

2014

# BioTechnology

*An Indian Journal*

FULL PAPER

BTAIJ, 10(19), 2014 [11771-11775]

## Research on construction pattern of college English network teaching resource database

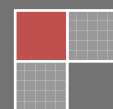
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### ABSTRACT

With the continuous development of modern information technology, online teaching is almost widespread in campus; and online teaching resource construction is an important component of educational informatization, as well as an important guarantee for integration of digital information technology and courses. College teaching resource is inseparable from the network. A well -designed resource system can efficiently organize all kinds of education materials and apply it to everyone who takes part in education, providing information and learning opportunities. This article mainly focuses on the teaching characteristics of college English; puts forward the idea which specializes in the construction of college English network teaching resource database, and further analyzes as well as elaborates the key design points and function modules of English resource database system.

### KEYWORDS

Network education; Resource database; College english; Function module construction.



## CONSTRUCTION BACKGROUND

### Construction requirements of resource database

The information era is affecting every aspect of people's life. Therefore higher education is inseparable from network information. Computer and internet are influencing people's life, work, and learning as well as thinking patterns; accordingly college education reform is unstoppable. The integration of college information has won great progress in education system, teaching contents, teaching methods, teaching thought and teaching philosophy. College education information is widespread gradually. Meanwhile the significance of teaching resource construction is more and more evident. Network information technology provides teaching resources with openness and diversity. The interactivity of information resources can better stimulate students' learning initiative. English teaching resources in college have own special requirements, at the meantime the teaching model, teaching methods and teaching approach in English all have its own characters. Therefore it is necessary and crucial to establish powerful and comprehensive online teaching resource database. Learning language needs to create a learning environment; such resource database can provide students more communication platform, improving students' initiative about learning English to a great extent. Multimedia technology can provide students condition for obtaining language skills and knowledge from the view of vision, listening and speaking.

### Definition and classification of network teaching resources

Online teaching resources refers to learning information repository after digital processing; it can be operated with the help of multimedia or internet, supporting better and more effective completion of teaching process. It can be processed and combined to promote student learning. Large-capacity, multimedia, networked and digitization are the main characteristics of the network teaching resource database. According to the relevant technical specification, network teaching resource database can be divided into the following types: resource catalog, network courseware, media materials, test database, online courses, cases, FAQs and documentation.

### Current situation and development tendency of network teaching

Construction of network teaching resource database abroad has entered a stage of development and construction of material library. It further focuses on the development of enhanced content, such as depth, quality and systematic. In recent years, China is also striving towards construction of various kind of repository development. Many schools and enterprises in China are further deepening the construction of teaching material resource database. However, the biggest problem at present is that teaching resource database needs to be further internet-based, because sharing; fast-update and low cost of internet are not really brought out. Systemic, professionalism, stability and security of repository still need further development and improvement.

## DESIGN THINKING OF ENGLISH TEACHING RESOURCE DATABASE

### Design objective

Building a classified, featured, easy-operated database with convenient resource management and open pages should be the goal of English teaching repository. Resources should serve teaching based on actual teaching content, ultimately achieving network resource sharing. It provides teachers convenience to prepare lectures and give lectures and provides students with convenient platform for self-directed learning. Resource division should be in strict accordance with the technical specifications, providing convenience for data sharing, distribution and resource transplantation and management. The entire repository is designed by function modules. Each part should have clear logic and distinct gradation for resource optimization and integration. The database shall achieve material editing and storage, self management, material inquiry and self assessment based on the existing user functions.

### Design points

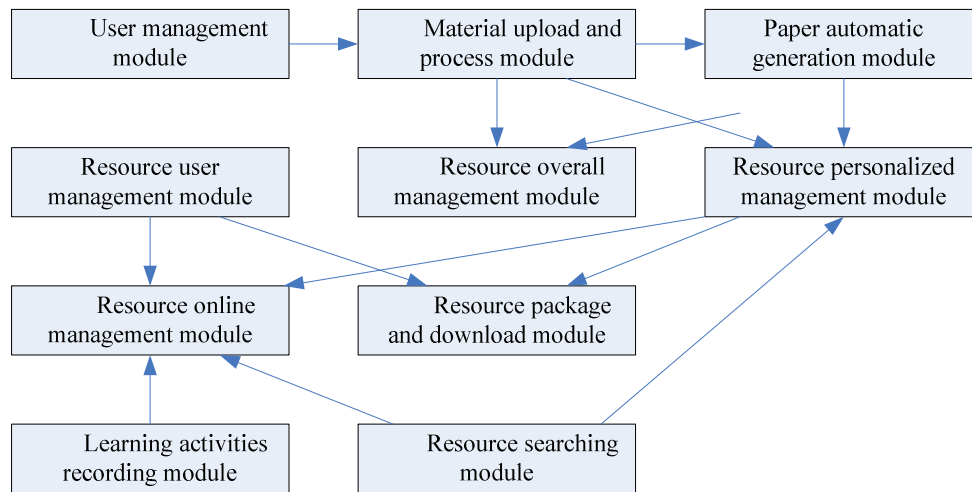
First, the database should not only support users to remote upload teaching materials, but also remote edit materials in the repository. Secondly, it should achieve basic content presentation, interactive autogenic training, feedback, and recording individual learning activities. Repository should have enough resources to immediately prepare papers, distribute question types and scores; so that users can test their learning outcomes at any time. In addition, the database should be able to automatically generate and compress all kinds of materials, handouts and papers and other download data of users. Finally, it should support personalized material organization to satisfy different users to organize and use materials.

### Technical implementation

SQLSERVER 2000 database is adopted in the construction of English resource database for retrieved information storage, information management and directory information. The client's script adopts Windows MediaPlayer and other plug-ins. Media files use real player. And controls adopt ASP development tools and third-party development software. The database uses controls with network services, so users do not have to download controls. The principle of database design is giving priority to efficiency and avoiding redundancy. The database storage, disk storage and database index should be combined together to form an overall system.

## DESIGN OF MAIN MODULES

The diagram of main modules in repository is shown as Figure 1.



**Figure 1 : Main repository module diagram**

### User management module

English resource database is open repository, faced with different users. Different users can share as well as jointly construct resources to make repository more perfect. When designing permissions, system divides users into three categories: system administrators, senior users, and ordinary users. Systems will set different change permissions for different levels of users. Administrators can review uploaded resources of advanced users and transfer into shared parts of public resources after certification. Advanced users will need to register before searching, browsing and downloading relevant information. They can also upload and edit their own materials, remote update resources as well as delete storage materials. Ordinary users will not have to register; they can directly search, browse and download shared resources.

### Paper automatic generation module

This module is mainly about automatic generate text papers required by users through the repository's existing text, material and subjects. The module ensures paper titles are random arranged in order to achieve users' evaluation. The generated text paper in existing databases include one-choice questions, multiple choices, gap filling, and some other open-ended questions. After users completed answer sheet, the system can evaluate score for users, record detailed training process for students and then provide to teachers, helping them better understand students' answer process. Each subject has automatic scoring and error feedback. The repository can also identify students' independent entry on the essay questions, and grade for students based on error ratio as well as give prompt on correct answers.

### Resource searching module

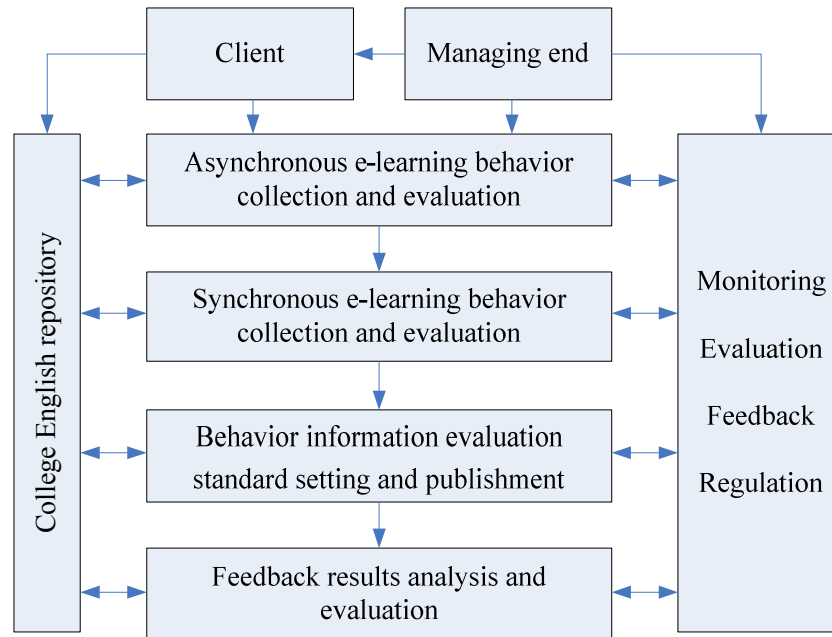
This module is mainly about completing the systematic management of materials, which combines with system's searching function, allowing users to easily find the material they need. According to different topics, materials can be divided into: daily learning, grade examination and materials in different grades. Daily learning can be divided into English in politic, economy, culture, science and technology, education, entertainment and general knowledge. Grade examination can be divided into social common title examinations and English grade examinations. If users did not have a clear classification on resources they need to search, they can inquire from the standard difficulty part. Standard difficulty query is a relatively vague query with five difficulty levels. Users can simply input keywords or use the advanced search to search resources. The specific searching pattern is decided by them.

### Resource personalized management module

This module has large arbitrariness. Users can reorganize and rearrange shared materials according to their needs, stored in the personal collection. Users can use online or single for convenience. Users can also use materials to generate papers or handouts by themselves. They can also upload their own materials or audio files in their material favorites. These individual material favorites can also enter shared resource database after the administrator's approval as shared materials. Users can generate electronic edition of papers or handouts with their material favorites, materials can be processed and modified for convenience. In short, downloadable material information enjoys strong flexibility to meet the needs of different type of users.

## IMPROVEMENT OF COLLEGE ENGLISH NETWORK LEARNING FEEDBACK DATABASE

The learning behavior evaluation and feedback system diagram is shown as Figure 2.



**Figure 2 : Learning behavior evaluation and feedback system diagram**

### Learning behavior survey and evaluation on students

Network learning is primarily a self-learning process for students. Students can dominate time by themselves in school; arbitrariness and personalization are more obvious. Therefore summing up students' study habits and learning styles is very important for working out suitable repository for students. It helps extract students' personalized information, such as students' styles and preferences. On this basis, the internal relation of students' learning behavior and resource management library can be summed up, providing important reference value for construction and constant improvement of repository. Survey and information collection on college students are mainly for the following objectives: first, obtaining online learning behavior of students by the form of questionnaires; second, formulating repository which is more consistent with students' online learning styles, increasing students' learning autonomy and initiative; and third, classifying the behavior of the students and making a comprehensive evaluation to formulate a scientific and rational evaluation program for online learning of students.

### Main function of online learning evaluation module on students

In college English network learning behavior evaluation feedback system module, the responsibility for managing end is to develop an appropriate standard for learning resources as well as evaluation rules for users.

First, managing end obtain the historical statistics of student learning by statistics, and further analysis and evaluate the preparation and learning styles of student learning. The module attempts to find out complementary relationship between students' network learning behavior and teaching behavior of network repository in order to build the most effective learning system model. Second, the managing end makes comprehensive evaluation of students' learning behavior based on the existing feedback system model. In the network learning behavior construction module, independent learning process management system for users is already developed. The system can complete function of learning behavior collection, recording and summary. Through users' learning behavior, the system can combine different analysis results into multi-dimensional structure, automatically transferred into database to analyze and process. By online reporting mechanism and summary data, the ultimate dynamic and accurate network resource feedback will be achieved.

There is a non-quantitative behavior evaluation module for students. Through manual entry of student learning behavior and later processing of non-quantitative module, the feedback system can reflect the following two aspects of information. The first thing is obtaining evaluation results by network questionnaires. The results can be query and reference for students, teachers and web administrators, then relative personnel can monitor and adjust the results. Second, the module output student's behavior characteristic into related behavior pattern library, then teachers manage student behavior by teacher managing and make further arrangement and evaluation guidance.

### Research information of network teaching repository feedback system

Information content of feedback system mainly includes three aspects: general

Behavioral habits, interactive learning behavior and resource utilization of learning. The pattern of data analysis mainly includes two kinds: synchronous collection and asynchronous collection. Synchronous collection is to obtain inquiry and feedback of student learning behavior mainly through network communication system, recording students' learning habits and learning behavior. This method is dynamic data feature by quantifying student information parameters, including:

keyboard click records, search keywords, frequency of accessing materials, the type of access information and the residence time of reading, as well as some real talk topic frequently accessed tools, finished practice exercises, practice stage and test scores. Asynchronous collection mainly refers the questionnaires of student learning activities and learning conditions. In this way the system can monitor and statistical analyze students' learning behavior and study achievements, as well as report back the results to teachers and students in time.

Feedback system can make timely improvement for teachers' teaching; it plays a great supporting role for teaching guidance and repository update. Establishing feedback repository is a process with student as subject and teachers as leading part. Feedback system provides practical basis and data documents for improvement of college English teaching resource database; it is a very important module in resource database.

## CONCLUSION

With the rapid development of network communication technology and multimedia technology, the advantages of online teaching are more and more obvious. It is continuously spread in major colleges and universities in China. Students' learning approaches are expanded; students' learning initiative has also been improved. Meanwhile teaching effectiveness of teachers has also been optimized. After establishing college English repository, student feedback continuously improved repository; therefore it can be said that the behavior of network learning acquisition and feedback information feedback have a direct impact on student learning and online teaching. Timely feedback of learning achievement and learning behavior is an important part of repository. Qualified learning repository provides students a platform to study with high quality and improve the efficiency of learning, maximizing the expansion of information resources. It also builds a communication and learning platform for teachers and students, comprehensively utilizing and sharing teachers' information resources. Therefore establishing a stable, scientific and improved college English repository is quite necessary and worth further profound study.

## REFERENCE

- [1] Chen Siyi; Practice and thinking of optimizing English teaching by internet-Application of internet resources in college English teaching, *China Education Innovation Herald*, (07), (2008).
- [2] Zhu Shengbing, Zhang Xinjun; Sharing and integration of college digital resources based on cloud computing, *Course Education Research*, (04), (2014).
- [3] Zhu Shengbing, Zhang Xinjun; Basic thinking of construction on college digital resources, *Education Teaching Forum*, (22), (2014).