

Brief Analysis on the Application of One-Card System in Intelligent Campus

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Abstract: With the development of information age, the development of campus card has also been leaping forward. In order to meet the growing needs of teachers and students, the application of smart campus card system is put forward. The system can be fast and convenient, and has great significance for promoting the information management system of colleges and universities.

Keywords: One-card; Smart campus; System; Application

1. Introduction

The smart campus card work in Colleges and universities has always been an important part of the work of students in Colleges and universities. The results of the identification of poor students will directly affect the living standards of teachers and students, indirectly affect the learning quality of poor students, and affect the fairness and influence of University affairs. There are many problems in the identification of poverty-stricken students in Colleges and universities, which leads to the failure of the reasonable and fair allocation of subsidized funds to the real poverty-stricken students [1-3]. In the era of rapid development of information technology and vigorous development of big data, colleges and universities should establish their own analysis of students' teaching, learning, management, life and other aspects of data research. Campus card is an important part of the construction of digital campus in Colleges and universities. It symbolizes the identity of teachers and students in the campus. It bears the application of teachers and students in school life, work and learning, and provides data support for teaching, scientific research and decision-making management. Among them, as a system application of campus consumption service, one-card system produces a large amount of consumption data, and the mining of one-card consumption data has become a hotspot in university informatization research. Taking the one-card system of Overseas Chinese University as an example, this paper analyses and studies the consumption data of student canteens collected by one-card system, excavates the consumption level of students, and provides a data service option for the identification of poor students in student management [4-5].

With the expansion of university scale and the popularization of information technology, the information system of university becomes more and more complex. In addition, people's demand for campus application is also increasing. In order to better meet the needs of campus

management and information system for teachers and students, it is necessary to establish a more perfect campus intelligence system. Among them, the card system is a very important part. One-card system can make colleges and universities better grasp all kinds of basic data, provide strong data support for school decision-making, and constantly improve the management level of schools. The construction of one-card system will help to further improve other network application platforms of schools and make the whole campus information system more complete. While recognizing that one-card system can bring convenience, we should also be aware that the current application of one-card system is still on the surface, one-card system and University management. The deep integration of aspects is not enough, lacking of intelligent applications and other functions. At present, the card system has not really played its due role in data analysis and utilization. It has not made full use of students' card swiping records to analyze and standardize the behavior of teachers and students; it has not used teachers' card swiping records to analyze teachers' scientific research and teaching work, and has also made school policies. In terms of system formulation, the role of the card system has not been fully developed. In addition, some colleges and universities in the construction of card system, has not fully combined with their own actual situation, lack of forward-looking.

2. Data Acquisition of All-in-One Card Students

For students' consumption data, in addition to dining in the canteen, it also includes supermarket consumption, network recharge, electricity payment, self-service copying and other consumption types. According to the actual data reflecting students' consumption level, it is mainly reflected in the dining room dining data. Therefore, it is necessary to exclude other types of consumption running water and only collect part of consumption running water

in dining hall. First of all, we need to determine the data source. This topic mainly studies the consumption level of students and the coefficient of consumption of poor students. Therefore, the data source is a cartoon consumption pipeline database, and the research object is the students in school. Campus card system is an important on-line production application system, which is not suitable for direct connection to its database for large-scale data analysis. Therefore, the data analysis should follow the following principles: First, establish an independent database to ensure the separation of analysis database and on-line production database, and establish analysis. The corresponding relationship between database and production database tables; secondly, extracting production database data by ODI tools, or establishing links with production database through Data Base Link; and then avoiding the impact on the performance of production library when extracting data from analysis database, so synchronization time can be arranged at night when transaction volume is small and non-day-end statistics time. For the source data of the analysis, this topic obtains the consumption flow of students in the past two years of non-holidays, non-winter and summer vacations as the analysis data, and screens out the consumption flow of canteen merchants, and the consumption flow of undergraduates as the analysis data. Because during holidays, winter and summer holidays, the number of students consuming in school is not continuous or cannot identify students' consumption habits, so we need to exclude such data.

Firstly, data model is analyzed, data structure is constructed, data warehouse, conceptual model, logical model and physical model are established. According to the need of large-scale data processing, taking ORACLE database as an example, the database is established, and the corresponding physical model is established according to the logical model, and the relevant views are established according to the analysis needs. Establish the data sheet of this subject. There are mainly the following:

T_ZA_ACCOUNT (Card Account Form)

T_ZA_DEPARTMENT (Department Table)

T_ZA_PID (Identity Category Table)

T_ZA_MERCHANT (Business List)

T_ZA_DEVICE (Equipment Table)

T_ZA_TRANFLOW (Transaction Flow Table)

T_ZA_TRANSTYPE (Transaction Type Table)

The card account form is the basic information form of all cardholders in the card system, which mainly includes the information of campus card account number, school/work number, name, gender, identity category, certificate number, department and so on. According to the type of cardholder or the requirement of data analysis, the card holder can get the information from the card. To extract the group of cardholders to be analyzed, and at the same time extract the consumption flow data accord-

ing to the association of campus card accounts. Departmental table is the organizational structure of the Department that records the information of the cardholder's department, including department number, department name and other information. Identity category table is an information table that records the identity of students and faculty in school, including identity category code, identity category name and other information. The merchant account form is the information of the collector's account, including the merchant account number, the name of the merchant and so on, which is recorded in the one-card system. The equipment table is a record of all the terminal information of the card system. It is used for the specific equipment consumed by the merchants and cardholders who belong to the related equipment. It contains the information of the equipment number, the name of the equipment and the merchants who belong to it.

3. Design of a Card System Model based on Intelligent Campus Environment

Intelligent campus is the focus of the development of colleges and universities at present. Intelligent campus and traditional digital campus have been updated in concept. Therefore, in the process of building a one-card system, we must closely integrate with the current education and service concepts, build a perfect information sharing mechanism, further optimize the system process, and enhance it. Campus management service level to help. One-card system should be connected with banks and other systems to realize the mutual transformation and processing of campus consumption, subsidies and other data. In addition, the system is divided into three platforms, the first is the database platform, which is mainly used to store user account information; the second is the core management platform, which is mainly used for system monitoring, business management, communication services; the third is the application platform, which mainly provides relevant application services for users. Application system platform based on database.

From the current application situation, the card is mainly used for small consumption in canteens, supermarkets, water houses and so on. It cannot achieve the functions of cash collection. From the aspect of hardware composition of consumption system, it mainly includes cards, terminal consumer computers, etc. Among them, the terminal consumer computer plays a powerful role, responsible for data acquisition, processing and transmission. The system establishes a special database for users to store relevant letters.

Interest, and with the help of the deposit machine to transfer the funds in the bank card to one-card. The school set up breakfast, lunch, dinner and night supper in the canteen. According to the different consumption levels of male and female students and the eating habits, the supper and night supper were divided into one meal,

named after dinner. Since each meal is consumed more than once, it is necessary to consolidate all consumption amounts in a meal range.

When students use a card, if they lose it, they can also report it, and they can set and modify their passwords. Cartoon has the function of identity recognition, which can identify and verify the identity information of card-holders, so that it has the functions of access control and attendance. At this stage, some colleges and universities can also achieve fingerprint authentication, with the help of advanced biometric technology, further enhance the identification level of the whole card system, improve the security level of authentication. The card system also realizes the docking with the multimedia classroom management system, and can obtain the information of course arrangement. In the process of using the system, teachers can generate the use rights of teachers and corresponding classrooms, which is conducive to the information management of multimedia classrooms and improves the efficiency of management.

4. Conclutions

As a new era of campus intelligent interactive platform, smart campus card can not only facilitate teachers and

students, but also need continuous development. It can bring convenience to students, teachers and students' learning and life. It promotes the construction and development of campus information, promotes the management and standardization of university information system, and has important practical price. Value.

References

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