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A New Interactive Method to Distance English Learning in Conceptual Age

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Abstract

Latest advance in information technology and innovative teaching confronts DEL (distance English learning) with new challenges and problems. According to the DEL analysis, the paper firstly presents cloud service's functions to the support service, which serves to distribute and store quality learning resources. Meanwhile, practice-focused conceptual learning is advocated, which inspires distance learners' autonomy, initiative and subjectivity to the greatest degree. Then the paper discusses designing principles and orientations of conceptual learning for DEL based on cloud service. Finally, by presenting several successful DEL experiences, the paper puts forward new teaching methods and advocates students' multi-dimensional learning experiences.

Keywords: Cloud Service; Conceptual Learning; DEL; Distance English Learning; Information Technology; Innovative Teaching

Introduction

Latest advance in information technology has engaged DEL learners in a significant learning way. Learners prefer to both convenient, flexible, personalized learning opportunities and sound learning environment in any time and place. Meanwhile, it provides the most optimized intelligent environment with knowledge acquisition, storage, editing, performance, teaching and creation, which would be in turn an improvement for DEL learners' creativity and problem solving ability.

Cloud service-based mode of information processing is in response to intelligent environment, changing the way of information obtaining, sharing and communicating. Meanwhile, it's readily accessible and low cost.

The innovation advocated by conceptual age will lead the whole world in the near future. Daniel H. Pink, a U.S. trend expert, brings forth an opinion in his book, *A Whole New World*. He believes that, information age dominated by left-brain as logic, linear and reasoned thinking will soon come to an end. Instead, a brand-new conceptual age will emerge, with its characteristics as right-brained, comprehensive, creative and contextual thinking-based.

The left brain is usually considered as the verbal dominant hemisphere, while the right brain as the silent, non-dominant one. Such kind of misunderstanding leads to the fact that foreign language teaching pay more attention to the left brain's functions and behaviors, which stand in the way to the comprehensive utilization of the whole brain's function and potential. Madan Kataria, an Indian psychologist, points out that: "The right brain is very powerful. When people feel happy, it will be stimulated to help people to be capable of anything." As for DEL, learners should carry out the task of memory with the left brain while the complicated learning process with the right brain. In this way, the pressure of the left brain would be greatly released. At the same time, a sense of pleasure and achievement by right-brain learning can be fully enjoyed.

Therefore, it is necessary to integrate cloud service with conceptual learning for DEL. The determining factor lies in information technology and innovative teaching.

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Distance Education

Distance education provides learners with diversified learning style of autonomous learning. In a matter of fact, learners prefer to both convenient, flexible, personalized learning opportunities and sound learning environment in any time and place. In a word, featuring as "anyone, anywhere, anytime, any resources, any methods and any ideas," the distance education achieves the goal for real-time, convenient, highly-efficient and ubiquitous.

Through distance education, learners expect a tireless electronic teacher, a real-time response expert system, an ubiquitous learning place, a close and friendly learning experience.

Cloud Service

Latest advance in information technology has propelled the popularity of cloud service based on cloud computing, which is especially useful for distance education. Nowadays, cloud service enjoys wide spread. More and more distance education institutions and distance learners have their own information processed into "the cloud." The basic working principle is that, the data that the user processes is not stored locally, but in the Internet data center. The company offering cloud service takes responsibility of management and maintenance of the normal transfer of data, provides a strong enough computing power and storage space. Users can enjoy these services in any time, in any place, with any terminal equipment connected to the Internet access, without the need to expertise with such kinds of technical problems as hardware, path, data, response, as well as which individual storage or computing cloud.

Functions of cloud service prevail in the distance education. It has cloud storage and distributive storage. Cloud service enables Internet architecture transfer from the "server + client" to "cloud service platform + client," which provides dynamic division and release of storage space as demand. With countless software and services applied in the cloud server, distance learners can have easy access to the Internet, without the need to download or purchase resources. Moreover, software will be upgraded dynamically. With infinite space and speed, server cluster can provide a variety of solutions, regardless of learners' physical location. Correlative resources, services and applications can be ordered and escrowed according to learners' preference and demand. The standard sharing mode ensures the synchronous update and widespread use of data and resources. Learners' extra demands can be expanded and satisfied.

Conceptual Learning

Innovation symbolizes a new trend to the whole world. In that sense, traditional teaching should be introspected in many aspects. Learning skills such as rote-memorization, standardized testing and chalkboards are out of date. In contrast, it is the brand-new teaching method that would be beneficial to develop learning potential and thinking, share teaching resources in distance education.

Typical right-brain characteristics as six senses of design, symphony, story, play, empathy and meaning are illustrated as the figure 1. By using the sense of design and symphony, together with conceptual thinking ability, connection in the complicated education links could be located precisely, not confined to the individual but on the whole. By using the sense of story and play, improvements can be made to make learning plan, study micro-courseware and discuss hot issues. By using the sense of empathy and meaning, students' questions can be answered to communicate timely and monitor their learning progress.

Figure 1: The Schematic Diagram of Conceptual Learning

Conceptual Learning emphasizes that the process of instructional design is no longer a single rational or creative one. Instead, it is the realization of the learner as well as the teaching designer's autonomy, initiative and subjectivity to the greatest degree.

Analysis of Distance English Learning (DEL)

As far as DEL, various knowledge points have been integrated, so as to share the rich learning resource pool and testing practice bank. Multimedia experience for DEL is user-friendly. Miniature courseware can be used to realize modularized study. Teaching resources transmits fast, with various teaching network and communication paths available. Performance testing bank scopes to a certain extent, which requires daily practice and accumulation. With many knowledge points and tough learning task, it is difficult to memorize and easy to forget. Language courses depend on comprehensive ability to a great degree, so there is no necessary connection between learning effects and learning time.

As we can see from table 1, for the information technology-based cloud service and context-based conceptual learning, their opportunities and problems can be complemented and communicated with each other. As a consequent, a method of integration to DEL is explored.

Design of Conceptual Learning for DEL based on Cloud Service

It is strongly suggested that we make full use of cloud service's contributions to the learning resources as well as conceptual learning's promotion to the teaching service, so as to guarantee harmonious coordination and cooperation between left-brain and right-brain. In that sense, information can be obtained on or off class. Resources can be utilized for unlimited service, anytime and anywhere

Table 1: SWOT Analysis of Conceptual Learning for DEL Based on Cloud Service

Cloud Service Distance English teaching		Threats1 All-round integration of the teaching platform involves enormous workload and lack of teaching links. It is necessary to introduce cloud technology to the teaching design process, which means high requirements for the school.		Opportunities1 Teaching resource in the cloud, teaching service in the cloud. Ubiquitous cloud service, infinitely powerful cloud service	
Strength		**ST1**	**SO2**	**SO1**	**ST2**
course	Various knowledge points have been integrated. The teaching resource transmits fast. The Multimedia experience is good.	Sharing public resources, public data. Construction of online course, miniature courseware	Forming communication/ feedback/ dynamic mechanism	Joining the public education cloud. Building private cloud. Adding more data interface to curriculum resources	Maintain teaching continuity/ consistency/ integrity
learner	Eager to study initiatively. Experienced in language communication. Good at learning methods summary.	Enriching the online learning experience. Encouraging students' participation in establishing and optimizing platform	Promoting initiative study. Promoting successful personalized learning experience	Making students' participation in cloud computing and cloud services. Extending students' learning space and freedom	Priority to teacher, focus on student. Recording learning experience and impression
Weakness		**WT1**	**WO2**	**WO1**	**WT2**
course	Requiring practice and accumulation. Plenty of knowledge points and tough learning task. Learning time cannot guarantee the performance	Accurate definition of teaching. With multiple measures	Carrying out extracurricular. English language practice. Enhancing planed learning ability	Using the technology gradient reduce difficulty to learn. Making learning become a skill-obtaining process	Enhancing learning confidence and sense of achievement. Making short-term and long-term learning plans
learner	Overcoming the contradiction between study and work. Good at understanding but poor at memorizing. Tend to produce sense of learning anxiety	Guaranteeing the teaching design by the cloud. Individual learning to a "closed loop"	Combining working with teaching exploration. Making feasible study plan and goal	Enhancing multidimensional stimulus of memory. Enriching game function and entertainment function of learning	Promoting learning self-discipline and teaching reflection. Strengthening the interactive function and communication function
Distance English teaching Conceptual learning		**Opportunities 2** Playing teachers' teaching dominant, beneficial to the realization of teaching design. Playing students' personal initiative, beneficial to the learning effect		**Threats 2** Lacking identity of reforming the exam-oriented education model of original English teaching. Difficult in the joint of teaching philosophy and teaching practice	

through the cloud service for mobile learning. Considerate humanistic care support can be provided. What's more, problems can be solved with customized service, through conceptual orientation for relaxed learning.

Design Criteria of cloud service model

As for DEL, cloud service should meet the demand of synchronized, socialized, intensive and intelligent.

Resources and services are compared to two basic paths to promote distance learning. The former characterizes as explicit, static and compatible; the latter features as virtual and dynamic, open and integrated. In the distance learning at different stages, however, there is a degree of convergence and directivity. Through virtualized technology and aggregation of services of various kinds, it is feasible to realize flexible, convenient and practical operations. Relying on unification of hardware and software resources, together with reducing hardware and software standards, it is possible to realize intensive, dynamic and elastic construction. With resources uploaded to the cloud, service provided to the customer, learners can enjoy coherent, consistent and friendly learning experience in different channel, time and location. At the same time, the problems such as scattered data of the multi-level learning platform, resource sharing and service conflict can be solved.

The network works as the main communication channel for DEL learners and close the relationship with each other. So, cloud service should be made full use of to promote the class from loose to close, from silent to active. Learners are also free to discuss hot issues, provide consultation and evaluation to each other, forming a sociable learning environment. Meanwhile, they can establish community interaction, seek help from alumni, evaluate by electronic portfolio, train collective intelligence, share learning experience, show work products, communicate between the school, teacher and students, etc.

It should meet the need of the multi-level management and classified guidance. Teachers have explicit responsibilities, permissions and appropriate implementation of cross and vertical management. The supervision mechanism should be set up from top to bottom for the system information management platform, as to close to the school management pattern and convenient for administrators' evaluation.

The tracking, reminding and feedback function should be improved to help teachers achieve the teaching design and guide the student in learning plan, intelligent scene recognition, intelligent information processing, retrieval and push pull. For teachers, they offer oriented resources and customized service for students. For students, they enjoy these by powerful search engine, cross-database and cross-platform.

Orientation of Conceptual Learning for Distance English

For DEL, key elements of conceptual age can be combined with six objectives, to create an environment for original teaching, the group learning and autonomous learning.

We should exercise the students' language understanding, improve their second language acquisition ability, help them get rid of thinking set and promote their ability of deconstruction and reconstruction of distance English learning. With the focus on design-based learning, we should encourage students' participating in course and teaching design. Consequently, a new type of intelligent, expansive and creative class will produce. Meanwhile, students' desire and motivation to language learning are promoted.

Distance English learning requires not only to bear in mind the knowledge, grasp the key points and use various tools flexibly, but also to fully use of situation, plot and story elements to communicate. Consequently, the ability of plot construction and innovative narration is advanced. Also, it is necessary to guide students to blog writing, narrative writing, digital-situational courseware and learning material producing, so as to promote such linguistic abilities as pronunciation recognition, word and grammar recognition, reciting and language rule inference.

To cultivate learner's synthesized skill of English learning, it is key to enhance their ability to see the whole picture, explore the connection between knowledge and integrate learning materials. Through vivid audio and video courses, blog notes and photo journal, the connection between the knowledge points, skills of learning, perception and creation are strongly built. In that sense, a "symphony" of understanding (IQ) and scene controlling (EQ) for English learning is produced.

Life is not all about being serious; play is essential and exclusive. Similarly, learning does not always mean tough working. Pleasure is the ultimate goal of knowledge pursuit. Therefore, it is a learning subject to enjoy pleasure during the creative process. Such skills as development, study and anti-frustration are built internally with one's own pleasure, not by external teaching. Especially for distance English learning, it would get into a serious and tedious long cycle and difficult to achieve the teaching effect, once giving up rich and colorful, lively game-based teaching style.

Expressed in symbol and metaphor, we experience different roles' emotions, share their experiences and understand their situations and feelings. Empathy means experiencing from others' standpoint, understanding their feelings and resolving the contradiction between each other.

It is also important to focus not only on consequence but also on significance. Distance English learning has the advantage, because knowledge of English is dominant skills, which is profitable and joyful.

Combination of Cloud service and conceptual learning

Resources and services have been united and aggregated respectively under the guidance of the sense of design in DEL (figure 2). All kinds of resources can be searched out in cloud platform according to the "push" instruction in course learning. Those primary resources can be classified according to difficulty and quality, as well as to subject and form. Students can make choices according to "evaluation index" such as active degree and attention degree to DIY in individual learning and thus enhance "story" experience of learning. The platform can also provide "push" services of text messages and email such as professional orientation, new arrival reminding and course examination, promoting interactive "sense of symphony" of learning and practice. Teachers and students strengthen interaction and communication in "pull" and "push" link during the learning process, to achieve a closed, two-way "fluid circulation" and enrich "sense of empathy" in learning. Cluster support such as class group, group discussion, live telecast classroom and two-way communication would enhance the connotation of autonomous learning interactivity and build "sense of play." Therefore, the teaching goal of "sense of meaning" can be achieved under the condition of cloud service technology application, conceptual learning practice and teaching link development.

New Method and Experience of DEL

Cooperating with LanZhuo company, Shanghai Open University has adopted the "mobile" English learning system in 2006 firstly and began to use MMS (Multimedia Messaging Service) channel for the mobile teaching in 2010. Beijing Open University is set up for the world of mobile learning platform "iTunes U Beijing Open University" site for high quality education resources. A course, English phonetics, has been ranking first in iTunes U download in China for a long time. At present,

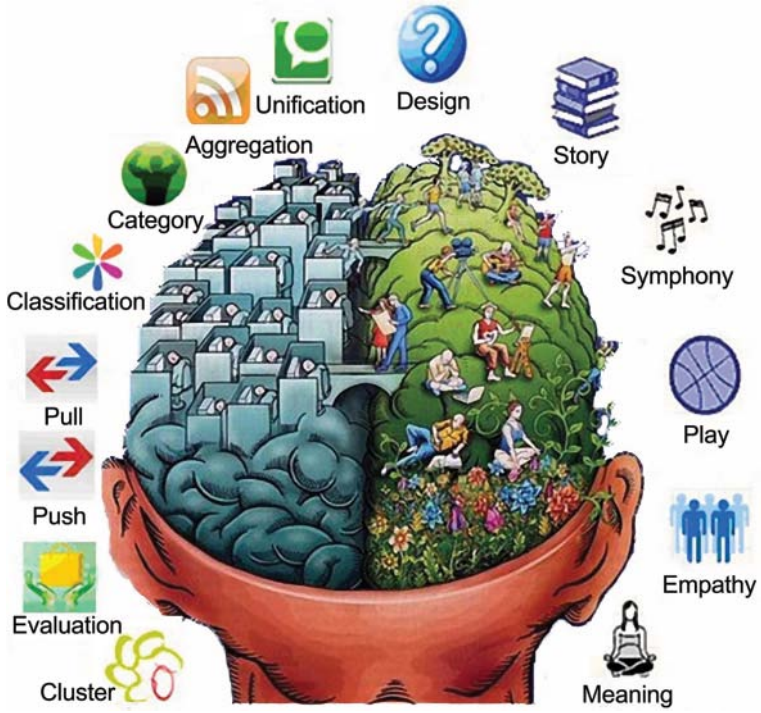

Figure 2: Conceptual Learning for DEL Based on Cloud Service

the Open University has made several experiences in exploring distance English teaching with the application of education cloud services.

Changing Teaching Mode

The data transferring is more accurate. The interconnected system guarantees data sharing between applications and fluent management process to the school. The real-time delivery of massive amounts of teaching data provides school system to obtain the data most accurately. In this way, teachers can focus on students' learning status and demands, released from transforming from platforms. The optimized performance of cloud security mechanism promises high security levels and efficient operation of teaching resources. The private cloud solutions make applications and resources deployed on the cloud hosting and cloud database, which control student roles and permissions uniformly, guarantee double security of personnel and system, solve the big problem of data leak and system paralysis caused by the personnel and system risk.

The system work is more efficient. Users' terminal learning equipment can be accessible by a desktop computer, or smart phone, laptop, tablet PC, PDA, or any other equipment capable of complete information interaction. The channel, for public cloud, mainly refers to the eight major telecom operators (including China telecom, Netcom, education, etc.) provided by the conventional broadband services, as well as all kinds of wireless communication network (2.5 G / 3 G / 4 G, etc.). For a private cloud, is refers to the internal communication of wireless campus network (WIFI). The cloud service refers to the cloud service provider. As for English learning, it can be provided with aforementioned LasS (infrastructure as a service) by Ali cloud, mobile learning SaaS (software as a service) by LanZhuo company, and PasS (platform as a service) by Google.

The management settings are easier. IT remains no longer the bottleneck of the background management. Those tedious operating processes and problems caused by system switching and

data obstruction can be solved. Elastic support ensures system quality at the time of large flow rates, guarantees promptness and integrity of data transferring, as well as the background processing speed and stability. Through professional service and comprehensive management, the cloud company takes charge of network infrastructure, software and hardware platform, responsible for all facilities maintenance, management and a series of services. Thus, it can release teachers and management personnel from the heavy burdens of background system maintenance tasks. Cloud technology manages all English teaching activities through the central position rather than from a single site or terminal, helping host teachers maintain through the Web, including wanted software quickly issued to equipment user. The expansion of bandwidth deals with more effectively the information transmission bottleneck of cross-regional, cross-network, cross-platform, thoroughly solving the problem of regional communication.

The basic resources are more flexible. The resources are shifted from rigid, inflexible, pure storage state into a full, rich, and active in delivery. A large integrated virtual resource pool can improve the utilization rate of resources according to different load dynamic allocation of resources and data flow. For cloud service-based school distribution, it is not necessary to allocate a large number of high performance computer mainframe, instead, distribute network bandwidth and release resource allowance according to season and time interval after the completion of the network channel construction. Taking advantage of the high elastic cloud resources, cloud resources configure to meet the actual demand levels in period of small and stable daily resource demand. When exam season (English unified examination, online examination) arises, resources can be upgraded by network to meet the business peak state in the shortest period. In period of equipment adding, debugging and application upgrading, by upgrading on the cloud, application characteristics can be successfully updated and issued, without having to manually upgrade on every desktop computer application within each individual school. Consequently, problem such as fund waste for disposable peak purchase of traditional resources can be solved.

The service mode is more secure. After solving the problem of bottleneck of IT background management, teachers will more concentrate on front-end service and teaching and have more support for the students. At the same time, with the sharing back-end resources, the students' relevant preferences and behavior data can be controlled by school. More reasons can be provided for the teaching design, which ensures students better service and experience. Meanwhile, with digital integration principle of cloud service, it can be possible to construct unified norms and standards, realized resource elastic extension and flexible combination.

Improving Students' Multi-dimensional Learning Experience

The learning method is more diverse. Hangzhou, for example, is the first city to offer city-wide free Wi-Fi in China, constructing 2000 hotspots in public areas. By connecting to "i-hangzhou," users have Internet access via Wi-Fi free of charge. China Mobile has built the world's first full coverage of 4G network in Hangzhou underground, with the highest rate of more than 40 MBPS. Urban network promises students an outlook in distance English learning, that is, it is no longer important to have a computer, fixed network access or to purchase and install a large number of software on your computer. With normal hardware configuration and operating system, users can browse cloud service website and enjoy its cloud service provided.

The learning process is more simultaneous. In Zhejiang Radio &TV University, for example, learning information is unified stored in cloud server. By any instruction through the network connection, relevant information in the lifelong learning digital public service platform and the lifelong learning digital repository in Zhejiang province, distance virtual laboratory and the digital library will be

Table 2: Conceptual Learning for DEL Based on Cloud Service

Syllabus	Make syllabus online and distribute to students and other participants	**Homework**	Assign test online check the schedule and give marks
Exercise and test	Encourage students to take testing online and give distance guide	**Questions answering**	Form online discussion group have free questions and answers
Calendar	Release review question answering,	**Announcement**	Send various information online support E-mail, sms, imessage synchronously
Video conference	Interactive online course, integrate video teaching, electronic whiteboard and chatting room	**Learning resources**	Provide courseware and learning experience between teachers and students
Other tools	Score inquiry, campus culture, blog, personal space, survey, wiki, translate online, digital library, paper base		

automatically pushed to every device available, such as the most popular series products of iPhone, iPod Touch, iPad, or even Mac computers, don't have to worry about in a number of divorces equipment in the process of learning.

The learning communication is closer. Login in learning platform based on cloud service, users can browse through various services such as syllabus, homework, test, questions answering, teaching calendar, announcement, video conference, learning resources and so on (table 2).

The learning feeling is more considerate. Users can have more considerate learning feelings as the following:

(1) Not so long ago, users started to watch an English learning video through the iPad. If they want to turn to the iPhone to continue, system can allow an appropriate position to continue the study last time. When users highlight some of the text, take notes or add bookmarks while they are reading on the iPad, the cloud will automatically update those revised information in the iPod touch.

(2) Once users download English courseware, the system will automatically push it to other registered devices, which will be recorded.

(3) Users are allowed to record various learning experiences and processing resources in a variety of devices, which will have a backup copy by system quickly and efficiently under the condition of the network access. Moreover, system backup can take responsibility when users set up a new IOS device or restore information on original equipment.

(4) Users are able to edit and browse the same document in the different space position, if personal courseware, learning material, paper are stored in the network hard disk. When the user machine is out of order and the local data is missing, the data stored in the platform can be easily recovered from the platform to the local hard disk.

(5) By scanning the users' collection of English learning resources, system will reserve, select and take compatibility of the resources according to the same level and the similar style. And then it provides users with a cloud-based version of the same quality, as to achieve the goal of guided learning.

Conclusion

As an advanced technology strategy, cloud service requires correspondence to advanced teaching concept. In the same way, as an innovative learning strategy, conceptual learning also needs leading teaching techniques as the backbone. With cloud service liberating left brain and conceptual learning developing right brain, DEL demands cooperation with both left and right brain. Therefore, we can draw a conclusion that conceptual learning based on cloud service is a good choice to two-dimensional interactive DEL.

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