Abstract: Network teaching and its related research has become an important part of the education reform in China. How to effectively use the Internet resources, the construction of the classroom under the network environment, the modern teaching mode based on the combination of network teaching and classroom teaching, improve the quality and effect of teaching and learning, deep integration of information technology and curriculum, is an urgent need to study the problem. The new English curriculum standard also advocates teachers to make extensive use of network resources to assist teaching, explore new teaching mode, promote personalized learning, and improve classroom teaching effect. Therefore, this paper combined with the teaching of English reading, in linguistic theory and learning theory, on the basis of the new English curriculum reform and the advantage of multimedia and network technology, the construction of junior high school English classroom reading teaching mode under the network environment development. With the development of economy and information, English is becoming more and more important. For some industry workers, often need to read a lot of English data, or even to write pure English literature, because the English level can't reach a certain height, the need to learn English again. English reading can not only cultivate the sense of English language, but also promote the accumulation of vocabulary, improve the level of writing, training English comprehensive ability to help. English independent reading and word reciting software is to improve the comprehensive ability of English software can meet the basic requirements of English learning. The software to Windows XP as the operating platform, based on the Delphi language, using the ADO database engine and Access database development technology. To achieve the introduction of the text, on the new words, examples for storage, memory of the new words, the birth of the word, the export of fixed usage and other functions. At present, College English teaching is facing unprecedented challenges: many colleges and universities to carry out the teaching reform, College English courses in the reduction of credit and hours. In this process, the Chinese students in the traditional foreign language strengths of reading, it is bound to be a challenge. A lot of reading to the limited classroom time and language learning between the intakes is very difficult to find a good balance, we must find an effective way to ensure students' English reading and "quality" and "quantity" can meet the requirements of language acquisition. This research aims to discuss how to analyze and design can meet the requirements of computer and network in College English Classroom English teaching mode of "reading teaching management system based on the Internet environment to solve the existing classroom teaching of English reading in the time of shortage problem, realize the College English Reading Classroom extends from time the geographical restrictions, learner centered, focusing on interactive network space. The main function modules of the system design include: reading teaching, automatic marking, score management, user dictionary, course and exam management, system management. The development of network teaching of College English reading platform, to make up for the lack of classroom teaching in the traditional English reading teaching, which is not restricted by time and place, has very practical significance in avoiding duplication, improve teachers teaching efficiency, promote learning effect etc.

Keywords: Network environment; English reading; information management; network teaching; teaching mode

1. Introduction

The social life of information and economic globalization, the importance of English has become increasingly prominent. As one of the most important information carriers, English has become the most widely used language in every field of human life. In terms of the use of population, English is second only to Chinese, Spanish, the world's third largest language, at present, there are more than three hundred million people in the world as their mother tongue. In the use of the scope, the Internet 3/4 of the information is written in English, more than seventy percent of the world's mail English writing, or English address; broadcast around the world, more than sixty percent in English; international politics, business, culture, trade, transportation and other fields, all to the English communication tools. It can be said that English is an absolute "world language". Under such background, many countries in the basic education development strategy [1], all the English education behavior of civil quality education important component, and put it in a prominent position. In order to meet the needs of talents training in the new period, the status of English in education has been promoted to a strategic level, and English language related courses have been extended from primary school and middle school to school. To the university stage, but also through the establishment of the National College English four, six level of examination in the form of college students to measure the level of English. To a large extent, regardless of the level of education, regardless of which professional students, English is a topic that cannot be avoided. College English is a compulsory course for non English Majors in college students opened, in modern foreign language teaching theory under the guidance of the main teaching content which covers English language knowledge and listening, speaking, reading, writing and translation skills, both English learning strategies [2], cross-cultural communication. After years of development and accumulation, it has become an indispensable part of China's current higher education system, for the state and society to cultivate a large number of talents can communicate in English. No matter which one way to realize the network of College English reading system, as educators, we must realize that English language learners as a whole course of study of a member of the group, wants to show themselves by other members of the group's attention in the learning process, and hope to others communicate when they encounter problems, hope their learning outcomes are group members recognized, hoping to grow and other members. Ignore the basic fact to design the network learning system of College English reading, is tantamount to simply take the classroom teaching of the traditional teacher centered to the network space to help to solve the problem fundamentally. The most important purpose of this research is to discuss how the Internet environment is designed and implemented to meet the requirements of computer and network in College English Classroom English teaching mode of "speed reading teaching management system based on solving the time shortage problems met in the teaching of reading the existing classroom, the College English reading class extends from time the geographical restrictions, learner centered[3], focusing on interactive network space. The schematic diagram of the English network reading system is shown in Figure 1.
The starting point of this paper through the design of teaching system of College English reading under a network environment, trying to solve the current college English reading, especially the fast reading teaching problems, to make up the defect existing in the system of College English learning. Through the reading and understanding of these materials, it has laid a solid theoretical foundation and technical support for the final completion of the paper, a series of necessary preparation. Through participated in the teaching reform of College English network teaching and domestic academic conferences, with in-depth exchanges with domestic experts, understand the current teaching characteristics of College English reading, "research and analysis of network teaching of College English reading system". This paper mainly on deepening the reform of College English reading teaching and improve teaching efficiency by using information technology background, fully consider the learning styles and features of modern English language learners, through a large number of pre-research and practical work experience of College English fast reading network teaching needs analysis and targeted design the corresponding function module, and uses the browser / server (B/S) architecture design for system. And with the information age of the Internet is gradually changing people's life, the network popularization rate is constantly rising, in the context of "distance education", "education network" and "network classroom", "school", gradually appeared in people's vision. The network learning model and the traditional learning method based on the initiative, can play a greater learning enthusiasm, able to implement two-way teaching effectively, personalized education, these are the advantages of network teaching, but because learners are dispersed, learning time distribution of each learner is discrete type, how to ensure the quality of network learning, this is a new problem. The network assessment is undoubtedly a good way to protect the network learning, how to build a scientific evaluation system based on the network learning system [4], becoming a new research direction. Since the academic archives as the art education project of Harvard University, the method of evaluation of students' learning process and results in the "zero project" has been paid attention by the world. The electronic archives, it is in the background of the information age of electronic information technology, information technology. Electronic gear is an organic whole that records the effort, progress and reflection of the whole study. Because of the learning process of E-portfolio has, more conducive to learning and evaluation together, the former is the driver, while the latter is for the former incentive and feedback, which can effectively guarantee the quality of learning, the e-portfolio assessment based on learners' learning can promote more. Learners in the network learning process is always at the core position, so we not only need to rely on tests to measure the performance of network learning, at the same time we have to network learning process for learners to monitor, learning behavior and learning analysis results of learners through the network, comprehensive evaluation of learners. E-portfolio is a product of learner centered new learning way, and because the e-portfolio has development, it could collect the learner information data in many aspects, so it represents the learner in the learning process of growth, evaluators to conduct a comprehensive and comprehensive assessment of learners according to the e-portfolio records, learners themselves can also be self reflection based on e-portfolio, which is also a learner to record their learning process. Learning assessment based on the electronic portfolio is in fact a process and authenticity evaluation. In this evaluation system, any kind of learning activities can evaluate the learning content, and can evaluate the learning progress of the learners [5]. Therefore, all learning behaviors in the evaluation system can be used as evaluation activities, and these assessments can collect information from different ways to provide authentic and reliable information for learners' learning situation. Application of electronic gear to assess the way learners can be more clear to allow learners to observe their own learning situation, to judge whether progress, or step back. This paper first introduces the network learning evaluation, the study of the current network learning assessment of the main way and the network learning assessment of the status quo, and analysis of the current development trend of network learning assessment. Then the paper introduces the electronic gear, studies the practical significance and characteristics of the electronic gear, and analyzes the application of the electronic gear in China. Based on e-portfolio framework, in view of the network learning English for specific areas, research and design a based on e-portfolio's idea, using Java technology, build a stable, convenient, adaptable and open based on the process, to focus on the incentive feedback comprehensive evaluation system.

2. The key technology of system involved

2.1 Delphi visual development tools introduced

Delphi is a well-known Windows platform for rapid application development tools (Application Development Rapid, referred to as RAD). Its predecessor, the DOS era is the prevalence of a moment of "Pascal Borland Turbo"; the earliest version of the United States by the United States Borland (BOLN) Company in 1995 development. Cast Anders Hejlsberg. After several years of development, this product is also transferred to the company's Embarcadero. Delphi is an integrated development environment (IDE), the core is the traditional Pascal language and Object Pascal, with a graphical user interface development environment, through IDE, VCL tools and compilers, with link database function, consisting of a object oriented programming centric application development tools. Borland Company launched by the Delphi is a new visual programming environment, to provide us with a convenient and fast Windows application development tools. It uses a Microsoft Windows graphical user interface of many advanced features and design ideas, using a flexible reusable complete object-oriented programming language (Object-Oriented Language), the world's fastest compiler, the most advanced database technology. For the majority of application developers, using the Delphi software development and application will greatly enhance the efficiency of programming, and with the deepening of the application, you will find that every detail of a design program is no longer work dull as ditch water -- Delphi, will bring you a joy. Delphi is the United States Borland (BOLN) company developed the work under the Windows platform development tools; it is the predecessor of the product under the Borland Turbo Pascal DOS. From the product name can be known, Pascal is using Turbo language. From the beginning of the Pascal Turbo 5.5 version, Borland company in the traditional Pascal based on the addition of object-oriented features. Delphi is an integrated development environment (IDE), the use of the traditional Pascal language developed by the Pascal Object language [6]. It is a code editor rather than a language in essence, but because Delphi is almost the
only product on the market using a Pascal language, so sometimes Delphi has become synonymous with people call Object Pascal. Borland has the Object Pascal language renamed Delphi language. Delphi has a visual integrated development environment (IDE), the use of object-oriented programming language (Object Pascal) and component-based development framework. Delphi it provides the use of these components, developers can quickly build the application system. Developers can also according to their own needs to modify the parts or use Delphi itself to write their own parts. "Real programmers use C++, smart programmers with Delphi", this sentence is the most classic Delphi, the most realistic description. Delphi is known as the fourth generation programming language, it has simple, efficient, powerful features. Compared with Delphi, VC is simpler and easier to grasp, while in function is not inferior; and Delphi compared to VB, the function is more powerful, more practical. It can be said that Delphi at the same time both powerful and VC features VB easy to learn the characteristics of. It has always been a programmer's favorite programming tool. Delphi has the following characteristics: Based on the form and the object-oriented method, high speed compiler, powerful database support, and Windows programming tight combination, strong and mature component technology. But the most important is the Pascal Object language; it is the root of all. Pascal Object language is developed on the basis of the Pascal language, easy to learn. Delphi development interface as shown in Figure 2.

### 2.2 J2EE technology introduction

J2EE is a completely different from the traditional application development technology architecture, including many components, mainly to simplify and standardize the development and deployment of application system, and then improve the portability, security and reuse value. J2EE is a set of core technical specifications and guidelines, which contains various components, service architecture and technical level [7], common standards and specifications are made between different platforms, all based on the J2EE architecture, there is a good compatibility between enterprises to solve the past the back-end information products are not compatible with each other, inside or outside the enterprise to communicate the dilemma. J2EE components and the "standard" Java class are different: it is assembled in a J2EE application, with a fixed format and comply with the J2EE specification, by the J2EE server for its management. The J2EE specification is defined as J2EE components: the client application and the applet is running on the client components; Java Served and Java Server Pages (JSP) is a Web component running on the server; Enterprise Java Bean (EJB) component is a business component running on the server. J2EE (Java 2 Platform, Edition Enterprise) is a large enterprise mainframe computing type and design of the Java platform. Sun micro system (together with its industrial partners, such as IBM) designed J2EE, in order to simplify the application development in the thin client level environment. For creating reusable modules and standard because of the establishment of the hierarchical structure can program problems in automatic processing, J2EE simplifies the development of applications; it also reduces the programming and training requirements for programmers. Because companies must adapt to the new business needs, the use of existing enterprise information systems in terms of investment, rather than re formulate a comprehensive program has become very important. In this way, a gradual (rather than radical, totally negative) approach is based on the existing system on the server side platform mechanism is the company's needs. J2EE architecture can make full use of the user's original investment, such as the use of some companies Tuxedo BEA, CICS IBM, Encina IBM, VisiBroker Inprise and Application Server Netscape. This has become possible because the J2EE has a wide range of industry support and a number of important 'Business Computing' areas of supplier involvement [8]. Each vendor provides an upgrade path for existing customers without the need to scrap existing investments and enter a portable J2EE field. The existing operating system and hardware can be kept in use, because the product based on the J2EE platform can be used in almost any operating system and hardware configuration. J2EE is able to develop portable applications that are deployed in a heterogeneous environment. J2EE based applications do not rely on any particular operating system, middleware, hardware. Therefore, a reasonable design based on the J2EE program can be deployed to a variety of platforms only once. This is very important in the typical heterogeneous enterprise computing environment. The J2EE standard also allows customers to order off the shelf components that are compatible with J2EE, and to deploy them in a heterogeneous environment, saving the cost of making the entire program by itself. The schematic diagram of J2EE architecture is shown in Figure 3. Enterprises must choose a server side platform, this platform should be able to provide excellent scalability to meet the business operation of a large number of new customers on their systems. Applications based on the J2EE platform can be deployed to a variety of operating systems. For example, it can be deployed to high-end UNIX and mainframe systems, this system can support 64 to 256 processors, (This is the NT server compared to J2EE) the suppliers to provide a more extensive load balancing strategy. Can eliminate the bottleneck in the system, allowing more than one server to integrate the deployment. This deployment of up to thousands of processors, to achieve a highly scalable system to meet the needs of future commercial applications. A server side platform must be able to operate around the clock to meet the needs of the company's customers and partners. Because INTERNET is a global, ubiquitous, even in the night by planned downtime can also cause serious losses. If it is unexpectedly shut down, it will have disastrous consequences. J2EE deployed to a reliable operating environment, they support long-term availability. Some J2EE deployed in the WINDOWS environment, customers can also choose the robustness (stability) better operating systems such as Solaris IBM, OS/390 Sun. The best robustness of the operating system can be up to 99.999% of the availability or a 5 minute downtime per year. It is the ideal choice for the commercial system in real time. J2EE Management (Transaction Management) model allows you to specify the relationship between all methods of the formation of a transaction between, so that all the method in a transaction are treated as a single unit. When enterprise bean activation in the client, the container involved in a management affairs [9]. Because there is a container managed transaction, the bean enterprise does not have to encode the boundaries of the transaction. Code that requires control of distributed transactions can be very complex. You simply declare the transaction properties of the bean.
enterprise in the layout description file, without writing and debugging the complex code. The container will read this file and deal with this bean enterprise transaction for you. JNDI addressing (Lookup JNDI) service provides a unified interface to multiple names and directory services within an enterprise, so that application components can access name and directory services.

Figure 3. Schematic diagram of J2EE structure

2.3 Introduction of aprior algorithm

The algorithm is widely used in the industry. Its basic principle is: first find all the frequency set, in order to generate all the frequency set, using the recursive method. May produce a large number of candidate sets, as well as may need to repeat the scan database, are the two major shortcomings of the Apriori algorithm. In view of the inherent defects of Apriori algorithm, Han J. and so on has been improved, and the algorithm of FP-tree frequency set is worked out. The principle is to take a different set of different frequency compression measures, FP-tree, at the same time still retain information associated with them, then FP-tree will differentiate into conditions of library, each library with a 1 unit length frequency set has some relevance, then the analysis of mining depth here. If the initial information is very large, if necessary, can be divided, to promote the FP-tree into memory. Practice has proved that FP-growth can meet the association rules of various lengths, and it has better efficiency than Apriori algorithm.

\[ C_1 := \text{all 1-item sets}; \]
\[ \text{While (Ck) do generates a counter for each item in the Ck; } \]
\[ \text{For (i=1; I = D | |; i++) Begin The first Ck to record the T supports of the first I in the item set, and its counter plus 1: End; } \]
\[ Lk := \text{Ck to meet all of the min_sup set; } \]
\[ \text{Result := Result, Lk: Ck+1 := all (k+1) - items are focused on satisfying their k-subsets both in Lk All in; } \]
\[ K := k+1: \text{End do.} \]

Above is the use of text and pseudo code shows the principle of the Aprior algorithm and the implementation process, this section uses a specific example to demonstrate the specific implementation of the Aprior algorithm. Assuming that the initial database has 4 basic transactions, representing \( |D| = 4 \), the minimum support count is 2, which can be calculated from \( \text{min_sup} = 2/4 = 50\% \). Algorithm detailed implementation of the process as shown in Figure 5, 4, 6, 7, 8.
Figure 4. An instance database of association rules.

<table>
<thead>
<tr>
<th>TID</th>
<th>List of project ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>I1, I3, I5</td>
</tr>
<tr>
<td>T2</td>
<td>I3, I4</td>
</tr>
<tr>
<td>T3</td>
<td>I2, I3</td>
</tr>
<tr>
<td>T4</td>
<td>I1, I3, I4</td>
</tr>
</tbody>
</table>

Figure 5. Algorithm implementation process the first step.

Figure 6. Algorithm execution process second steps.
2.4 Association rule mining

The data structure of frequent item sets designed by this system is shown in Figure 9. Figure 9 is the data structure used to find frequent itemsets, \( K \) said
the number of frequent itemsets, \( X_{mj} \) as a pointer to \( K \) all frequent itemsets, \( Z_{cd} \) support, \( X_{mj} \) support for the \( Z_{cd} \) pointer to \( K \) frequent itemsets, \( X_{mi} \) points
to a \( K \) frequent item set a \( X_{i} \) pointer, \( K \) frequent itemsets, which I 1, 2, ..., \( K \).

3. System requirements analysis

3.1 An overview of demand analysis

The main function of the demand analysis is to analyze the problem of the user to tell the system developers or system designers. It is mainly to tell you
what to do, not to tell you how to do it. It is the first step in a system or software development, as a first step it has an important role. The result of demand
analysis is the requirement analysis specification [10]. Demand analysis, need to express to prepare reaction or on behalf of the user the most fundamental
requirement or desire, can not only consider the problem from the angle of the basic needs of users, but also need to take into account the user does not take
into account the problem. Its direct impact will result in the following outline design, logical design, physical design, operation and maintenance of the
workload. If you deviate from the user's needs, then the follow-up to do the work needs to be re designed and implemented. Needs analysis of main tasks is to
analyze the user in the actual process, the user of the object and the need to deal with the data and the user's workflow and other information, developers or
system designers need to fully understand the user in the present work the work habits or workflow, clear user requirements for further communication, or
through several exchanges in the way to fully understand the fundamental or the needs of users. In the demand analysis stage, the problem is the need to pay
special attention to the user in the working environment of the data and the data processing flow, obtained the three basic requirements of database users: one is
the information requirements; two is the processing requirements; three is the data security and integrity requirements.
3.2 Feasibility analysis of the system

Analysis of the feasibility of the system contains many analysis modules, this section is mainly three important aspects which are analyzed, on behalf of the three aspects are: the cost of technology is feasible, have what problem and the subsequent operation and maintenance is feasible. In most cases, these three aspects are important to determine whether a system is feasible or not. 1) Economic feasibility analysis based on the network environment, the English reading system can replace the traditional semi automatic teaching system, introduce the worker's expenses and save the cost. 2) technical feasibility study The computer technology change rapidly, emerge in an endless stream of new technology, Web technology, after decades of development has been on stabilization and improvement in the Web technology, launched by the SUN JSP technology is particularly outstanding, has won the praise of developers. This paper puts forward the high English reading system based on network environment is the browser and server mode based on the development and implementation of this model is technically no problem, and the author also has some experience in project development. (1) B/S model C/S model which is different from the traditional structure, and the safety of Java development language, the development module of database access, and the importance of the information system of encryption, to ensure the safety of the data in the system. (2) all users of the system only need to use a browser to access and related operations, the system does not need the hardware and software platform is very complex and many complex configuration, a PC machine can meet the needs of the ordinary, more convenient to use; (3) the user input data when using the system, judgment and detection such as the date format input information system of the foreground and background of the user submitted, the age is in accordance with the specification, to ensure compliance with requirements to add data to the database, reduce the system pressure; (4) because the English reading system based on the network environment uses the B/S architecture design, all of the data exchanged in the system is carried out in the network, reducing the client's task and pressure; (5) reduce the user manual input, as far as possible to allow users to use the selection box to select, reduce user input errors, ensure the accuracy of the data; Secondly, this topic mainly uses the JSP technology and database technology to realize all the functions. JSP is a dynamic web page to achieve the standard. It is the main difference between the traditional HTML pages: in the static page to add some Java code and some of the unique JSP tags, you can form a simple JSP page development. Which was added to the Java code in the static web page can have a variety of different functions, the basic function can carry out the database crud task can access to other pages including all established all functions of dynamic web page need. But the request and task logic related systems are handed over to the server, the server returns the user to view in the browser on the result of this model largely reduce the pressure of server, reduce the client due to software installation or configuration requirements. Even if the average client does not have any software installed on the machine, the system can access the system as long as there is any browser. And JSP technology to facilitate easy to learn, for the development of this system is very effective. Therefore, JSP technology to realize the function of this system is more than sufficient. Therefore, the technology is relatively mature, the subject of the proposed system can be achieved. 3) Operational feasibility analysis Due to the early demand analysis has done better, but also the system to deal with and capture a lot of abnormal processing, so the latter part of the system development and maintenance is relatively easy. On the one hand, there is a complex business process, system maintenance and operation personnel only daily management and monitoring of the system, especially in the current computer technology popularization, the demand is not very high, after a short-term training can adapt to. In addition, the main business processes of the system design are more familiar with the traditional staff, the operation is handier. Therefore, the operation is not a big problem.

3.3 Functional requirements analysis of the system

Users of the system are mainly divided into three categories: student users, read the administrator, the system administrator. The following three categories of users were introduced basic functions:

- Student user: 1) modifies the basic personal information, modify the login password, etc.
- Reading Manager: 1) is responsible for the students to read the information of the query, modify, add, delete, etc.
- System administrator: 1) all the functions of the students;
- 2) Query and modify the basic personal information, modify the login password;
- 3) Add new student users;
- 4) Modify student users;
- 5) delete student user;

This subject is a full analysis of the current college students' English reading management basic needs and aspirations, through a long time with students and other means of communication, as well as on College Students' English reading analysis and understanding of the management theory of knowledge, combined with the process of English reading management practical business students. After investigation and analysis, the final analysis and research of the basic relationship between the college students demand function description, the formation of the requirements analysis specification document.

Based on the students' English reading network management system mainly has four basic subsystems modules: system management subsystem, student basic information management subsystem, reading management subsystem and report management subsystem. The specific requirements and instructions of several major functional modules are as follows:

1) System management, the module is mainly to achieve with the system level related to the operation and process. This module mainly includes system data backup and recovery, role management, system log management and so on.
   (1) Data backup and recovery: in order to ensure the safety and proper use of the system, the system supports regular backup. When an exception occurs, the system can be used to restore the system to normal operation and use of the system to ensure the normal use of the system.
   (2) The role of management: role management module is mainly used to the system administrator for different users or other management personnel assigned permissions, convenient access to different administrator or customer's use of the system and the operation etc..<br>
   (3) the log system log management system mainly refers to the basic operating system will automatically write all users of the system (add, delete, modify, etc.) these operations finally form a log file, convenient for analysis and access to relevant personnel.

2) Student information management, the module is a very important module of college students, is essential. Mainly in the management of students' information, the main object of the management system in this topic is college students, and student information is one of the most important. It mainly includes login management, student basic information management module, student information management, including view student information, modify student information, add student information and delete student information.

(1) login management module: This module is mainly used to retain some information about student login system, such as user name, password, permissions, etc., when these basic information can be registered by the students themselves etc., these basic also fill in by the administrator or entry into the database; also some basic information of and access to the database to add, query, delete, induction, summary and statistics.
(2) the basic student information management module: This module is mainly to manage the basic information of students, the management content including student ID, student's name, age, gender, student office, home address, telephone, e-mail, postal encoding, the basic information input by the administrator or import in the database; at the same time can also increase students' basic information management, delete, change, check operation.

3) Students' reading management
Through the analysis of the demand for college students. Students' reading management function should include student information inquiries, including the English level of students, students reading ability of students, the word ability level, students continue to education and other information collection, collation, inquiry, collection, storage and management.

4) Report print management
Report print management module is mainly used to print a good collection of university student information and other information related to the formation of the report.

System functional requirements analysis use case diagram as shown in Figure 10.

Figure 10. System functional requirements analysis use case diagram.

4. Design and implementation of the system

4.1 System architecture design
This system uses multi-layer architecture design patterns, in order to reduce the load of the server, the system uses two servers, one as a dedicated database server, a Web server for deployment. Operating system using a dedicated server operating system. The architecture of the system is shown in Figure 11.

Figure 11. Schematic diagram of system structure.

4.2 System database design
Database is the information storage warehouse, contains all the data required for the operation of the system, and through the database call and management, can improve the efficiency of the use of the system. As an important part of business, the key type and business relational database plays a very important role, and the enterprise management solutions center by the data engine control, the rapid development of economy is bound to make data and user increase rapidly, while the company is after the bear and operators must be all the data they control security carefully, and provides the maximum storage effect of relational data and structured data is the priority among priorities for the security status. For some super large online processing module failures, the need for high performance and some very complex data and data management system, SQL Server 2005 R2 can be completed in very large tasks at the same time, more commercial analysis and operation performance of the accident more intelligent, the key business of large enterprises need and work overload tasks perfectly. In general, a high performance query processing engine often can meet the needs of more users, it will not only greatly enhance the user's query speed, but also bring a large number of users use, stability test and query processing engine for such high performance but also the need for careful planning and query performance can be realized, single nuclear run mode is not the system can meet the need to borrow, multi-core processors and thorough query design together in the whole system. Entity analysis is the basic work of database conceptual design, entity to carry out analytical work is carried out based on the business process analysis and functional module on, according to previous analysis results and we can see that the system mainly includes entity employees,
departments, the Department of human resources management. According to the design task of the database, focusing on two main tasks of interpretation, one is to receive the data requirements, the entity exists needs to be drawn from the data, which is bound to the corresponding entities from the database and the other one is to design the database between mapping and database the entity database, and these details will also affect the integrity of the database design task.

4.3 System function module design

The system is divided into four main functional modules: system management subsystem, student English reading management subsystem, book management subsystem and report management subsystem. This section is mainly on the specific implementation of the system to do under the instructions. After the user access system, the system's home page is a network of English reading management user login screen; users need to enter their account number and password to log in, and to ensure consistency, System through the user's authentication information to determine the user's role and permissions, etc., to determine the interface to a different page. User login will enter the student's reading management interface. Student reading management module mainly includes "personal information inquiry", "personal information editing", "personal information file inquiry" and "withdrawal system". Student users can accord their own needs related to the operation of. The distribution of authority is a simple operation for each function module of the system (add, modify, delete and query) for distribution, distribution of a super administrator has the authority or all permissions for users, high flexibility. In this system, the use of crystal reports design and implementation of the college students read the situation and rewards and punishments for a more in-depth understanding and investigation and analysis. Crystal reports are used to design and generate reports, and can be integrated with a number of popular development tools and interfaces. The login screen of the system is shown in Figure 12.

Figure 12. System login interface.

5. Summary and Prospect

In this paper, the characteristics, current situation and problems of English reading under network environment are introduced. The paper focuses on the design and implementation of English independent reading and memorizing words, and adopts the method of object oriented design. In this process, according to the characteristics of the English learning software, the English learning software system is analyzed and the overall design is made from the aspects of the function.

Acknowledgment

Foundation and Advanced Technology Project of Henan Science and Technology Office: Research on Construction and Application of Smart Campus under Big Data and Cloud Computing Environment, No. 142300410397.
Nanyang Normal University 2016 Class Teaching Model Reform Project: Research on College English Flipped Class Teaching Design and Practice, No. 16.

References