Research on the Design and Application of English Micro-learning Resources Based on Cloud Technology and Micro-public Platform

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Abstract

This paper puts forward the construction of a foreign language learning method, with the aim of popularizing English micro-learning resources among WeChat and other micro-public platforms users by using the development of cloud computing. For the popularization of WeChat users, the aim of this paper is to build a campus WeChat service account. On the basis of the construction of a student's campus learning service account, the resource information management system is established. It can well promote the proficiency of language skills. This paper makes use of Web server, Java technology, database, XML parsing technology and other systems to develop. In order to achieve innovation based on information technology and teaching methods, its implementation with great promotion and application value is investigated.

Keywords: Service number, Foreign language learning resources, System architecture.

1. INTRODUCTION

The concept of micro-learning was proposed by Austrian scholar Martin Lindner in 2004. It is a new way of learning based on micro-content and micro-media in the new media ecosystem(Linet al.,2017). In the country, Professor Zhu Zhiting combined the characteristics of micro-learning itself. Micro-learning should follow the simplicity and low-tech threshold of the interactive interface in the design process, which takes full account of the discontinuous state of the learners' micro-learning. In the process, it stimulates the learners to participate in the principle of interest and so on.

Figure 1. Functional Design of Foreign Learning Resource Management System

Micro-content and micro-media are the subject of micro-learning, which has become a consensus, as shown in Figure 1.It shows the current mainstream association of micro-media, micro-content and micro-learning. Micro-learning is a micro-content resource formed on the carrier of micro-media. According to the connotation of learning resources, micro-learning resources can be defined as in the process of micro-learning. It can be used by learners, because of its support for learning, financial assistance, material, information, etc. Unlike traditional learning resources, any data produced by Internet users can be called micro learning resources(Kovachevet al., 2011; Linand Chen, 2013; Klamma, 2013).

2. MICROBLOGGING PUBLIC PLATFORM

2.1 The design of micro-learning resources

The design of micro-learning resourcesis necessary to refine the learning content into relatively independent content. However,it connects knowledge points as it is easy to operate the interactive module.On the one hand it enables learners to make full use of amateur learning time; on the other hand it can effectively improve the learners' competence in terms of micro effectiveness. Developers should make full use of the advantages of cloud computing technology to achieve micro-resources learning,which can be seamlessly compatible between different mobile devices (Simona, 2012).While the needs of learners can give rapid and accurate feedback to maximize the reduction of resource consumption, it can effectively improve the utilization of micro-learning resources and ultimately achieves cross-platform learning resources sharing, just as shown in Figure 2.
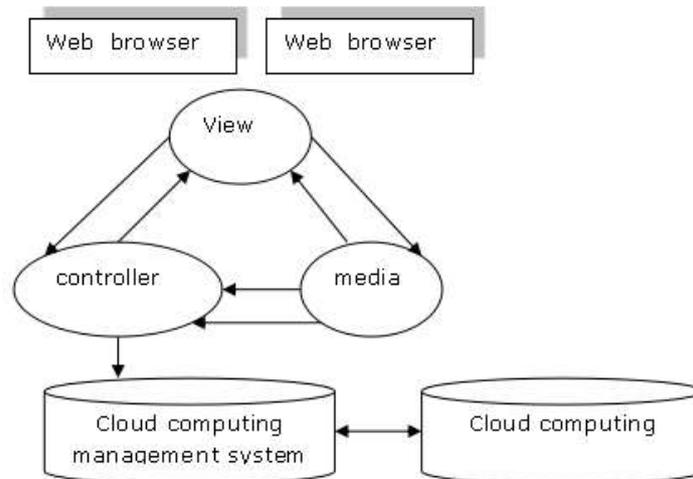

Figure 2. Overall Architecture of Foreign Learning Resource Management System

2.2 Microblogging public platform function

With the miniaturization of media terminal equipment, a variety of micro-media terminals emerge in an endless stream. We obviously have entered the era of popular social networks. The MSN, QQ, renren and other new media have not yet been out of date.Microblogging, WeChat and other new media, as a push resource of micro-media, further promote micro-learning gradually become the basis for the development and the materials.Obviously, WeChat is now the new media among the rookie representatives.

In this study, the micro-public platform is Tencent's new derivative function plate based on the WeChat. As shown in Figure 3, the functional framework of the micro-public platform can be used by individuals and enterprises. They create a public letter of micro-letter and a specific group of text, pictures, voice all-round communication and interaction. The public letter of the slogan is "small potatoes also have their own brands", which is enough to see its importance to brand promotion. Through this advantage of WeChat, it can push the user micro-learning resources. As a result, it imperceptibly changes or enriches learners' knowledge structure.
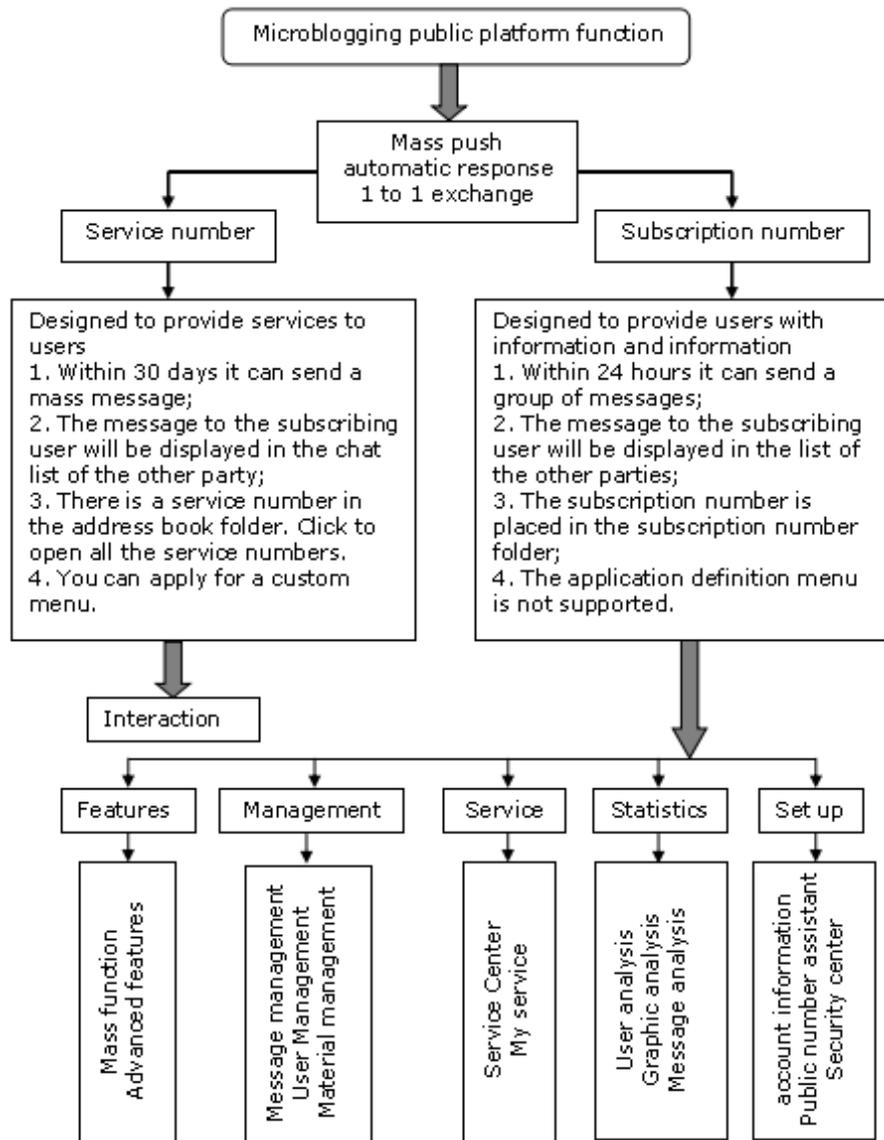
Figure 3. Microblogging Public Platform Function

2.3 The theoretical basis of micro-learning resources

Distributed Cognitionis a system that includes cognitive subject and environment. It is a new analysis unit thatincludes all that is involved in cognitive study. Its cognition is distributed among individuals, media, environment and culture for the good creation of micro-learning resources. To a certain extent, it reflects the cognitive phenomenon, which is the cognitive subject and the learning environment between the nature of distribution.Therefore, it distributed cognition for micro-learning resources to build an important guiding role(Cuadrado-Corderoet al.,2016).

Connectivismis a system of network, complexity and self-organization and other theories to explore the principle of the whole. It describes a learning model that adapts to changes in the current social structure. Learning is no longer an internal behavior when new learning tools are used. Learning is a process that occurs in a blurred environment where learning (defined as dynamic knowledge) can exist outside of ourselves (within an organization or database).And we will focus on learning. This connection enables us to learn more and more important things than the existing knowledge system in the connection of the professional knowledge series. Unicom provides a theoretical direction for platform-based resource building(Sunet al., 1939).

"Fish pond theory" is a well-known theory of marketing, in which the customer is compared to a section of the swimming fish and gathered to describe the place as a fish pond. Fish pond theory states that enterprises should be based on corporate marketing objectives and analysis of fish ponds inside the different preferences and characteristics of customers.It adopts a flexible marketing strategy, and ultimately it achieves the greatest success of the entire fishing process. The introduction of this study is used for the development of the function of the micro-public platform. Through pushing the resources,the micro-public platform mainly uses the equipment of the WeChat to influence the learner's knowledge structure. On the basis of the theory of fish ponds, the builder of the platform can follow the expected push target. Analysis of the platform of this "fish pond" in the preferences and characteristics of subscribers, which uses the corresponding push strategy, ultimately achieves a wide range of radiation effects(Wanget al.,2014).
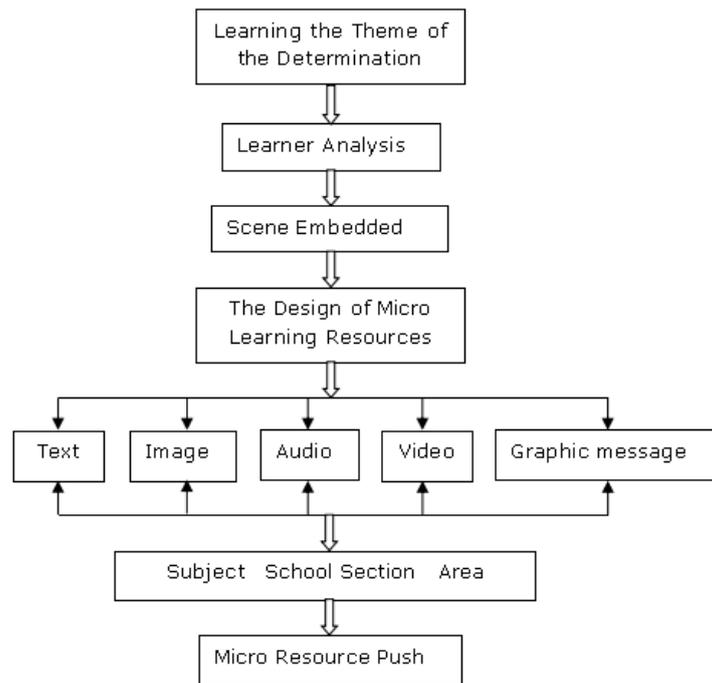

Figure 4. Micro Resource Design

2.4 Micro learning resource design

According to the selected learning subject, learner analysis and embedded learning situation, the specific process of micro-learning resource design is shown in Figure 4.We choose the appropriate learning resources material and the theory of Unicomism into learners who can use the learning resources.And these learning resources are based on handheld terminal carrier.In the specific micro-learning resources in the design process, we consider all aspects of the factors, which provides learners with complete and easy-to-use micro-learning resources.

3. RESULTS AND DISCUSSION

Micro-resources are designed by micro-messaging public platform. In the push to the micro-subscription subscribers,it can be sent to the Tencent microblogging platform. The audience is not only the platform of the subscribers, but also Tencent microblogging audience.The subscribers have access to the platform of micro-resources, which can be sent to audience of same needs.Friendsshare collections on friends circle. Theyalso share Tencent microblogging and copy the link in the browser to open andallow more learners to share micro-resources. Micro-learning resources have instantaneous added value. The public platform will present all the behaviors of the subscribers in the form of data. This is the micro-public platform, obviously better than other micro-media. We use a micro-resource information release as an example to decompose this process.Micro-resource information source and destination are shown in Figure 5.
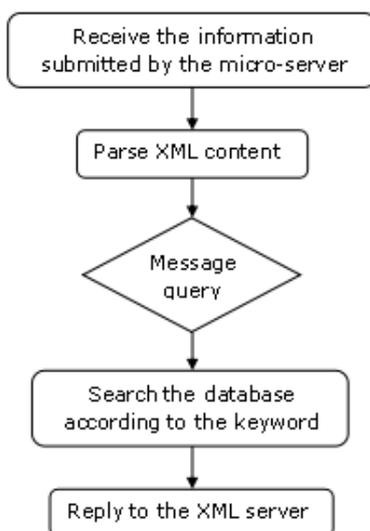
Figure 5. Micro Resource Release Process

According to learner characteristics, the biggest advantage of the microblogging public platform in the development of micro-resources is the ability to push information on demand. Automatically it generates a "statistics" chart such as the publication of a micro-learning resource called "micro-learning: new learning for the future," which mainly come from the data of the three days from March 19, 2014 to March 21, 2014. The learners'attention, readiness, interaction between learners and the platform are shown in the statistics of Figure 5. The developer of micro-resources can be well informed by the statistical data and perspective of the chart. According to the amount of reading users, the number of sharing analyzes the micro-learning.It is a new way of learning for the future "learning situation".In order to tap and develop a more user interest in the micro-learning resources, they are shown as in Table 1 and Table 2.

Table 1. Statistical Analysis Table (a)

	New number of people concerned	Cancel the number of people concerned	Net increase in the number of people concerned	Cumulative number of people concerned
	4	0	4	174
Day	+33.3%	--	+33.3%	+1.5%
Week	+33.3%	--	+30.0%	+5.5%
Month	+33.3%	--	+33.3%	+23.4%

Table 2. Statistical Analysis Table (b) ----- Data Details

Number of people served	Read the text page			Read the original page			Share forwarding	
	Number of people	People	Graphic conversion rate	Number of people	People	Original conversion rate	Number of people	People
174	117	188	67.24%	3	3	2.56%	13	16

4. CONCLUSIONS

In order to popularize the WeChat users, on the basis of construction of foreign language learning resources management system, this paper designs to build a campus WeChat service account. On the basis of the construction of a student's campus learning service account, the resource information management system is established. Through the application of the above development technology, the query and utilization of foreign language learning resources is realized. The microblogging public platform can meet the needs of modern students with foreign language learning resources. However, the system design also needs more improvement and debugging. As a result, it continues to be improved.

REFERENCES

BeeseJ., Turnbull J. (2013). Community psychiatric nursing – challenges and opportunities, British Journal of Nursing, 2(6), 275-278

Cuadrado-Cordero I., Cuadrado F., Phillips C., Orgerie A.C.,Morin C. (2016). Microcities: A Platform Based on Microclouds for Neighborhood Services, International Conference on Algorithms and Architectures for Parallel Processing, 2016: 192-202.

Lin H., ZhaoJ., Jiao Y., CaoJ., Ouyang H., Fang H. (2017). Research on building an innovative electric power marketing business application system based on cloud computing and microservices architecture technologies, IEEEInternational Conference on Cloud Computing and Big Data Analysis, 2017: 246-253.

Lin W.W., Chen C.M. (2013). Web-Based-Learning via Tajen Cloud, International Conference on Web-based Learning,8390 :253-258.

KovachevD., Cao Y., Klamma R., Jarke M. (2011). Learn-as-you-go: New Ways of Cloud-Based Micro-learning for the Mobile Web, International Conference on Advances in Web-Based Learning, 7048: 51-61.

Klamma R. (2013). Community Learning Analytics –Challenges and Opportunities, International Conference on Web-based Learning,8167:284-293

SimonaM.S. (2012). THE EUROPEAN FORUM "QUALITY SOCIAL SERVICES IN EVERY COMMUNITY – CHALLENGES AND OPPORTUNITIES", Revista De Economie Sociala, II(3) , 7.

Sun G., Cui T., Yong J., Shen J., Chen S. (1939). Mlaas: a cloud-based system for delivering adapative micro learning in mobile mooc learning, IEEE Transactions on Services Computing, 99: 1-1.

WangB.Z., Chen K., Ye W.L., Wang X. (2014). The design and implementation of micro-blog user interest search engine base on cloud computing technology, Applied Mechanics Materials, 543-547:3294-3299.