Research Article

Integration and Utilization Strategy of University English Teaching Information Resources Based on Fuzzy Clustering Algorithm

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With the changes of the times and the development of science and technology, modern multimedia technique has entered the field of schooling without hesitation. Modern schooling faces new challenges as a result of the information society. A new way of teaching is to integrate curriculum and information technology. Message technology is used to support not only teaching and learning but also the use of message-based resources. Students' innovative thinking and action ability in the process of integration can be effectively released by mobilising the initiative and enthusiasm of science and engineering students. The quality of university English education has significantly improved since the implementation of the web-based schooling model. However, a number of obstacles prevent educators from making better use of educational message resources. A fuzzy clustering algorithm is used in this paper. The time spent on clustering optimization is reduced by more than half using this algorithm. Its prototype-based clustering algorithm is simple, efficient, and adaptable to large numbers. In clustering analysis, it is the most commonly used algorithm and a research hotspot.

1. Introduction

Although there is no universally agreed-upon definition of message technique and curriculum integration, there is a general agreement on its meaning [1]. The traditional university English teaching model is being challenged by the advent of the age of informatization, digitization, and webing. The establishment of a new model of university English teaching based on multimedia and the web [2] is one of the main contents of the reform in order to adapt to the new situation and requirements. The channels for receiving messages have been infinitely expanded with today's emphasis on independent and individualised learning. Message transmission carriers have also changed dramatically [3]. The traditional classroom teaching content and methods are extended and expanded using constructivism theory. Students can make full use of the network's natural and fresh data images to compensate for the content and form deficiencies of traditional teaching materials and increase knowledge input [4].

The value of integrating and sharing educational resources is now recognized in university education. Every university is constructing and integrating. However, large-scale resource integration remains a challenge in my country due to the dispersed distribution of universities. The primary goal of combining message technique and curriculum is to see if it can improve learning efficiency, achieve the curriculum's intended effect, and promote student growth [5]. Exploration and practise of the new university English teaching mode are becoming increasingly popular. The university English teaching mode based on multimedia and web environment has basically been formed after years of continuous exploration and practise. Not only have major universities established multimedia classrooms, web-based study

rooms, and teaching resource libraries, but they have also informatized and networked their campuses. It has been completed and is improving, providing a new platform for university English teaching and a strong guarantee of improving the quality of university English teaching [6]. The introduction of message technique has opened up new avenues for improving our English teaching methods [7]. There are numerous advantages to network teaching, including a large number of messages, high interactivity, high real-time and practicality, new knowledge, and resource sharing. It has revolutionised traditional teaching methods and had a significant impact on our classrooms [8]. Currently, several sets of university English online learning systems recommended by the Ministry of Education to universities across the country adopt a management system that controls the learning process of the main courses + a large number of all-weather open teaching resources + an online self-assessment question bank + teaching subject (teachers, students). BBS et al. [9] interactive models. Currently, despite the fact that the integration of English resources in major universities has yielded results and there is an urgent need for the support of a large number of teaching resources, infrastructure construction still has flaws, preventing the large-scale implementation of integrated and shared content. Some content does not have a high adoption rate. Furthermore, because university integration and sharing of teaching resources are essentially free, the school remains conservative and uninterested in its own resources.

The intersection, penetration, and combination of content in the teaching of message technique and English are not only a new teaching concept [10], but it is also a new intersection, penetration, and combination of content. The use of computer and web-based message technique creates a rich teaching environment, promoting students' autonomous learning, cultivating students' creative thinking and comprehensive language ability, and optimizing the combination of teaching resources, teaching elements, and curriculum. The teaching-learning connection creates powerful objective conditions for students to develop their innovative spirit and practical skills [11]. University English teachers also use their initiative and creativity to their full potential, maximizing the benefits of computers and the Internet, relying on the software and hardware resources made available by their institutions, updating their teaching concepts, and constantly enriching and improving their own knowledge structure and technical level. In the multimedia and web environment, changing roles and practising new teaching modes have created an effective way of university English teaching reform, gradually achieving the goal of university English teaching reform in the new era, and pushing university English teaching reform to the dig deeper [12]. Starting with the integration of message technique and university teaching, this paper explores the theoretical necessity of message technique and teaching integration, as well as the integration mode and problems encountered during the process.

The innovation of this paper lies in the following aspects:

(1) We propose the DSpace system. Using the integrated DSpace system will greatly expand the metadata resources within the DSpace system, strengthen the exchange and sharing of data resources between organizations, better protect data resources, and provide users with more comprehensive digital resource services

(2) We propose XML technique. XML simplifies many rarely used parts of SGML and fully takes into account the characteristics of the web. As a standard format for data exchange, XML can greatly enhance the interaction between different systems

This article is divided into 5 parts in total, and the chapters are structured as follows: Section 1 introduces the discussion of the article and the relevant background. Section 2 introduces the theoretical basis of the related content of this paper. Section 3 introduces the framework technique used in the integration and utilization of university English teaching message resources. Section 4 contains the fuzzy clustering algorithm used in this paper, as well as some simulation data obtained from experiments. Section 5 is the conclusion of this paper.

2. Related Work

Liu and Wang proposed the idea of using ordinary universities' superior resources to conduct distance education [13]. Zhang proposes a framework for creating an all-encompassing, easy-to-use web portal that can be accessed at any time and from any location [14]. Dong and Chen proposed integrating the system's overall construction goals [15]. Gj et al. proposed that the library's professional staff continue to digitize various catalogue resources; however, auxiliary resources for education and teaching, as well as auxiliary resources for scientific research, should be produced by the teachers themselves, who would be responsible for the corresponding digitization work, as well as the submission and uploading of resources in accordance with the resource system's requirements [16]. Zhang proposed that universities use their teaching resources to create teaching websites on the Internet in order to provide public educational services [17]. Chen et al. recommended that a thorough investigation of the system requirements be conducted before the structural design and business modelling of the system can be completed [18]. Dy et al. proposed that the definition and description of teaching resources be standardised based on existing research examples and the problems that current teaching resources face [19]. From the perspective of professional users, Unsworth and Mill propose to collect data from operational data and other data sources serving a specific professional community [20]. Elena and Prokopenko proposed storing audio and video file directories in the file system by using a data table to store the physical paths of the files [21]. To lay a foundation for the later burgeoning of the system and data retrieval and sharing, Zeng and Li proposed standardising the definition and description of teaching resources based on the existing architecture and application, combined with the problems encountered by current teaching resources [22].

Major universities have established their own teaching resource banks and web electronic resources to varying degrees after several years of reform practise and burgeon, driven by the driving force of reform and teaching needs. However, due to regional restrictions and differences in university status, as well as differences in faculty and university emphasis, an imbalance of resource allocation among universities has become an undeniable fact. How to effectively organically integrate the rapidly developing and rich multimedia and web teaching message resources into an important tool to assist English teaching and achieve the teaching goal of improving university students' English practical ability has gradually become an important topic discussed in the English teaching community.

3. Integration and Utilization of University English Teaching Message Resources

3.1. DSpace Frame Technology. Using intelligent control technique, different intelligent PID controllers can be designed. At present, some intelligent PID control algorithms are only simulated by software. How to combine the intelligent PID control algorithm with hardware for online control of software and hardware is a difficult problem. Selecting OAIHarvester as the metadata acquisition module of DSpace system is an effective solution to realize the sharing of data resources among multiple DSpace systems. DSpace system is a digital warehousing system developed by HP and MIT to realize long-term preservation of data resources. It provides metadata resources through OAICat as a data provider, but it does not realize the function of obtaining open metadata resources from outside. Not only that, DSpace system only provides a simple data import and export interface, which cannot meet the requirements of the system to import and export data in batches.

DSpace's digital asset management capabilities include the ability to collect, store, index, preserve, and republish permanent identifier research data in any digital format and hierarchy. It does not, however, allow for online browsing of digital assets; instead, it only allows for the display of metadata and the download of digital assets. The DSpace system is open source software developed by the MIT Library and HP Lab to create a digital knowledge base system. The OAIS reference model, which integrates message collection, description, storage, and preservation, is used to design its functions and services. It combines various functions and services, such as release and utilization, to provide a dependable solution for universities and research institutions to store and effectively utilize their scientific research outputs over time. The DSpace system is divided into three layers: storage, business logic, and application. Each layer is made up of a number of components that work together to complete tasks like resource storage and user interface. Each component's function is realized by calling a Java storage API, and it can customise the Java programme to meet its own needs. The layered architecture of DSpace is shown in Table 1.

DSpace real-time simulation system is a working platform for the burgeon and testing of control systems according to MATLAB/Simulink, which can be seamlessly linked with MATLAB/Simulink. As a computer-aided design and testing platform, DSpace has easy-to-use code generation and download software, test tool software, and a flexible hardware combination system. From the perspective of the actual needs of users, DSpace provides a software combination CDP to realize the burgeon and design of the control system. The way data is organized in DSpace is represented by objects in a hierarchical structure. These objects include digital space group, digital collection, digital item, digital stream package, digital stream, and digital stream format from top to bottom, in which digital item is the basic archive unit of message, representing a specific piece of digital resources accessible to users. OAIHarvester can obtain metadata resources from OAICat, which ensures that DSpace systems integrated with OAIHarvester can share metadata resources with each other; not only that, OAIHarvester can also obtain metadata resources from data providers other than OAICat that support OAI-PMH. If the user's choice of digital assets only relies on the judgment of the metadata, it will cause a lot of inconvenience and blind choices. Therefore, it is very necessary to add online browsing function to DSpace. In theory, DSpace can manage any number format. Therefore, we can add corresponding online browsing modules to DSpace for different digital formats.

To establish a digital knowledge base according to the DSpace system, each academic institution can centrally preserve the research results and wisdom of its researchers and open it to other scholars for reference and use. DSpace has the incomparable superiority of other simulation systems, mainly has the following four characteristics: (1) It can establish the control model of the control system and the object and can perform offline simulation; (2) it can set real-time I/O interface; (3) it is easy to code generate and download; and (4) facilitate comprehensive testing and testing. At present, it is estimated that more than 200 institutions around the world use DSpace digital archive management tools online to capture, save, and share works, documents, and research materials. Among them, 145 educational and scientific research institutions registered on DSpace's official website and using DSpace system.

3.2. XML Technique. Today's society is rapidly becoming more and more informatized. Message flow between various automated systems within an enterprise, as well as between enterprises, is increasing at an exponential rate. The heterogeneity of the automation system, on the other hand, impedes the smooth flow of this message. Market competition is becoming increasingly fierce, and various departments within

TABLE 1: DSpace layered architecture.

Application layer	Org.dspace.done.*
DSpace reference model	
Business logic layer	Org.dspace.*
DSpace metadata	
Storage layer	Org.dspace.storage.*

the company as well as strategic partners are compelled to form alliances in order to improve mutual cooperation and their own competitiveness in order to succeed in the marketplace. With the widespread use of web technology in various fields in recent years, people have begun to believe that HTML is no longer sufficient. Despite the fact that there are already expressive functions such as scripts, tables, and frames in HTML, it is difficult to fundamentally meet the growing demand. On the other hand, existing web browsers have been able to perform complex functions, indicating that a new web page language is both necessary and feasible. Extensible markup language (XML) was created to compensate for the shortcomings of HTML and was only intended to be used as a basic technique at first, but its popularity has far outgrown the designer's original vision. It is now regarded as the cornerstone of the next generation web by both academic and business circles, and the use of the XML technique has become an unstoppable technical trend. XML, like HTML, is derived from SGML, which stands for Standard Generalized Markup Language. SGML was developed long before the web and was primarily used in the fields of print and electronic publishing.

The integration of enterprise message resources is the basis and key of cooperation. In the process of implementing system integration, data, as the soul of enterprise message, must be integrated first. However, in the process of implementing informatization in enterprises, different application systems use different technologies, which brings certain difficulties to the data integration of enterprises. So XML came into being; as a standard format for data exchange, it can greatly enhance the interaction between different systems. It defines the general syntax used to mark data with simple and easy-to-understand tags and provides a standard format for computer documents. The data contained in XML documents are text strings, surrounded by text tags describing these data. Although XML makes up for the shortcomings of HTML, it is not intended to replace HTML. XML and HTML are both derived from SGML and belong to a subset of SGML, so the files are composed of tags. Data interaction between different systems is quite difficult. But with the application of web becoming more and more extensive and in-depth, there are many emerging application fields such as e-commerce and distance education. Although new versions of HTML have been launched one after another, and there are already expressive functions such as scripts, tables, and frames, the too simple syntax of HTML can never meet the growing demand, and due to the burgeon of computer technique, it is necessary to realize that more complex web browsers are entirely possible. XML has huge scalability and flexibility that HTML language lacks. XML no longer has a fixed format like HTML. XML is actually a definition language; that is, users can define endless tags to describe any data element in the file, thus breaking through the constraints of the fixed set of HTML tags, making the content of the file richer and more complex and forming a complete message system. The heterogeneity of the data storage mechanism means that different application systems use different data sources. For example, in the process of developing an application system, an enterprise can choose among storage methods such as RDBMS, OODBMS, and flat files according to its own situation.

In an XML file, the data between tags is the content of the message, and the mutual inclusion of tags represents the structure of the message. In this way, an XML file can fully express the content, structure, and meaning of the message. XML simplifies a lot of rarely used parts of SGML and at the same time fully considers the characteristics of the web; XML is a limited subset of SGML and can have DTDs, so the XML syntax is extensible. XML overcomes the shortcomings of point-to-point integration and ETL integration methods; it allows users to easily add new applications in the existing integration environment, and users can obtain integrated data from the system in real time.

4. Integration and Utilization of University English Teaching Message Resources according to Fuzzy Clustering Algorithm

4.1. Fuzzy Clustering. With the continuous burgeon of database technique and the wide application of database management systems, massive data are stored in the database. Today's society has developed into a message society. Information generally exists in the form of data, and data is the carrier of message. Therefore, data is very important for the message society. In today's highly intelligent and automated, pattern recognition [23–25] has almost entered every field of human life. Visually speaking, pattern recognition refers to distinguishing which object is the same or similar to the specimen from the objects to be recognized. The characteristics of the two types of clustering effectiveness functions are compared in Table 2.

A large amount of data exists in the database, which needs to be classified using a certain method. One of the important branches is cluster analysis. Clustering is the process of distinguishing and classifying things according to the similarity between them. There is no teacher guidance in this process, so it is an unsupervised classification. Cluster analysis is the use of mathematical methods to study and process the classification of a given object. "People are divided into groups, and things are grouped together." Clustering is an ancient problem, which has been deepened with the emergence and burgeon of human society. To understand the world, human beings must distinguish different things and recognize the similarities between things. However, in the real objective situation, some objective objects have the property of belonging to multiple "classes," so they cannot be divided by rigid standards but by "soft division." So fuzzy theory was introduced into cluster analysis, and the use of fuzzy theory can theoretically support this "soft division."

The number of clustering points, c represents the number of categories, and u_{ij} satisfies the following conditions:

$$\forall j, \sum_{i=1}^{c} u_{ij} = 1; \forall i, j\, u_{ij} \in [0, 1]; \forall i, \sum_{j=1}^{n} u_{ij} > 0. \qquad (1)$$

TABLE 2: Comparison of the characteristics of the two types of clustering effectiveness functions.

Compare items	Method according to fuzzy partition	Geometry-based methods
Theoretical basis	Information system	Data source
Advantage	Simple, small memory	Strong connection
Shortcoming	Poor connection	Too complicated, large file

Define an objective function $J_2(U, V)$:

$$J_2(U, V) = \sum_{j=1}^{n} \sum_{i=1}^{c} u_{ij}^2 D_{ij}^2(x_j, v_i). \tag{2}$$

Among them, $v_i \in R^n$ is the category center vector, and its set can be expressed as $V = \{v_{ii} | v_i \in R^n, i = 1, 2, \cdots, c\}$, and $D_{ij}(x_j, v_j)$ is the formula distance from the data point x_j to the cluster center v_j. Generalize this algorithm to the more general case:

$$J_m(U, V) = \sum_{j=1}^{n} \sum_{i=1}^{c} u_{ij}^m d_{ij}^2(x_j, v_i). \tag{3}$$

$d_{ij}^2(x_j, v_j) = (x_j - v_j)^T A(x_j - v_j)$, d_{ij} use different distance definitions, which can be used for data cluster analysis of different geometric features, and the objective function $J_m(U, V)$ is the weighted sum of squared distances from each data point to the corresponding cluster center.

Applying the Lagrange multiplier method to solve the optimization problem that minimizes $J_m(U, V)$ under the condition that u_{ij} satisfies the constraints, the calculation formulas of u and v can be obtained:

$$u_{ij} = \left[\sum_{k=1}^{c} \left(\frac{d_{ij}}{d_{kj}} \right)^{2/(m-1)}, \right.$$
$$v_i = \frac{\sum_{j=1}^{n} u_{ij}^m x_j}{\sum_{j=1}^{n} u_{ij}^m}. \tag{4}$$

In supervised classification [26], the categories of known patterns and the category attributes of some samples are first learned or trained with samples with category labels, so that the classification system can correctly classify these known samples and then use. A learned classification system classifies unknown samples. This requires us to have sufficient prior knowledge of the classification problem, and to do so, it is often costly and sometimes impossible. A typical fuzzy clustering system is shown in Figure 1.

As the main carrier of message, data plays an important role in today's message society. People hope that computers can help us extract interesting knowledge, laws, or high-level message from massive data and help us make decisions according to rich data, which leads to data mining, which has been widely studied. Cluster analysis is classification performed in an unsupervised state. How to evaluate whether the division of "classes" in cluster analysis conforms to objective facts. Generally, the validity evaluation is used, that is, the validity of fuzzy clustering.

Let r be the number of classes corresponding to the value of λ, n_i is the number of elements of the i-th class, x is the totality of the objects to be classified, and each sample is represented by m feature index vectors; mark $\bar{x}_{ik} = (1/n)\sum_{j=1}^{n_i} x_{jk}(k = 1, 2, \cdots, m)$ as the i-th class element. Average of k features.

Introducing the F-statistic:

$$F = \frac{\sum_{i=1}^{r} n_i \sum_{k=1}^{m} (\bar{x}_{ik} - \bar{x}_k)^2 /(r - 1)}{\sum_{i=1}^{r} \sum_{j=1}^{n_i} \sum_{k=1}^{m} (x_{ik} - \bar{x}_{jk})^2 /(n - r)}. \tag{5}$$

It obeys the F distribution with degrees of freedom of $r - 1$ and $n - 1$. Its numerator represents the distance between classes, and the denominator represents the distance between elements within a class.

Given a knowledge base $K = (U, R)$, for each subset $X \subseteq U$ and an equivalence relation $R \in ind(K)$, define two subsets, namely:

$$RX = \cup \left\{ \frac{Y \in U}{R} | Y \subseteq X \right\},$$
$$RX = \cup \left\{ \frac{Y \in U}{R} | Y \cap X \neq \varphi \right\}. \tag{6}$$

Call them the R lower approximation set and the R approximation set of X, respectively.

Given knowledge base $K = (U, R)$ and $B, D \subseteq R$. Let:

$$k = \gamma_B(D) = \frac{|POS_B(D)|}{|U|}. \tag{7}$$

In the formula, $POS_B(D) = BD$. Then, knowledge D is said to be $k(\leq k \leq 1)$ degrees dependent on knowledge B.

Given a message system $S = \langle U, C, V, f \rangle$, and $B \subseteq C$, $\forall z \in B$, define:

$$\text{sig}(a, B, C) = \gamma_B(C) - r_{B-\{a\}}(C). \tag{8}$$

According to formula (7) and formula (8) (let $B = C$), at a certain threshold level λ_k, the importance of a certain factor c_i can be expressed as follows:

$$\text{sig}^{\lambda_k}(\{c_i\}, C, C) = \gamma_C^{\lambda_k}(C) - \gamma_{C-\{c_i\}}^{\lambda_k}(C) = 1 - \gamma_{C-\{c_i\}}^{\lambda_k}(C). \tag{9}$$

It is the importance of factor a to factor B.

After years of burgeon, data mining has become a huge subject, and at the same time, clustering has also become an essential subfield of it. The purpose of cluster analysis is
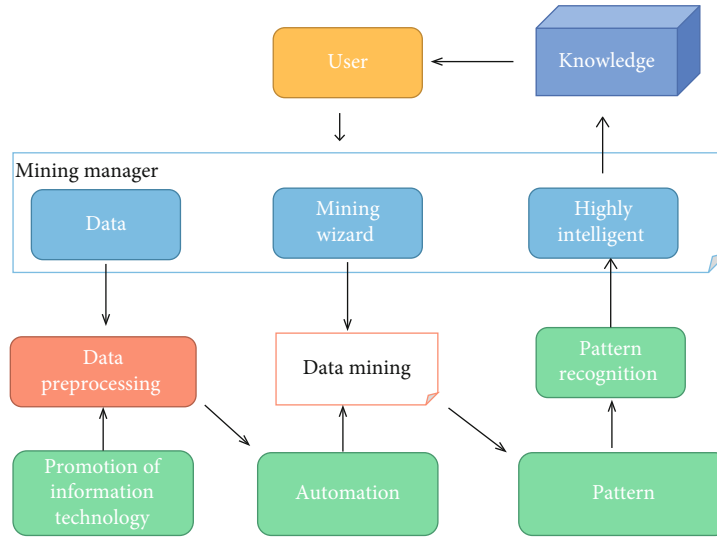
FIGURE 1: Typical fuzzy clustering system.

to divide data into meaningful or useful groups (clusters). Clustering is an unsupervised classification, which needs to preset some parameters, especially the number of clusters and fuzzy factors. The clustering time of the three optimization strategies is shown in Figure 2.

The results show that the optimized clustering operation time has been greatly reduced by more than 50%. The reason is that after optimizing the transfer closure method, the total amount of operation for solving the fuzzy equivalence matrix has been reduced. After multiple iterations, the reduction of the overall time for solving the fuzzy equivalence matrix will affect the whole clustering process. Evaluating whether the fuzzy division of the dataset conforms to the objective facts is a question of the effectiveness of fuzzy clustering. For fuzzy clustering, the validity problem can often be transformed into a decision problem of the optimal number of categories. Human society has started the original "cluster analysis" from the day it was born, dividing various things in nature into different "types" according to their similarities. With the burgeon of human society and the improvement of science and technique, people's understanding of the world continues to deepen; people continue to refine the division of "classes," constantly recognize the deep similarity of things, and continue to "cluster analysis" to improve the methods of distinguishing different things and recognizing the interconnectedness between them. The graph of the ambiguity index of the dataset is shown in Figure 3.

The burgeon of fuzzy set theory and method provides a powerful analysis tool for the soft partition of cluster analysis. People begin to use fuzzy method to deal with the clustering problem, which is called fuzzy cluster analysis. Since fuzzy clustering obtains the degree of uncertainty of the sample belonging to each category, it expresses the intermediary of the category of the sample; that is, it establishes the uncertainty description of the sample for the category, which can more objectively reflect the real world, thus becoming a clustering. The mainstream of analytical research. Figure 4 shows the trend of F-statistics for different numbers of classes.

4.2. SOA Architecture Model.
With the burgeon of message technique, the degree of message utilization and the effectiveness of management have become the key to whether enterprises can develop and maintain their advantages in the competition. The traditional management message system (MIS), which has been widely used in the production management of enterprises, can well meet the application requirements of a single user dealing with a single task, but it is difficult to implement a process system well. Although there have been a lot of technical researches on workflow management and related technologies from different angles in China, some key issues still need further research and exploration in order to truly meet the needs of enterprises. Service-oriented architecture is getting more and more attention, and using service-oriented architecture (SOA) programs according to web services to replace complex programs can improve the productivity of developers, provide greater flexibility, and reduce costs. The mapping from web service to SOA is shown in Figure 5.

Through Internet technique, cloud computing can release resources to the web in the form of services and provide them to users. It is a new computing model, with virtualization technique as the core, aiming to provide users with a service facility that is highly available and more convenient to use computing resources. Workflow technique originated from the research in the field of computer collaborative work in the mid-1970s, when computers were not yet popularized and the level of web technique was still very low. The algorithm time performance comparison is shown in Figure 6.

When the evolutionary algebra is 400, the algorithm takes less than 5 seconds. Therefore, SOA algorithm is suitable for the rapid construction of online combat analysis and simulation system with high real-time requirements. With the popularization of computers, the rapid burgeon of web technique, and the improvement of message construction, in order to realize the interoperability of workflow products, the International Workflow Management Alliance has put forward relevant terms and a series of standards for
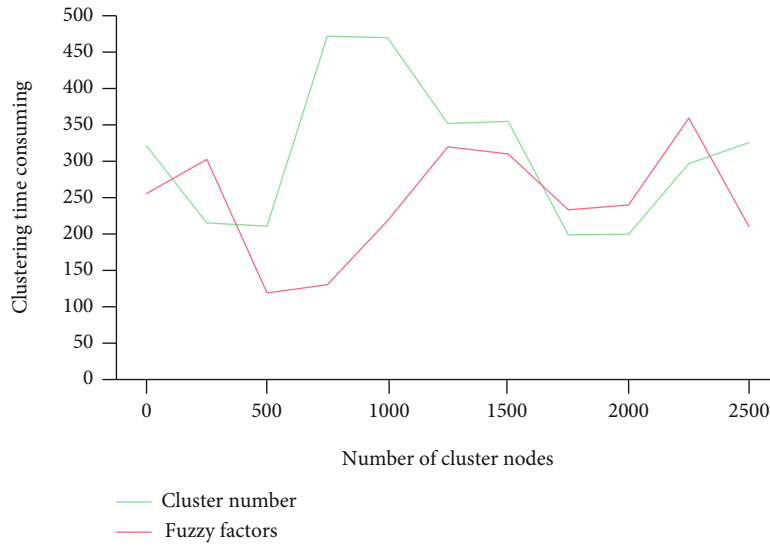
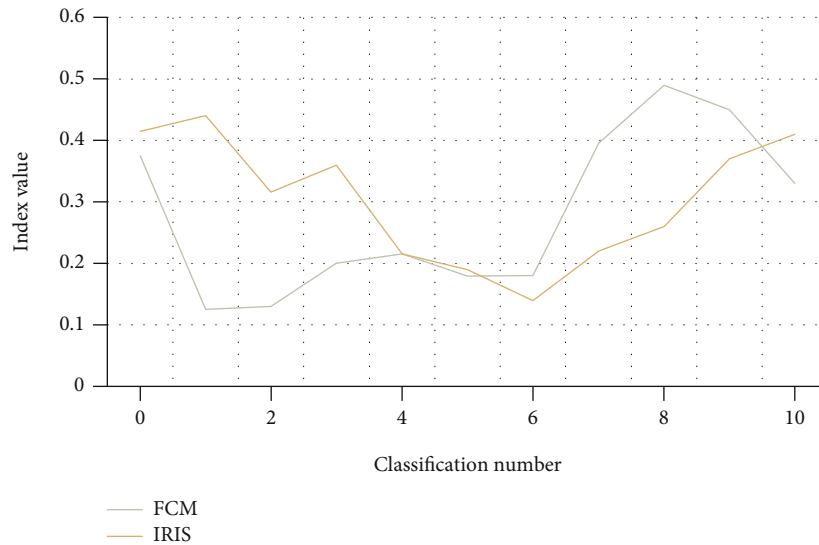FIGURE 2: Clustering time of three optimization strategies.

FIGURE 3: The graph of the ambiguity index of the dataset.

workflow management systems. With the rapid burgeon of computer and web technique, especially the increasing popularity of applications, a large number of distributed heterogeneous systems have appeared in various stages of enterprise informatization, and enterprise message resources have shown the characteristics of heterogeneity, distribution, and loose integration. Centralized message processing can not meet the actual needs. In the heterogeneous and distributed message environment of enterprises, in order to realize the automatic execution of business processes, the cooperation of different organizations, the integration of different application systems, and the sharing of resources, it is necessary to adopt the distributed workflow technique. Workflow technique is the core technique to realize business process modeling, business process analysis, business process optimization, and business process management and finally realize business process automation. Graph of the change in the

number of computers required to complete the task is shown in Figure 7.

By establishing a process modeling architecture that matches the workflow technique and effectively combining with other application systems, the enterprise can well realize the business process of the enterprise. In addition, the current and future enterprise management will be more according to the distributed heterogeneous environment, the workflow management system can be distributed in different software platforms, and the process collaboration needs to be completed in the heterogeneous environment. Many enterprise message systems are complex, with the characteristics of multisystem and multiplatform, and the construction of workflow model is still relatively weak, which brings certain difficulties to the realization of enterprise workflow management. The services provided by the dynamic discovery, configuration, and instant integration
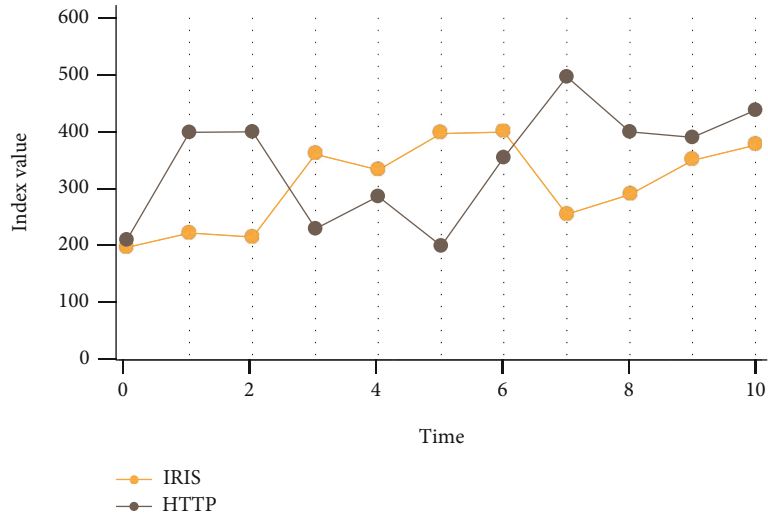
FIGURE 4: *F*-statistic trend chart of different number of classes.
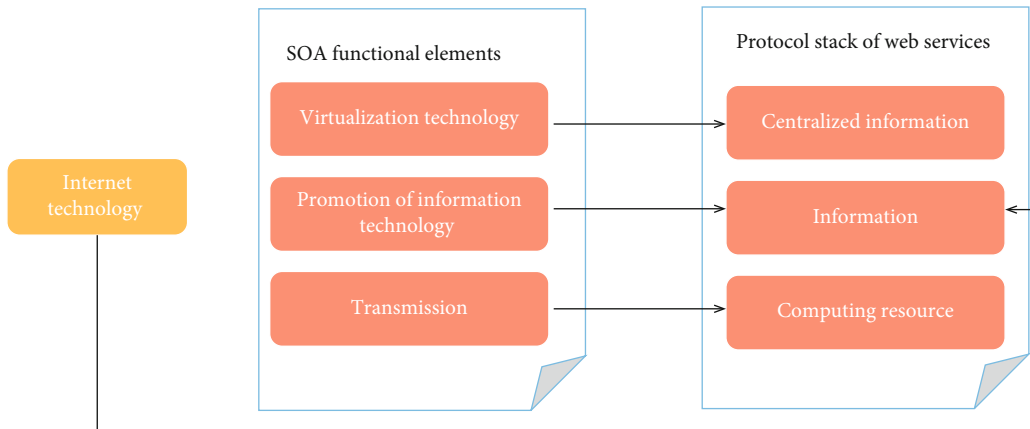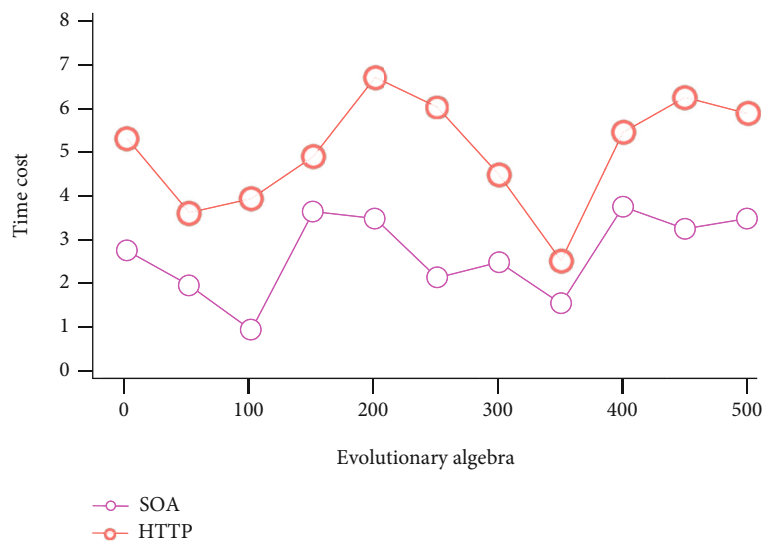

FIGURE 5: Mapping of web service to SOA.
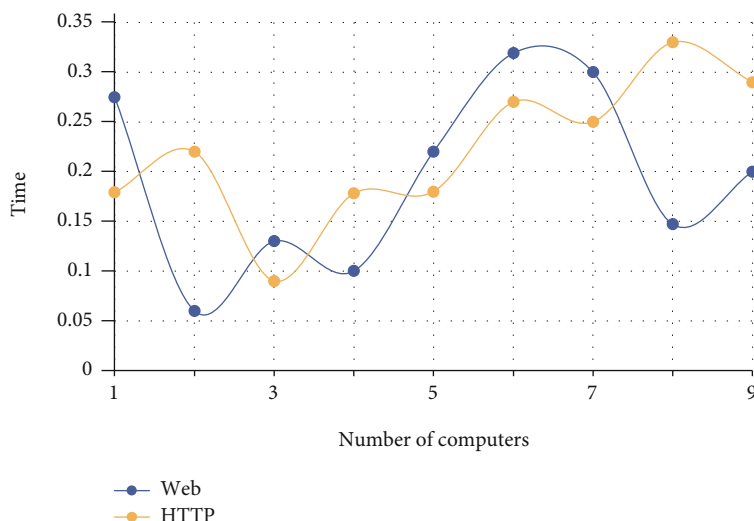

FIGURE 6: Algorithm time performance comparison.

FIGURE 7: Graph of the change in the number of computers required to complete the task.

according to WebServices have become the mainstream of applications on the Internet. WebServices defines service interfaces through WSDL protocol and uses UDDI protocol for WebServices registration and search. All these features make it the best way to implement SOA today. The adoption of web services and SOA technologies also removes complexity and integration issues from program burgeon projects. Workflow management systems must support interoperability in similar heterogeneous environments and provide support for heterogeneous software systems. In addition, a workflow may involve different application systems spanning multiple regions and multiple enterprises, so the workflow management system should also meet the needs of Internet-based management. However, the traditional workflow technique obviously cannot meet the requirements of dynamic e-commerce and cross-enterprise cooperation due to the lack of interoperability. From the perspective of the burgeon trend of software burgeon technique, software architecture has gradually developed from structured, client-server architecture, three-layer, or multilayer architecture, distributed objects to component-oriented components, and its burgeon direction is higher abstraction, encapsulation, and modular. Service-oriented architecture (SOA), as a higher abstraction according to component-oriented technique, points out the direction for solving the heterogeneity and synergy of large-scale enterprise applications. The key goal of implementation is to maximize the reuse of enterprise assets.

5. Conclusions

Integration and sharing of university English teaching resources are unavoidable in today's web environment for the growth of education. Universities can only learn from each other's strengths and complement each other's weaknesses in order to develop their innovative advantages if they have a cooperative and sharing relationship. Information technology is not only a means of display but also a teaching aid. The process of integrating message technique and

English teaching in a web environment is not only about using message technique in the classroom but also about teachers improving their own quality and trying out new ideas in practise. In the message age, this integration will undoubtedly be the dominant mode of learning. The effective use of computer message techniques to assist English teaching can result in a significant improvement in the efficiency of English classroom teaching, as evidenced by numerous examples. However, a deliberate pursuit of modernization and an overuse of message technique will transform English classes into message technique courseware demonstration classes or "film and television animation classes," and English teachers will become "projectionists," with unintended consequences. Integration of university English teaching resources is also essential for students and teachers. Teachers must improve their teaching skills by sharing and communicating, and students must improve by using a variety of learning resources. The time spent optimizing the clustering operation is significantly reduced by more than 50% using this algorithm, which is conducive to the integration and sharing of college English education resources and is critical for educational development.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The author does not have any possible conflicts of interest.

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