Atlantis Highlights in Intelligent Systems, volume 2

Proceedings of the 2021 International conference on Smart Technologies and Systems for Internet of Things (STS-IOT 2021)

Construction of Classroom Dynamic Evaluation Model based on Internet of Things

Yinling Li

School of Humanities and foreign languages, Xi'an University of Technology，Xi'an City, Shaanxi Province，710054，China

Liyinling2008.hi@163.com

ABSTRACT

With the development of computer technology and Internet technology, the current information exchange processing and analysis sharing has entered the era of big data. In the new era, the society puts forward higher requirements for students' English learning. As the main standard to test the quality of higher education, students' foreign language ability should not only stay in the stage of knowledge acquisition, but also be reflected in practice and service. Therefore, it is necessary to construct a set of perfect teaching dynamic evaluation model for College English teaching, and promote the improvement of teaching quality and level with the help of the evaluation function of the model.

Keywords: big data; English teaching; Dynamic assessment; pattern analysis

1   INTRODUCTION

In the era of big data, Internet has gradually penetrated into all walks of life, and education is no exception. Network assisted instruction provides a broader world for English teaching. In the new curriculum reform, it is emphasized that students should communicate in a certain language environment to stimulate their interest and passion in English learning. In the context of big data, teachers should make full use of these emerging resources in classroom teaching, change teaching methods, attract students' interest in English learning, and let students experience the charm of English learning in their perception, so as to improve students' English level. In recent years, flipped class room, MOOCS, micro courses and other teaching modes are the products of education in the new era, which provide great help for junior high school English classroom teaching[1].

College English teaching requirements has been promulgated and implemented. Its content clearly proposes that college English teaching evaluation should conform to the development trend of the times, take scientific evaluation as the development orientation, and change from the traditional single evaluation mode to the combination of process and result. Information technology should be introduced into College English teaching to provide technical support for modern teaching mode. Based on the theory of dynamic evaluation, combined with the practical results of colleges and universities, this paper puts forward suggestions for the development of dynamic evaluation of teaching in Colleges and universities in China.

"Before the exam, I was worried that there was not enough time to copy the answers on the answer sheet. I found myself thinking too much in the test." "when I did this paper, I felt that I missed all the answers after walking along the road; only your name and student number were sure, others did not master..." these feelings after the exam did not come from "learning slag", but some "student tyrants" of Shanghai Jiaotong University Complaints about the school English proficiency test on the Internet.

In addition, a pilot course of academic English has been set up to guide students' academic thesis writing, so that they can use English in a "real English environment", which is a common practice in China and the West.

"The difficulties faced by College English teaching continue." Professor Xu Jinfen of Huazhong University of science and technology said that in addition to the great reduction of College English class hours and credits and the decline of students' enthusiasm for learning English, new technology has a greater impact on traditional English classes.

However, the problem lies in how to ensure that students learn fully and effectively outside the classroom. "Shanghai and abroad are exploring the research application of language data Ali enabled education to support scientific decision-making and intelligent education. We hope to establish a new intelligent education model that is truly learner centered," said Hong Huaqing.

When students encounter problems in the learning process, they can give timely feedback through message boards, dialog boxes and other Mu class network plat-

forms, so as to encourage students to think more independently and guide them to have a fuller understanding of their learning contents, effects and needs. They can also join relevant MOOC course tutorials according to their learning level and English level, so as to facilitate learning in the classroom Communicate with the teachers and students in the group in the spare time, so as to better improve the enthusiasm and enthusiasm of learning and enhance the learning effect.

2   RELATED WORK

The Internet of things is a network that uses sensors, RFID, collectors, video surveillance and other sensing technologies and equipment to connect various networks according to the agreed protocol for information exchange and communication, so as to realize intelligent identification, positioning, tracking, monitoring and management. The development of Internet of things has played an important role in promoting many aspects of smart campus. Internet of things technology can be used to build an intelligent teaching environment, enrich experimental teaching, assist teaching management, expand extracurricular teaching activities and other educational links, and can be applied to teaching technology, student management, logistics support services, etc.

Mahmoud m a [1] et al. proposed an agent-based evaluation model of students' emotional engagement in classroom. Ouyang w[2] proposed. Classroom education effect evaluation model based on mfo intelligent optimization algorithm. Zhu h[3] et al. proposed classroom teaching evaluation of chinese painting as a form of fine arts in rural junior high schools. Xing h[4] et al. proposed the classroom teaching evaluation theory:reflection and construction. Mcknight l[5] et al. proposed supporting teachers to use genomics as a context in the classroom: an evaluation of learning resources for high school biology. Ma j[6] et al. proposed cdam: conservative data analytical model for dynamic climate information evaluation using intelligent iot environment-an application perspective - sciencedirect. Mo z[7] et al. proposed dynamic cost evaluation method of intelligent manufacturing enterprises based on dea model. Yin t[8] et al. proposed research on the evaluation index system of table tennis classroom teaching based on core literacy. Davis, nash[9] proposed memory mates: an evaluation of a classroom-based, student-focused working memory intervention. Colmar s[10] et al. proposed memory mates: an evaluation of a classroom-based, student-focused working memory intervention. Kar s[11] et al. proposed. Evaluation of quasi-static and dynamic nanomechanical properties of bone-meta-static breast cancer cells using a nanoclay cancer testbed. Mahfouz w[12] et al. proposed evaluation of the effect of

abdominal sacrocolpopexy (asc) on urethral anatomy and continence mechanism using dynamic mri.

Education products under the background of "big data"

With the continuous development of the Internet era, many new teaching models are emerging. For example, flipped classroom, MOOC and micro - courses are the first wave of big data reform education.

The emergence of MOOC and Tibetan lessons has changed the traditional education mode. In the past, the classroom was a teacher's endless "cramming" explanation, but now the classroom is "video re education". Teachers can according to the situation of students, targeted understanding of students' learning problems, targeted explanation and guidance. The traditional classroom can no longer explain the new lesson, but become a place for students to do homework, explain problems or do experiments[2]. As shown in Figure 1, the application of big data in English classroom.

This paper consists of the following parts. The first part introduces the related background and significance of this paper, the second part is the related work of this paper, and the third part is data analysis. The fourth part is example analy-sis. The fifth part is conclusion.
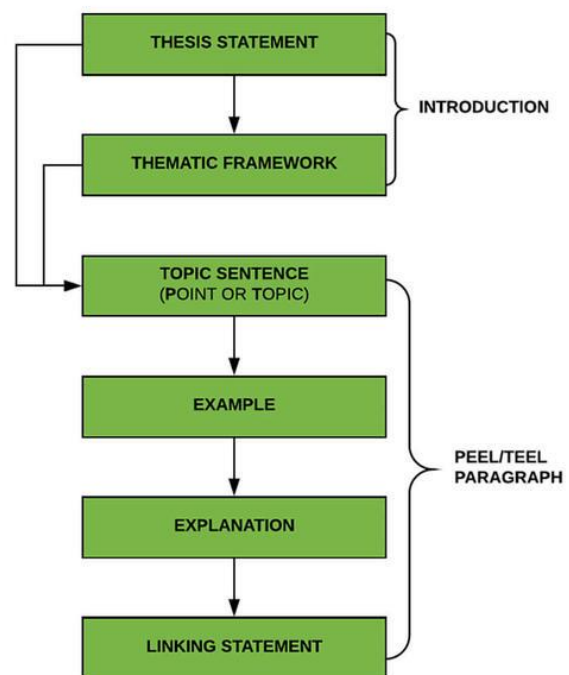

Fig. 1. Application of big data in English classroom

If flipped classroom is just a feeler, then the emergence of MOOC is the further sublimation of flipped classroom. With the further improvement of "video re education",

MOOC has opened online courses on a large scale, and micro class is a response to flipped classroom and an indispensable resource for students' autonomous learning. The micro course is the mini lesson of the concentrated teaching video, which is mainly used for the students' early study. At present, the practice of information teaching in primary school and middle school has been influenced by the curriculum. It can be said that the first thing to bear the brunt of the reform in the field of education is the big data transformation of information-based teaching.

3 DATA ANALYSIS

Scientific and effective evaluation mode has a far-reaching impact on the development of colleges and universities. For teachers, it can not only provide reliable information reference for improving the teaching environment, but also promote them to understand their own shortcomings in the teaching process, innovate teaching methods, and build a harmonious communication bridge between teachers and students. However, due to the obvious defects of teaching evaluation mode in China, most colleges and universities can not realize the idea innovation[3]. There is a common problem in Colleges and universities that emphasis on knowledge but neglect ability[4]. Taking test scores as the only standard to measure learning ability, we use a single exam oriented way to test teaching results, ignoring the importance of diversified teaching evaluation mode. Therefore, colleges and universities must build the corresponding dynamic evaluation model (as shown in Figure 2).
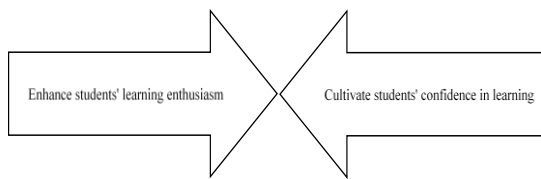

Fig. 2. Corresponding dynamic evaluation

（1） Improve students' enthusiasm for learning
Interest is the best teacher. If it can help students to establish interest in English learning, the problem of low efficiency in English teaching will be solved well[5]. In the past, the traditional single evaluation mode is obviously insufficient in mobilizing students' learning enthusiasm. Students only passively accept the knowledge imparted by teachers and maintain a "Task-based" mentality, so it is difficult to achieve good learning results. But dynamic evaluation model can fully tap the students' learning potential and achieve high-quality learning effect. In

fact, the students' learning ability is not different. If scientific teaching methods are adopted, the potential learning ability of students will be effectively stimulated. The dynamic evaluation model can realize the good interaction between teachers and students. As shown in Figure 3, English dynamic evaluation model.
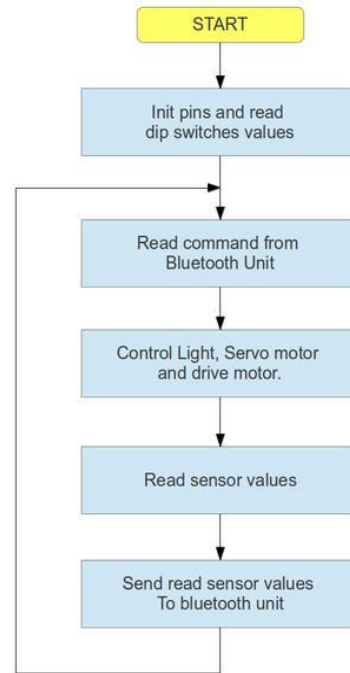

Fig. 3. English dynamic evaluation model

Through the application of this model, teachers will change the "high-level" cold-face role and actively communicate with students, thus stimulating the potential of students, inducing students to study actively and ultimately improve the teaching quality.

$$\sup_{0 \leq t \leq T} \|d_k(t)\| \leq \varphi \qquad (1)$$

$$x_k(0) = x_d(0), k = 1,2,3,\cdots \qquad (2)$$

$$u_{k+1}(t) = u_k(t) + L(t)(\dot{e}_{k+1}(t) + e_{k+1}(t)) \qquad (3)$$

（2） Cultivate students' learning confidence
Students are reluctant to spend time and energy on learning foreign languages, mainly because of the influence of weariness. The traditional evaluation method can easily enlarge the students' aversion to learning, which makes students more reluctant to learn, unwilling to learn and lose their confidence in learning. This is also the main

reason why students' English level can not be improved[6]. The dynamic evaluation model overcomes the disadvantages of traditional static teaching and helps students to find their learning confidence. Students can build up their self-confidence in learning by understanding the learning stage of English. In fact, students' confidence is closely related to teachers. If the school establishes a dynamic evaluation model, it will be helpful to improve the overall level of the teachers. Therefore, the coordination among teachers, students and schools is very important. The school should establish an effective evaluation mechanism to improve the teaching level of teachers; When teachers teach English knowledge, they should help students gain confidence in the process of learning; Students will eventually have a strong learning pleasure and actively participate in the construction of the school.

4 THE CONSTRUCTION OF DYNAMIC EVALUATION MODEL OF COLLEGE ENGLISH

The dynamic evaluation of colleges and universities should be combined with teaching practice, so as to improve the teaching quality, optimize teaching methods and provide students with information services for learning and talent[7]. But how to establish an effective dynamic evaluation model, how to improve the enthusiasm of students to learn foreign languages and what evaluation information is the most valuable, has become the focus of the current college needs to solve and pay attention to. As shown in Figure 2, the requirements for the construction of the dynamic evaluation model of College English are shown in Figure 4.
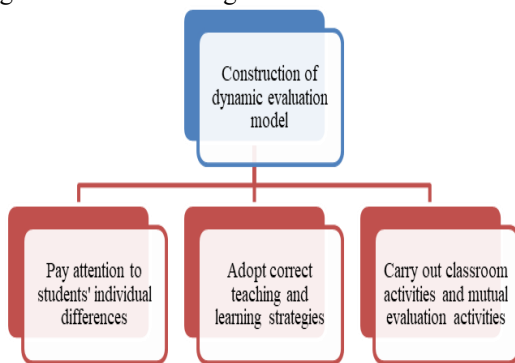

Fig. 4. Construction of dynamic evaluation model

In view of the current situation of the difficulty of dynamic assessment in the field of College English teaching, it is necessary to combine process and final evaluation with modern teaching information technology, and establish a dynamic evaluation model of College English

classroom teaching from two aspects of quantitative and qualitative evaluation. Taking process assessment as the main direction, combined with the final evaluation results, the mid-term and end of the period are regarded as nodes to establish an effective dynamic evaluation system. The authoritative evaluation of the teaching level and teaching results of colleges and universities provides a strong impetus for the development of national education.

（1） Pay attention to the individual differences of students

Based on Markov chain, when establishing dynamic evaluation model, people need to pay attention to individual differences of learners, and evaluate the development and progress of learners' individual abilities with learners as the center. At present, the learning state and learning potential of college students are important parameters to construct dynamic teaching system[8]. The evaluation model is based on the development of teaching in the future. Paying attention to individual differences can help to grasp the students' learning situation and state accurately, on the other hand, it can provide real-time teaching feedback to teachers, which will help to improve the scientificity of teaching methods and finally realize the dynamic evaluation of foreign language teaching in University. The core value of the dynamic evaluation model is to pursue the timeliness and effectiveness of students and teachers' autonomous learning. Therefore, the evaluation results, the actual situation of the subject, the teaching progress and teaching strategy must be taken as the research focus of colleges and universities. In this way, students can learn independently and improve the teaching quality.

$$\sup_{0 \leq t \leq T} \| I - L(t)C(t)P^{-1}(t)B(t) \| \leq \rho_1 < 1$$

(4)

$$C(t)\Delta \dot{x}_{k+1}(t) + C(t)\Delta x_{k+1}(t)) \qquad (5)$$

（2） Take the right teaching and learning strategies

When building the dynamic management system of teaching, the correct attitude and strategy can effectively relieve the work pressure and improve the teaching level. Figure 5 shows the correct teaching of English
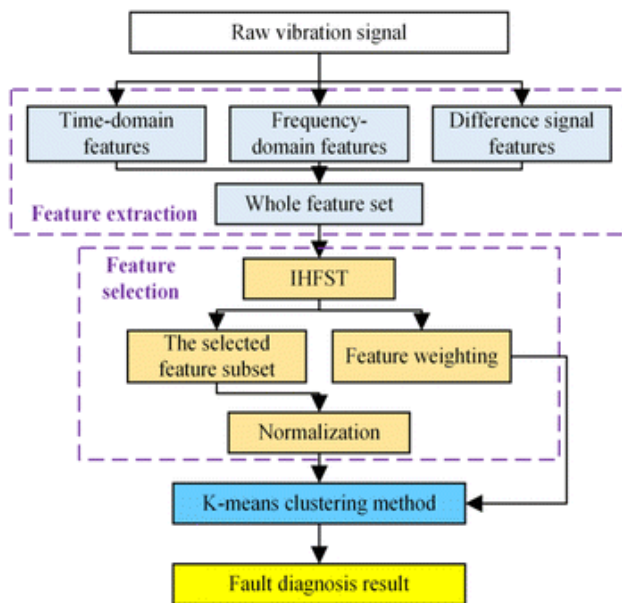
Fig. 5. Correct English Teaching Strategies

The attitude of learning is manifested in many factors, such as learning object, teaching teacher and curriculum experience. In classroom teaching activities, the attitude of learners is not constant[9]. With the different learning ability and different teaching experience, people need to adopt different teaching strategies. As a teacher, we should actively understand the students' psychological activities, and find out the changes of students' attitudes, and guide them to adapt to the dynamic teaching management mode gradually. Learning strategy refers to the learning methods and skills that learners adopt to improve their learning efficiency. Teachers should introduce all kinds of learning strategies to students comprehensively, and help them choose the most effective learning methods according to their own conditions. In fact, whether it is learning attitude or learning strategy, the key needs teachers willing to spend time on students[10]. In the study of colleges and universities, most teachers only take on the responsibility of teaching for students. Besides the class, teachers are not willing to pay attention to communication with students, which leads to the failure of establishing a good relationship between most students and teachers. First, any learning problems occur, teachers also put them on one side and do not deal with them in time. In the past, students can not keep up with the progress of learning.

（3） Carry out mutual evaluation activities of classroom activities

Unlike the static assessment mode which emphasizes quantitative, the dynamic evaluation mode needs the joint efforts of students and teachers[11]. The evaluation opinions of teachers and students in classroom learning are applied to dynamic evaluation, so as to increase the authority of evaluation results. Professor Feuerstein is the founder of interactive teaching dynamic evaluation. In his theory of "intermediary learning experience", he thinks that learning is actually a process of the collaborative application of educators, learners and learning tasks. It emphasizes that teachers should actively establish cooperative relationship with students and realize the optimization of efficiency. As an intermediary, teachers should take active measures to stimulate the learners' desire to know[12]. Through interactive way, they can not only help students to acquire knowledge, but also change their thinking structure and psychological state. Therefore, for students, learning will not be a painful process, but a process of respect and ability improvement. Therefore, in classroom teaching practice, activities in the classroom can not become learning, and activities outside the classroom are also a learning process. Teachers should use some extracurricular activities that can develop students' intelligence and improve their practical ability to use them, so as to realize the comprehensive development of students.

5   CONCLUSION

The development of big data is a profound change of people's life style, and plays an important role in people's communication and learning. As for the establishment of dynamic mode of College English teaching, first, universities should recognize the advantages of this evaluation model, change the single teaching method in the traditional mode, focus on the development of students' language ability and learning ability, find out the shortcomings of teaching methods and solve them, and finally improve the students' foreign language level, so as to improve the teaching quality of the University.Compared with the traditional translation process, the unique feature of computer-aided translation is that the computer actively participates in the translation process. In the process of machine aided translation, when the translator is working, the computer aided translation system will be busy with the following tasks: 1. Search the term library and make suggestions to the translator. 2. Search the translation memory database for the same or similar translation. 3. Store the translation results of the interpreter in the corresponding database and the terms specified by the interpreter in the term database.

ACKNOWLEDGMENTS

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