

# Online Intelligent Display Platform for English Teaching Communicative Awareness in Vocational Colleges Based on Multi-Dimensional Cross-Cultural Data Information Mapping Algorithm

LI Yun

Foshan Polytechnic

Foshan, Guangdong, China, 528137

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**Abstract:** Aiming at the problems of low mining accuracy, slow running speed, and large memory footprint when mining complex and large-scale data sets in biological information networks, a multi-dimensional data mining algorithm for biological information networks based on association rule mapping is proposed. At the same time, it analyzes the current situation of English teaching in higher vocational colleges and the problems existing in cultural teaching, which leads to how to cultivate students' cultural communication awareness and improve students' cross-cultural communication ability in English teaching activities in higher vocational colleges. The online and offline college English blended teaching mode of the network platform, and the online and offline college English blended teaching strategy of the network platform is proposed.

**Keywords:** Online Intelligent Display Platform, English Teaching Communicative Awareness, Multi-Dimensional Cross-Cultural, Data Information Mapping

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## 1. INTRODUCTION

The State Council pointed out in the "Decision on Vigorously Develop Vocational Education": "Vocational education should serve to improve the quality of laborers, especially the professional ability." [1] This requires that the teaching of secondary vocational schools must aim at cultivating students how to master professional skills. ability for the purpose. With the continuous development of multimedia and network technology [2], multimedia data such as images, audios, and videos are constantly increasing. It is very difficult to effectively manage and query these data. However, using data mining technology with learning ability, it is possible to discover a large amount of data information by mining a large amount of data [3]. Effective clustering of multimedia data based on potential content features.

Biological information network refers to the use of mathematical methods, graph theory, network topology and other methods to study the network of biological information systems [4]. It includes biological science, mathematical models, computer science and other technologies. contacts and organizational structure. The new "Basic Requirements for College English Teaching" clearly states that college English courses are not only a basic language course. Therefore, it is very important to study the online and offline mixed teaching mode of college English on the network platform [5], which is not only the need for students to fully master the ability of listening, speaking, reading, writing, and translation, but also the need for college English teaching reform [6].

It is a quality education course that broadens knowledge and understands world culture, which is both instrumental and humanistic; English teaching workers are required to fully consider the cultivation of students' cultural quality and the imparting of international cultural knowledge when designing English courses. Ontology has been widely recognized as an

important means of domain knowledge structuring [7]. In the fields of multi-agent systems, information integration, semantic web and knowledge management, ontology is considered to be an important theoretical basis [8]. According to Studer, ontology is a shared conceptual model A clear formal specification of [9]. Auralization is the expression of information with non-speech sound signals, that is, in order to facilitate communication and interpretation, the connection of data in the research field is transformed into a sensory connection expressed by auditory signals [10].

Hearing is a good visual aid, and part of the information of the CAD design analysis results is fed back through audio. Due to the different ecological [11], material, social and religious environments in which different ethnic groups live, their language environment produces different language habits, social culture, local customs and other contextual factors. Therefore, different cultural backgrounds cause people to speak differently [12]. The way or the habit is not the same. Biological information network refers to the use of mathematical methods, graph theory, network topology and other methods to study the network of biological information systems. It includes biological science [13], mathematical models, computer science and other technologies. contacts and organizational structure [14].

An efficient algorithm for mining approximate frequent items in data stream is proposed. The algorithm uses a deterministic  $\epsilon$ -approximation method to accurately mine frequent items in data stream, and uses summary data to satisfy user's query [15], and effectively reduces the algorithm's complexity. Space complexity and average processing time, resulting in smaller frequency errors. First of all, as far as the teaching syllabus is concerned [16], the various foreign language teaching documents and syllabuses formulated by the Ministry of Education of the People's Republic of China emphasize the importance of learning foreign cultures, but these syllabuses are all formulated around language teaching,

and none of the syllabuses incorporate cultural education Raised to a position of equal importance with language teaching [17].

The online and offline college English mixed teaching mode oriented by the network platform is a supplement to the traditional college English teaching, and promotes the comprehensive improvement of students' listening, speaking, reading, writing and translation skills.

## 2. THE PROPOSED METHODOLOGY

### 2.1 The Multidimensional Cross-Cultural Data Information Mapping Algorithm

However, in an open environment such as the Semantic Web and multi-Agent systems, or when carrying out tasks such as information integration and knowledge management, such a "centralized" solution is obviously not advisable. In engineering analysis, audibility is widely used at home and abroad. There are also certain applications, such as in finite element analysis, numerical simulation of fluid mechanics and so on.

In the Exvis program at Louville University. Culture is the foundation of language. Over the years, although English teaching has continued to improve and innovate in teaching methods, the results are not so satisfactory: although the students trained can only read, can't speak, can only watch, and can't listen compared to the past. made great progress.

In this paper, the association rules of network data sets are determined based on the association mapping relationship of network data to improve the efficiency of data mining, and the frequency of data mining is obtained by the method of probability estimation, and the mining factor and relative error are introduced to improve the mining accuracy. According to the definition given above, below we describe the concept mapping problem. Given two or more ontologies, concept mapping means that for any concept  $c \in O1$  in the ontology  $O1$ , an attempt is made to find one or more corresponding concepts in the ontology  $O2$  such that both have the same or similar semantics.

When distinguishing data samples in the same subspace, it is necessary to formulate mining rules according to the degree of association of the data samples. When the data sets are located in different subspaces, it is only necessary to distinguish the subspaces according to the correlation properties of the subspaces. Teachers should not only pass the book course knowledge to the students, but also combine the book knowledge and use network education resources to mine relevant information. The knowledge of English is passed on to students together, broadening students' knowledge horizons, and then cultivating students' core English literacy. The above assumptions are the basis for our similarity measurement. The idea of the algorithm is to comprehensively weigh the similarity of each attribute of the concept, and then decide to what extent the two may have the same or similar semantic properties.

### 2.2 The Communicative Awareness of English Teaching in Vocational Colleges

The needs of social development. The frequency and diversity of international exchanges require that English learners must master certain customs and customs of the target language country in order to communicate with them smoothly. Otherwise, even if they are fluent in spoken language and have strong expressive ability, pragmatic errors will occur due to the lack of understanding of the cultural background of the

target language country, and even misunderstandings will cause the other party's disgust. Than again, in terms of teaching, English teaching lacks the necessary innovation.

In addition to hidden social factors, the reasons for this phenomenon include the following specific reasons: inappropriate situational teaching arrangements, which are not conducive to classroom activities for dialogue exercises. Online and offline activities guided by network platforms The college English blended teaching model needs to do a good job of pre-class teaching preparation, and use the effectiveness of pre-class teaching to connect classroom teaching and after-class teaching mode, so as to realize the online and offline teaching mode. The preparatory work for college English pre-class teaching activities is divided into two parts. The architecture of CAD auralization can be divided into three parts: CAD geometric modeling and analysis and simulation, CAD analysis data and mapping, and the realization of system auralization. There are two main software data analysis interfaces.

For students who need to work in English after graduation, they do not understand the values and moral standards of Westerners. In order to verify the multi-dimensional data mining algorithm of biological information network based on association rule mapping proposed in this paper, the experimental simulation hardware platform used is: IBM's PC, clocked at 2.3 GHz CPU. Course teaching hours are less and more content, cultural education and English courses are not closely integrated; classroom teaching concepts are outdated, teachers have not yet established the idea of "connecting culture and language"; students do not know enough about themselves, and do not pay enough attention to cross-cultural quality education, students in higher vocational colleges often put more experience in the study of professional knowledge due to the pressure of employment.

### 2.3 The Research And Development of Online Intelligent Display Platform For English Teaching Communicative Awareness

Memory usage under different numbers of data sets, the smaller the memory usage, the better the performance of the data mining algorithm, and the more suitable it is for mining actual large-scale data sets. Students who are not majoring in English in secondary vocational schools have fewer opportunities to contact British and American people, so the classroom becomes the main position for learning English. Teachers should make full use of this main teaching place. Language is the carrier of culture and the main manifestation of culture. Language develops with the development of a nation, language is an integral part of social and national culture, and cultural difference is an obstacle to cross-cultural communication.

Different nationalities have different cultures, histories, customs and customs, etc. Second, teachers pass the prepared educational resources to students, guide students to learn English knowledge independently with the help of English teaching resources, and exercise English skills after class, to have a comprehensive grasp of English knowledge, so as to enhance students' self-confidence in learning. The direct conceptual environment determines the intrinsic and most important extrinsic attributes of conceptual semantics. Therefore, it has a direct impact on conceptual semantic similarity. It is also noted that, In the attributes and sub-concepts of concepts, such as frequency, loudness, timbre,

etc.; the mining accuracy of the algorithm under different numbers of data sets, the larger the number of data sets, the better the mining accuracy can be maintained, which means that the mining algorithm is practical in practice. application effectiveness.

### 3. CONCLUSIONS

This paper proposes a simple edge-first dependency parsing algorithm, and uses it to perform dependency analysis on complex noun phrases. The object of the algorithm is complex noun phrases containing at least three words. We should learn from the research methods and achievements of some European and American countries. Under the organization of the Professional Education Committee, foreign scholars and experts should be invited to conduct research on the joint promotion of English teaching and cultural education. Concept mapping and ontology mapping are semantic web, knowledge management and It is an important topic in the field of data integration. This paper takes the assumption of conceptual similarity as the premise and the similarity calculation as the basic technology.

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