

# Research Article

# The Structural Framework Design on Information Management System of University Funding

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With the increase in the number of college students, the problem of family poverty among college students has also attracted the attention of colleges and universities. There are still many problems to be solved in the link of university funding. This article takes college students as the management object and designs a set of college funding information management system to complete the information management of college funding information for college students. The system adopts distributed and modular design ideas, divided into two parts, software and hardware, and uses MySQL as the back-end database to research and design a set of B/S university funding information management system. The system not only improves work efficiency but also ensures the safety and accuracy of data. We first tested the pressure performance of the system, and the final result shows that the system has good robustness. Then, we investigated the attitudes of impoverished students from 120 colleges and universities towards the information management system of college funding from 2016 to 2021. Combining with the data obtained from the survey and sorting and analyzing the data, the survey results show that at least 83.54% of poor students believe that this system has a greater effect on the information management of poor students. In addition, more than 64.31% are quite satisfied with the system; of course, 19.01% of them are unclear. Therefore, it can be considered that the system has a large effect on information management.

# 1. Introduction

In recent years, many universities have updated their existing funding policy system. With the widespread application of information technology, which has promoted the rapid development of all walks of life, how to improve the level of accurate funding for students through information management has become a concern of many universities. This article briefly discusses and analyzes the information management of precision funding for college students, hoping to play a leading role in improving the efficiency and ability of precision funding. The rapid development of digital networks has made information management systems a powerful means of managing college students. Relying on various information management systems, colleges and universities have achieved remarkable results in poverty alleviation. At the same time, there are problems in identifying poor students, improving academic and professional abilities, volunteering, and performance evaluation. This urgently needs to broaden the functional connotation of the funding information management system and overcome platform obstacles, closely integrating funding work with talent training elements to improve students' learning, practice, and entrepreneurial innovation capabilities. Through public welfare services to poor students, cultivate the concept of contributing to society, serving society, and giving back to society.

There have been a lot of researches on wireless communication and information management. Chen et al. researched the sources (RM) of hybrid wireless communication systems between vehicles and infrastructure, where radio frequency and electrical communication seem to be intertwined. An MRI algorithm has been proposed to solve this problem and the simulation results confirm the efficient operation of the Chen algorithm [1]. Boussadi et al. proposed a new multicore architecture specifically for embedded video and image processing applications. They proposed a flexible multicore approach with two architectures. One is implemented using CMOS65nm technology containing 16 open-source blocks, and the other is implemented using CMOSFD-SOI28nm technology containing 64 open-source blocks. Each block of these architectures can select its communication link based on the overall parallel scheme most relevant to the target application. Both chips have complete functions in simulation [2]. Chen and Qin designed an embedded application system based on iris recognition technology to realize the functions of iris information collection, input, registration, and recognition. The iris sensor is used to collect iris information and complete the software development on the embedded operating system Windows CE. The system can be used for company access control systems, airport customs security, criminal identification, etc. [3]. Hwang et al. investigated the deep-routing- (MADRL) based resource allocation method for the multicore wireless communication network (WPCN), where most hybrid access points (H-APs) transmit in wireless mode to users with limited power to retrieve data from them. Hwang et al. designed a distributed stability training system in which H-AP independently determined time and power distribution variables. The digital results show that the proposed method can achieve the same functionality as the central algorithm [4]. The data results of these studies are not accurate, and there is a certain degree of contingency in the research, which leads to the research results not being adopted by the public [5, 6].

The hardware part of the college funding information management system designed by the institute has the advantages of small size, low cost, low power consumption, light weight, high performance, and easy modularization. The software part has the advantages of easy upgrade and realtime performance [7]. A good system can provide good services to poor students in colleges and universities. At the same time, in response to the problems and countermeasures of university funding information management, this study provides a multifaceted reference, which is more conducive to university information management [8].

# 2. University Funding Information Management System

The college funding information management system is mainly divided into two parts: software and hardware [9]. The hardware system includes a wireless communication module, and the software system includes an operating system and a database [10]. The hardware part is the foundation and the carrier of the software part, and the software part makes the hardware part have use value. The two complement each other and are indispensable. The specific structure of the university funding information management system is shown in Figure 1 [11].

#### 2.1. Hardware System Composition

2.1.1. Wireless Communication Module. The function of the wireless communication module is mainly divided into three

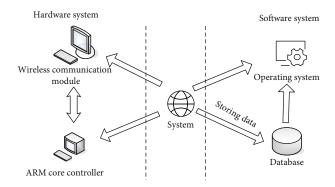


FIGURE 1: The structural framework of the university funding information management system.

aspects. One is to support multicenter data communication in terms of communication, the other is to support the collection of required data in terms of collection, and the third is to support remote management of data in terms of remote management [12, 13]. The main feature of the wireless communication module is that it is suitable for outdoor harsh environments. It supports transparent data transmission and domain name resolution function and supports various configuration software and user-developed software systems [14]. The wireless communication module has the advantages of low cost, good adaptability, good scalability, and convenient equipment maintenance in terms of data transmission [15]. The parameter comparison table of wireless communication short-distance transmission technology is shown in Table 1.

## 2.2. Software System Design

2.2.1. Operate System. The software development part of the system is realized based on the operating system. Development based on the operating system has the advantages of reduced development difficulty, real-time number, and easy portability [16]. The mainstream embedded operating systems now include Linux, UCOS, NuttX, VxWorks, and Windows CE. The specific performance analysis of these operating systems is shown in Table 2 [17].

Combined with the performance of the operating system and the system design requirements, the Linux system is selected as the operating system for this design. Linux system has high security and stability, which is very beneficial to information management.

Whether it is the Microsoft .NET concept or the SUN SUN ONE concept, it is the integration of basic operating systems and software applications, which will be the development direction of the computer industry [18]. Aiming at the trend of B/S mode control information, a development platform model has been proposed [19]. There is no doubt that the information management development system based on the B/S model will become the main structure of the information management system [20].

Compared with C/S, B/S has the following main advantages:

#### Wireless Communications and Mobile Computing

Communication type	Infrared	WiFi	Bluetooth	Zigbee	UHF communication
Communication distance	<10 meters	<300 meters	<10 meters	<500 meters	<1000 meters
Communication rate	<4 Mb/s	>2 Mb/s	<1 Mb/s	<250 kb/s	<25 kb/s
Communication frequency band	900 nm	2.4 GHz	2.4 GHz	2.4 GHz	<928 MHz
Development difficulty	Easy	Difficult	Difficult	Easy	Easy
Module cost	Low	Very high	Weak	Low	Low
Wall penetration	Without	Powerful	Weak	Weak	Powerful

TABLE 1: Comparison table of main performance of short-range wireless communication technology.

			C	1 .
TABLE 2: Embedded	operating	system	nertormance	21221010
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Name	Maximum number of tasks supported	Task scheduling methods	Open source or not
Linux	Not limited	Grabby/time piece	Yes
UCOS	64	Preemptive	Yes
NuttX	Not limited	Grabby/time piece	Yes
VxWorks	256	Preemptive	No
Windows CE	256	Preemptive	No

- (1) In the use of the system, it reduces the installation of client software. It is simple and easy to use, making the system easier to use [21]
- (2) For the future development of the system, it places high demands on developers, especially the system version and compatibility that need to be considered and save time by directly using existing browsers
- (3) From the perspective of system maintenance, only the server needs to be updated; it will not cause any client problems and can reduce maintenance costs

In the future, the development of an information management system based on the B/S model will become the main structure of the information management system.

The main characteristics of the B/S structure are strong distribution, easy maintenance, easy development, strong sharing, and common ownership. It is very cheap, easy to implement a crossplatform layout, and easy to coordinate local area networks and wide area networks. It is particularly suitable for information distribution software [22].

This design is based on the B/S framework, so it is necessary to understand the working principle of the B/S framework. B/S architecture is implemented in two ways: browser request and server response. Each web server can connect to the database server in several ways. The structure of the specific B/S architecture is shown in Figure 2.

2.2.2. Database. The database system exists independently and provides users with a unified data request interface. Different software can issue data processing requests through a unified database language, and the specific data operations are all done by the database system itself. This data independence and sharing feature saves a lot of costs for software developers, which allows a substantial breakthrough in the functions of computer software. This truly realizes that a piece of software provides a unified service for a large number of users at the same time [23].

The process of storing data in the database: call the stored procedure, and pass in the user name and password parameters.

The database serves as the data storage center. Choosing a database suitable for the system is very helpful for data processing such as data call and query. Combining system design requirements and comparing database functions, MySQL was finally selected as the back-end database for this design. The MySQL database is open source and costeffective and has better performance than databases such as MsSqlserver and Oracle. The structure diagram of MySQL is shown in Figure 3.

Simply put, MySQL database has the following three advantages:

- (1) The number of users accessing the database at the same time will not be limited
- (2) Save up to 50 million records
- (3) It is the fastest database system currently in use

The server-side processing flow is shown in Figure 4.

The full name of MVC is Model View Controller. It is the abbreviation of Model-View-Controller. It is a framework pattern used to separate business logic and data display logic, which is different from design patterns. The framework mode pays more attention to the reuse of code, while the design mode pays more attention to the reuse of design. MVC was used in desktop applications in the early days and is now widely used in the field of web development. The execution structure diagram is shown in Figure 5.

2.3. Algorithms Used by the System. This time the system uses the EM algorithm; the EM algorithm acts as an iterative optimisation in the session of data storage optimisation,

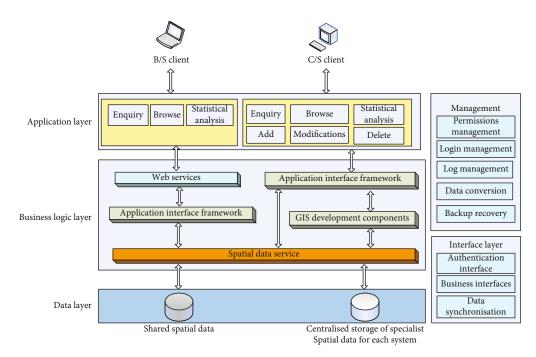


FIGURE 2: B/S architecture framework diagram.

which will facilitate real-time data updates. Since the samples in series A are independent and distributed as points, only type B samples can be plotted to calculate vector C. Assume that the known pattern is defined as

$$R = \{\mathbf{x}_1, \mathbf{x}_2, \cdots, \mathbf{x}_N\}.$$
 (1)

For the likelihood function, the joint probability density function  $q(R|\delta)$  is called the likelihood function of  $\{x_1, x_2, \dots, x_N\}$  relative to  $\delta$ .

$$\mathbf{j}(\delta) = q(R|\delta) = q(x_1, x_2, \cdots, x_N|\delta) = \prod_{i=1}^N q(x_i|\delta).$$
(2)

If  $\delta^{\wedge}$  is the  $\delta$  value that increases the maximum probability of the  $j(\delta)$  function in the parameter domain, then  $\delta^{\wedge}$ should be the "most" parameter value; then,  $\delta^{\wedge}$  is the maximum probability calculation of  $\delta$ . It is a function of a collection template called

$$\hat{\delta} = \mathbf{s}(x_1, x_2, \cdots, x_N) = \mathbf{s}(R). \tag{3}$$

 $\delta^{\wedge}(x_1, x_2, \cdots, x_N)$  is called the maximum likelihood function estimate.

Find the value of  $\delta$  that maximizes the probability of the group of samples:

$$\overset{\wedge}{\delta} = \arg \max_{\delta} j(\delta) = \arg \max_{\delta} \prod_{i=1}^{N} R(x_i|\delta). \tag{4}$$

In practice, in order to facilitate analysis, the log-

likelihood function is defined:

$$G(\delta) = \ln j(\delta), \tag{5}$$

$$\hat{\delta} = \arg \max_{\delta} G(\delta) = \arg \max_{\delta} \ln j(\delta) = \arg \max_{\delta} \sum_{i=1}^{N} \ln q(x_i, \delta).$$
(6)

### (1) There is only one unknown parameter ( $\delta$ is a scalar)

Under the terms of the probability function in terms of frequency and variance satisfaction, the maximum probability calculation is the solution of the following variation equation:

$$\frac{dj(\delta)}{d\delta} = 0 \tag{7}$$

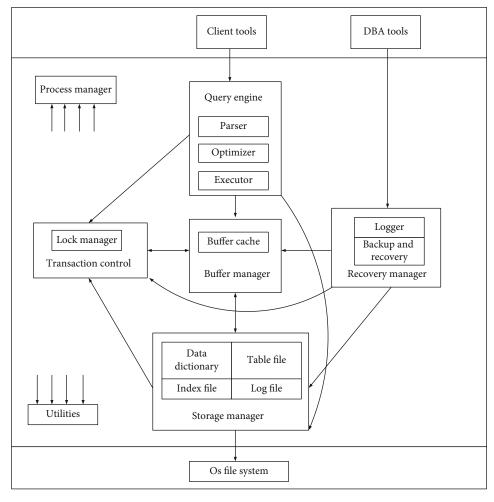
or equivalent to

$$\frac{dG(\delta)}{d\delta} = \frac{d\ln(\delta)}{d\delta} = 0.$$
 (8)

# (2) Very unknown parameters ( $\delta$ is a vector)

Then,  $\delta$  can be defined as an unknown vector with element M:

$$\boldsymbol{\delta} = [\boldsymbol{\delta}_1, \boldsymbol{\delta}_2, \cdots, \boldsymbol{\delta}_M]^T.$$
(9)



→ Depends-on

FIGURE 3: MySQL structure diagram.

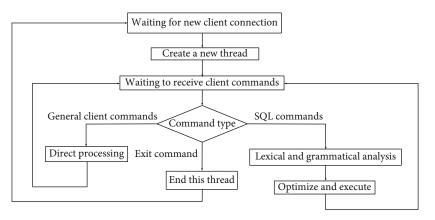


FIGURE 4: Server-side processing flow.

Let the gradient operator

If a possible function causes a result condition, the maximum probability calculation is the next equation solution.

$$\nabla_{\delta} = \left[\frac{\partial}{\partial \delta_1}, \frac{\partial}{\partial \delta_2}, \cdots, \frac{\partial}{\partial \delta_S}\right]^T.$$
 (10)

$$\nabla_{\delta} G(\delta) = \nabla_{\delta} \ln j(\delta) = \sum_{i=1}^{N} \nabla_{\delta} \ln q(x_i|\delta) = 0.$$
(11)

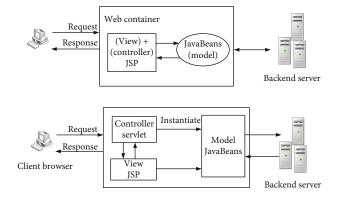


FIGURE 5: MVC operating structure diagram.

Let *Y* be a function of random variable *X*, Y = g(X) (*g* is a continuous function), then

(1) *X* is a discrete random variable, and its distribution law  $isP(X = x_k) = p_k$ ,  $k = 1, 2, \cdots$ . If  $\sum_{k=1}^{\infty} g(x_k)p_k$  absolutely converges, there are

$$E(Y) = E[g(X)] = \sum_{k=1}^{\infty} g(x_k) p_k$$
 (12)

(2) X is a continuous random variable, and its probability density is f(x). If ∫<sup>∞</sup><sub>-∞</sub>g(x)f(x)dx converges absolutely, then

$$E(Y) = E[g(X)] = \int_{-\infty}^{\infty} g(x)f(x)dx$$
(13)

For the *m* of the  $x = (x^{(1)}, x^{(2)}, \dots, x^{(m)})$  observation data, the records of the parameters and the maximum model distribution of the  $\alpha$  model are found as follows:

$$\alpha = \arg \max_{\alpha} \sum_{i=1}^{m} \log P(x^{(i)} | \alpha).$$
(14)

If the observation data is collected as  $z = (z^{(1)}, z^{(2)}, \dots, z^{(m)})$  data, the recording function of the maximum model distribution is as follows:

$$\alpha = \arg \max_{\alpha} \sum_{i=1}^{m} \log P\left(x^{(i)} | \alpha\right) = \arg \max_{\alpha} \sum_{i=1}^{m} \log \sum_{z^{(i)}} P\left(x^{(i)}, z^{(i)} | \alpha\right).$$
(15)

There is no way to find  $\alpha$  directly in formula (15), so some special skills are required. First, the formula is scaled

as follows:

$$\sum_{i=1}^{m} \log \sum_{z^{(i)}} P\left(x^{(i)}, z^{(i)} | \alpha\right) = \sum_{i=1}^{m} \log \sum_{z^{(i)}} Q_i\left(z^{(i)}\right) \frac{P\left(x^{(i)}, z^{(i)} | \alpha\right)\right)}{Q_i(z^{(i)})}$$
$$\geq \sum_{i=1}^{m} \sum_{z^{(i)}} Q_i\left(z^{(i)}\right) \log \frac{P\left(x^{(i)}, z^{(i)} | \alpha\right)\right)}{Q_i(z^{(i)})}.$$
(16)

The likelihood function is

$$j(\alpha) = \sum_{i=1}^{m} \log q(x|\alpha) = \sum_{i=1}^{m} \log \sum_{z} q(x, z|\alpha).$$
(17)

From Jensen's inequality,

$$\log \sum_{j} \lambda_{j} y_{j} \ge \sum_{j} \lambda_{j} \log y_{j}, \quad \lambda_{j} \ge 0, \sum_{j} \lambda_{j} = 1.$$
(18)

In other words, since the logarithmic function is a concave function, there are

$$f(E(x)) \ge E(f(x)). \tag{19}$$

Then, we can get

$$Q_{i}\left(z^{(i)}\right) = \frac{P(x^{(i)}, z^{(i)} | \alpha)}{\sum_{z} P(x^{(i)}, z^{(i)} | \alpha)} = \frac{P(x^{(i)}, z^{(i)} | \alpha)}{P(x^{(i)} | \alpha)} = P\left(z^{(i)} | x^{(i)}, \alpha\right).$$
(20)

# 3. Problems and Countermeasures of Information Management of University Funding

How to achieve fair, just, and open poverty alleviation has always been a problem that needs to be solved in the process of poverty alleviation. In the process of university funding information management, there are still deficiencies and problems that need to be resolved from different aspects. The problems existing in the current university funding information management are sorted out and summarized by means of interviews and investigations, and corresponding countermeasures are given. The following is an explanation of the problems and solutions presented in the four aspects.

3.1. Identification of Poor Students Based on Information Management. The steps for identifying poor students in colleges and universities are as follows: first, students submit applications based on their own situation, and then, class organizers conduct democratic voting and report the results to the college. Then, the college organizes teachers to conduct democratic evaluation and publicity based on the student's family situation and then report it to the school. Finally, the school arranges personnel to review the poor student list based on factors such as student performance and family economic conditions, to determine candidates for poor students and establish a bank of poor students. The process before entering the library is to work on-site manually and organize student information in the form of paper materials. This may be due to some factors such as interpersonal relationships and poor understanding of the situation, which caused the students who should have been selected as the poor student list to not be selected, and some students with good family financial status were selected into the poor student bank.

In fact, to solve the problems listed, we can proceed from the following aspects. First of all, the school's system platform realizes data sharing, so that you can better and faster understand the personal situation of students. In addition, the identification of poor students should be considered from many aspects. It should not be judged solely based on the family's economic status. It should be combined with student behavior, consumption information, loan status, etc. as the criteria for identification of poor students. Only in this way can we achieve fairness and justice and realize true "precise poverty alleviation."

3.2. The Improvement of Academic and Professional Ability Based on Information Management. The real purpose of college funding is to provide poor students with the guarantee that they can complete their studies safely. The ultimate manifestation lies in whether the students' personal abilities have improved and they can adapt well to the social environment. However, poor students generally need to be improved in terms of practical ability and communication ability, and their social adaptability is poor. Therefore, the problem that needs to be solved is to improve the ability of students through university funding.

The school can first help students to clarify a development direction for future employment. Secondly, analyze the shortcomings of students based on their performance in all aspects, so as to make some changes and work towards a better direction. In addition, some activities are carried out to assist students in achieving self-management and selflearning ability improvement.

In addition, colleges and universities can provide students with some internship opportunities, such as workstudy programs and innovation and entrepreneurship bases. At the same time, certain requirements are made for students during the internship, so as to ensure that students can get as much improvement as possible during the internship.

3.3. Volunteer Service Based on Information Management. Although it is advisable for students to provide part-time work-study and volunteer services, it is difficult to guarantee the quality and efficiency of student services if the two are not integrated with the university funding management platform. The service quality of students cannot be judged and assessed based on data. Volunteers are short of funds for organizing activities and often seek sponsorships. There is also a volunteer service that goes through the scene and organizes a group to consume some materials, which leads to bad habits for the students. All these indicate that voluntary service lacks good information management. In this regard, there are the following solutions: first of all, a standard should be formulated regarding service quality, combining the standard with the system platform to form a complete system. Whether it is judging the service quality of volunteers or rewarding and punishing volunteers, they are all implemented in strict accordance with the system. Then, the various expenses of volunteer activities must be reviewed and reported and other procedures are used to strictly control the use and flow of funds. Finally, as much as possible, allow volunteers to carry out professionalrelated volunteer service positions, which can better improve students' professional skills.

3.4. Low Information Entry Efficiency. The inputting efficiency of university funding management information is low, and the information cannot be input into the system in time, and the real-time transmission of information cannot be realized. Information entry generally has two methods: students self-filling in and the class unified entry. This leads to situations such as missed recording, wrong recording, and nonstandard format of information. Moreover, the basic personal information of students is entered and quoted by the admission office, so there are situations that need to be reviewed and the information needs to be changed. Therefore, the efficiency of information entry is not high.

For these situations, the system can be upgraded first, using recognition technology for automatic information entry. For nonstandard or missing information, errors can be reported automatically, and then, the school administrator can correct these errors. In addition, for the basic information part, it is necessary to realize the unification of the data of each school system, so that inconsistent information can be avoided.

3.5. Experiment Result. Perform data processing tests on the system's database. It includes three test items: empty table insertion, data selection, and data deletion. The test method of empty table insertion is to select student information data and insert 100,000 records, and the test consumes time. The test method of data selection is to select 1000 records from a 2000-record table, and the test consumes time. The test method of data deletion is to delete 1000 records from a 2000-record table, and the test consumes time. The test method of data deletion is to delete 1000 records from a 2000-record table, and the test consumes time. The set items are tested multiple times to reduce accidental errors. The specific test results are shown in Table 3.

According to the test results, the following conclusions are drawn:

- (1) In the conventional large-capacity and largerecording environment, the performance can be maintained at a high level
- Performing an empty table insertion operation has a greater impact on the performance of the system
- (3) The database server used in this system meets the management requirements of colleges and universities for student scholarships and student loans

The connection rate and average response time of the browser are shown in Table 4.

Test items	est items Test methods	
Empty table insert	Select student information data, insert 100,000 records	40.781 seconds
Data selection	Select 1000 records for a table with 2000 records	0.01 seconds
Data deletion	Delete 1000 records from the 2000-record table	0.07 seconds

TABLE 3: Stress test table.

#### TABLE 4: Connection rate and average response time.

	150	200	400	750	1000
Transfer rate (bps)	10736.1	11398.1	11451.1	11476.1	11482.6
Average response time (ms)	188.78	1300.54	1350.41	1411.95	18137.81

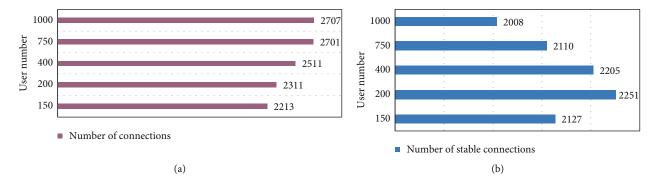


FIGURE 6: Connection number performance test.

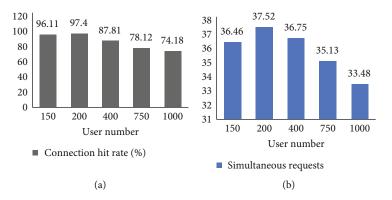


FIGURE 7: Performance test of connection hit rate and number of simultaneous requests.

The connection rate of the browser increases as the number of users increases, and the average response time also increases, which shows that the performance of the system will change according to the number of users. In addition, it also shows that the system design needs to improve the performance of the system as much as possible, so that there is no delay in the data, which brings a bad interactive experience to the user.

The number of browser connections will vary depending on the number of users. The specific changes are shown in Figure 6.

Figure 6(a) shows the number of connections generated by the browser under different numbers of users.

Figure 6(b) shows the number of stable connections of the browser under different numbers of users. It can be found that when the number of users exceeds a certain value, the number of stable connections in the browser will decrease, which also shows that the number of users still has a certain impact on the operation of the system.

The browser's connection hit rate and the number of simultaneous requests vary with the number of users. The specific changes are shown in Figure 7.

Figure 7(a) is a stress test of the connection hit rate, and Figure 7(b) is a stress test of the number of simultaneous requests. The test results of the two performance graphs show that as the number of users increases, the number of

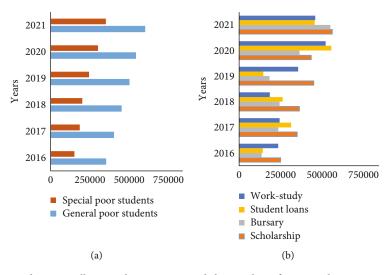


FIGURE 8: Number of poor students in colleges and universities and the number of poor students receiving four funding methods.

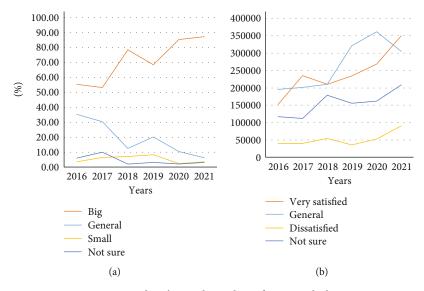


FIGURE 9: Poor students' attitudes and satisfaction with the system.

connections and simultaneous requests of the system decreases. At the same time, it shows that the increase in the number of users will also cause the system to face tremendous pressure. We can find the balance of system performance by observing these changes. This balance point will determine the maximum number of users that the system can access at the same time.

120 colleges and universities were selected to investigate the situation of poor students from 2016 to 2021, as shown in Figure 8.

Figure 8(a) shows the number of poor students in colleges and universities from 2016 to 2021. Figure 8(b) shows the number of poor students who received the four funding methods. It can be seen from the figure that the number of poor students is increasing sharply. At the same time, the number of people receiving funding is also increasing, indicating that colleges and universities pay more attention to funding for poor students. Next, we collected the attitudes and satisfaction of poor students towards the system, as shown in Figure 9.

Figure 9(a) shows how poor students think the system plays a role in information management. At least 53.23% of poor students think that the system is of great help to information management. Figure 9(b) shows the results of the survey on the satisfaction of poor college students with the information management system of college funding. On the whole, poor students are quite satisfied with the information management system for university funding.

## 4. Discussion

No matter which software system, it is constantly changing with the change of demand and cannot be changed again after the software system is formed. During the development and maintenance of database application software systems using B/S architecture and component systems, developers can update them as required. Adjust the corresponding layers and their components through different software levels and their components to realize the transition from the old system to the new software system, so that it can adapt to changing needs. In the past, system maintenance can only cost a lot of money, sacrificing a lot of time to redevelop the system or modifying the original system a lot.

The university funding information management system adopts the B/S architecture model. According to the modeling theory, it uses Microsoft Visio modeling analysis and uses mature architecture and technology to construct. The background is MySQL database platform. The system can not only meet the requirements of college student funding work and complete the funding work accurately and efficiently but also realize student funding informatization, networking, and efficiency. It has strong practicability and popularization. The system has played a good role in assisting information management, but with the discovery of problems, the system still needs to be updated in real time, so it will consume more manpower and material resources.

The original intention of the university funding information management system is to better achieve fair and just "precise poverty alleviation." The system designed this time has indeed brought great help to impoverished college students. Both in terms of satisfaction with the experience of poor students in colleges and universities and in terms of management efficiency, tremendous improvements have been made. At the same time, when studying the issue of university funding informatization management, a survey was used to summarize the discussions of poor college students on the problems of university funding informatization. This not only allows a more comprehensive understanding of the essence of the matter but also allows us to look at the problem from the essence, so as to draw the countermeasures we need to solve the problem. This can help research to be more detailed and accurate.

# 5. Conclusion

In short, just like teaching activities, student funding is also part of university education and training. However, as far as the current situation is concerned, there are still many problems that need to be resolved in the process of funding information management. It is very necessary to actively explore the problems in the development process of college student financial aid information management and find effective countermeasures. In the development process, make full use of the advantages of computer network technology, provide sufficient resources for students' study and life, and help every student to benefit from high-quality learning conditions. The financial information management of colleges and universities should target poor college students, so as to promote the process of identifying poor students, sharing data, and providing specific assistance, at the same time, developing the function of the information platform, incorporating voluntary services into the information management and evaluation system, and cultivating students' sense of responsibility, social identity, and gratitude. Through the improvement of students' professional skills, practical skills, and professional skills, the psychological and economic dual poverty can be finally achieved. Taking poor students as the main performance appraisal subject, listen to the opinions of aid recipients to ensure the effectiveness of the policy.

# **Data Availability**

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

# **Conflicts of Interest**

The authors state that this article has no conflict of interest.

### References

- J. Chen, Z. Wang, and T. Mao, "Resource management for hybrid RF/VLC V2I wireless communication system," *IEEE Communications Letters*, vol. 24, no. 4, pp. 868–871, 2020.
- [2] M. A. Boussadi, T. Tixier, A. Landrault, and J. P. Derutin, "HNCP: a many-core microprocessor ASIC approach dedicated to embedded image processing applications," *Microprocessors and Microsystems*, vol. 47, pp. 333–346, 2016.
- [3] D. Chen and G. Qin, "An embedded iris image acquisition research," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 5, no. 1, pp. 90–90, 2017.
- [4] S. Hwang, H. Kim, H. Lee, and I. Lee, "Multi-agent deep reinforcement learning for distributed resource management in wirelessly powered communication networks," *IEEE Transactions on Vehicular Technology*, vol. 69, no. 11, pp. 14055– 14060, 2020.
- [5] F. M. Lins, L. Tambara, F. Lima Kastensmidt, and P. Rech, "Register file criticality and compiler optimization effects on embedded microprocessors reliability," *IEEE Transactions on Nuclear Science*, vol. 64, no. 8, pp. 1–2187, 2017.
- [6] L. T. Clark, D. W. Patterson, C. Ramamurthy, and K. E. Holbert, "An embedded microprocessor radiation hardened by microarchitecture and circuits," *IEEE Transactions on Computers*, vol. 65, no. 2, pp. 382–395, 2016.
- [7] R. Sato, Y. Hatanaka, Y. Ando et al., "High-speed operation of random-access-memory-embedded microprocessor with minimal instruction set architecture based on rapid single-fluxquantum logic," *IEEE Transactions on Applied Superconductivity*, vol. 27, no. 4, pp. 1–5, 2017.
- [8] J. A. Martinez, J. A. Maestro, and P. Reviriego, "Evaluating the impact of the instruction set on microprocessor reliability to soft errors," *IEEE Transactions on Device and Materials Reliability*, vol. 18, no. 1, pp. 70–79, 2018.
- [9] V. Creylman, I. Knippels, and P. Janssen, "Assessment of transfemoral amputees using a passive microprocessorcontrolled knee versus an active powered microprocessorcontrolled knee for level walking," *Biomedical Engineering Online*, vol. 15, no. S3, pp. 53–63, 2016.
- [10] A. Castle and R. Harvey, "Lean information management: the use of observational data in health care," *International Journal* of Productivity and Performance Management, vol. 58, no. 3, pp. 280–299, 2016.
- [11] S. C. Mudumbai, "A study on the secure user profiling structure and procedure for home healthcare systems," *Journal of Medical Systems*, vol. 40, no. 1, pp. 1–8, 2016.

- [12] H. Madeleine, "Outwardly an innocuous conference authority': national socialism and the logistics of international information management," *German History*, vol. 1, pp. 67–92, 2017.
- [13] J. B. Rinehart, T. C. Lee, K. Kaneshiro, M. H. Tran, C. Sun, and Z. N. Kain, "Perioperative blood ordering optimization process using information from an anesthesia information management system," *Transfusion*, vol. 56, no. 4, pp. 938–945, 2016.
- [14] S. V. Rehm, L. Goel, and I. Junglas, "Information management for innovation networks-an empirical study on the "who, what and how" in networked innovation," *International Journal of Information Management*, vol. 36, no. 3, pp. 348–359, 2016.
- [15] M. Karami and R. Safdari, "From information management to information visualization: development of radiology dashboards," *Applied Clinical Informatics*, vol. 7, no. 2, pp. 308– 329, 2016.
- [16] D. Prajogo, J. Toy, A. Bhattacharya, A. Oke, and T. C. E. Cheng, "The relationships between information management, process management and operational performance: internal and external contexts," *International Journal of Production Economics*, vol. 199, no. MAY, pp. 95–103, 2018.
- [17] Y. Hwang, H. Lin, and D. Shin, "Knowledge system commitment and knowledge sharing intention: the role of personal information management motivation," *International Journal* of Information Management, vol. 39, pp. 220–227, 2018.
- [18] W. Hou, X. Lu, P. Wu, A. Xue, and L. Li, "An integrated approach for monitoring and information management of the Guanling landslide (China)," *ISPRS International Journal* of Geo-Information, vol. 6, no. 3, p. 79, 2017.
- [19] J. Weissmann, A. Mueller, D. Messinger, C. G. Parkin, and I. Amann-Zalan, "Improving the quality of outpatient diabetes care using an information management system," *Journal of Diabetes Science and Technology*, vol. 10, no. 1, pp. 76–84, 2016.
- [20] A. K. Jallow, P. Demian, C. J. Anumba, and A. N. Baldwin, "An enterprise architecture framework for electronic requirements information management," *International Journal of Information Management*, vol. 37, no. 5, pp. 455–472, 2017.
- [21] F. Ma, G. Marchionini, and X. Zhang, "Editorial," *International Journal of Pattern Recognition and Artificial Intelligence*, vol. 20, no. 4, pp. 463–465, 2006.
- [22] H. S. Dhillon, H. Huang, and H. Viswanathan, "Wide-area wireless communication challenges for the Internet of Things," *IEEE Communications Magazine*, vol. 55, no. 2, pp. 168–174, 2017.
- [23] K. E. Kolodziej, J. G. Mcmichael, and B. T. Perry, "Multitap RF canceller for in-band full-duplex wireless communications," *IEEE Transactions on Wireless Communications*, vol. 15, no. 6, pp. 4321–4334, 2016.