to obtain the approval of the information system project first. Third, designers need to build corresponding information system. The fourth step, the relevant enterprises should strive to obtain the unified cooperation certification of some preschool education institutions.
4. Detailed design of preschool education management information system based on computer technology

4.1. Development of user application function
The development of system user application function should mainly include four modules. The first mock exam is the user information entry function of kindergarten. The second module is the basic information input function of the kindergarten itself [6]. The third module is the inquiry function of kindergarten information. The fourth module is the login setting and permission setting of kindergarten users. In the process of system design, designers must pay attention to the application of user functions, and cannot charge arbitrarily (see Figure 2).

4.2. Development of educational supervision function
We set the educational supervision function as four main functions. They are user information query function, user information audit function, information maintenance and audit information query function. In addition, we also need to establish the user data view operation instruction, information audit operation instruction, information maintenance announcement instruction and information query operation instruction. The feedback of command operation also needs to be set.

4.3. Establishment of system database
The establishment of database is the key link in the construction of information system. However, the establishment of database is more troublesome. Designers must use programming to complete the process of establishing the database [7]. In the process of writing data, designers must avoid the emergence of high-risk vulnerabilities in the system. If the enterprise has sufficient financial support, designers can build a conceptual database model first.

Figure 2. The structure of preschool education information system based on computer
5. Analysis of main problems in system maintenance

5.1. Imperfection of system function mechanism
We find that many information systems of preschool education run independently. This leads to many provinces of preschool education information sharing is very difficult. In the process of system maintenance, designers will repair the main vulnerabilities of the system as soon as possible. However, many of the application functions and business work is not related. This shows that the system function mechanism is not perfect.

5.2. Inaccurate update of data
After each system maintenance, there will be a new data update announcement at the top of the system page. This kind of announcement is generally a comparison between the statistical data of education and the data of preschool education system [8]. It includes the number of kindergartens in different regions, the number of children in kindergartens, the number of children of different nationalities and the number of children with congenital disabilities. However, sometimes, the update of this information is inaccurate (see Table 1).

Table 1. The difference between the statistical data of education and the data of term education system

| Data sources       | Number of kindergartens | Number of people in kindergarten | Ethnic minority | Disabled children |
|-------------------|-------------------------|----------------------------------|-----------------|------------------|
| Educational system| 9447                    | 900951                           | 402271          | 102169           | 387               |
| Preschool system  | 8369                    | 569218                           | 271367          | 120893           | 663               |

5.3. The network quality of educators is very low
We found that many kindergarten staff are not professional. A lot of pre-school education training institutions of information literacy is also very low. In the process of the maintenance of education information system, supervisors must check the loopholes of the registration information of workers in various training institutions. It is worth noting that many kindergarten staff will not use the function of information system. They are not even able to accurately enter the information of children's school status.

6. The significance of the construction of feedback system and safety system of preschool education management information system

6.1. Significance of feedback system construction
The establishment of feedback system can help relevant enterprises to timely understand the application of information system of each kindergarten. Many educators can also timely feed back the loopholes of the system to the staff of the information system through the feedback system [9]. Parents of students can also give feedback to staff on some major resource management issues. The establishment of feedback system can help the long-term operation of information system.

6.2. Significance of establishing safety system
The internal information of preschool education information management system is very important. It contains a lot of kindergarten internal information and related workers' information. Most importantly, it contains children's personal information and school status information. At present, many enterprise information systems will be attacked by external network hackers. Therefore, we must build a complete network security measures.

6.3. Network security measures
The traditional security measure is network firewall. In recent years, the firewall is gradually upgrading. A lot of big bugs have been fixed. In order to further strengthen the network security, we can set the corresponding anti-virus software in the computer [10]. In addition, kindergartens should prohibit relevant staff from using internal computers to log on to some unsafe websites. These three measures can greatly avoid network security incidents.

7. Conclusion
Nowadays, there are many kinds of offline classes in preschool education. We can't deny the advantages of preschool education. In order to effectively supervise the kindergarten, we can use computer technology to complete the independent design of preschool education management information system. We should strive to extend the design concept of this information system to all regions of the country.

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