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A Pilot Study of Using Mobile Platforms (WeChat and WeLearn) in *College English* Curriculum

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Abstract. Wechat, a mobile application software with functions of communication, social interaction, and platform architecture, is widely used among college students in China and has constructed a new mobile learning support environment. By analyzing the features of Wechat and Welearn and examining related studies, we discuss how to integrate Wechat-based mobile learning into the *College English* curriculum in Higher-Educational Institutions of China.

Keywords. Innovative Mobile Learning, Intelligent Social Media, College English, Wechat, Welearn

1. Introduction

College English, an integral part of higher education, is a required basic course for non-English major students in higher-educational institutions in China. According to the College English Curriculum Requirements published in 2007, the extensive use of advanced information technology should be encouraged, computer- and Web-based courses should be developed, and students should be provided with favorable environment and facilities for language learning. The new teaching model should be built on modern information technology, particularly network technology, so that English language teaching and learning will be free from the constraints of time or place and geared towards students' individualized and autonomous learning. The new model should combine the principles of practicality, knowledge and interest, facilitate mobilizing the initiative of both teachers and students, and attach particular importance to the central position of students and the leading role of teachers in the teaching and learning process.

With the advancement of technologies and the wide adoption of smart phones among the general public, the use of mobile technologies in the education sector has been fast growing. Flexible learning through mobile devices has been the trend of digital learning. Mobile learning is about using mobile devices (including mobile phones, PDA, etc) to carry out learning activities at any time and any place[1]. The integration of the mobile phones technologies and learning activities arouse students' interest during the learning process as it provides easier ways to learn, such as accessig learning materials, doing online quizzes, participating in discussions and other online activities [2].

WeChat (pronunication: Wēixìn; literally: "micro messaging") is a mobile text and voice messaging communication service developed by Tencent Inc. in China, first released in January 2011[3]. Statics shows that it is the largest standalone messaging app by monthly active users [4].

With the popularity of smart phones and Wechat among college students, a study of how to integrate mobile learning based on mobile phones into College English learning will greatly contribute to mobile learning research and College English teaching reform.

By exploring the features and functions of Wechat and relevant research, we present how to integrate Wechat-based mobile learning into College English learning, so as to help achieve student-centered, personalized and autonomous learning.

2. Mobile learning and Micro-Learning

Despite its impact on learning, mobile learning still has not entered mainstream education due to the technologic and pedagogic limitations. Mobile devices' limitations such as small screen-size, variations in platforms, mobile networks, and presentation of information to the device in a reliable and friendly manner have been identified by researchers as blocking the uptake of learning usage [5]. Micro-learning seeks to address some of these blockers and to develop a form of content delivery and user interaction which could improve on mobile learning usability. Delivering contents in long learning sequences and large chunks of information with low degrees of interactivity have limited the potential of mobile learning. By comparison, micro- learning breaks mobile learning content into small chunks with a high level of interaction and instant feedback after each user action. Learning in smaller chunks has support from learning psychology and short-term memory literature [6][7].

The basic notion of micro-learning is that people can learn better and more effectively when the content is broken down into digestible parts and learning thus takes the form of small steps [6]. This is based on human cognition theory which places the limits of processing information in short-term memory [7]. This temporal dimension, learning in small steps better fits into the human processor model of receiving information or knowledge in small homogeneous chunks [6] and fits well in the small screen size of mobile devices[8]. Micro-learning does not demand separate learning sessions but is integrated into other activities of the learner. In addition, micro-learning is good for certain types of learning environment such as informal learning, where content can be designed in smaller objects, just-in-time learning, and Web 2.0 learning. Web 2.0 technologies changes learners from knowledge consumers to knowledge producers, by enabling them to share ideas and

perspectives. They can use mobile devices to log in to their social media accounts (e.g., WeChat, facebook, Twitter) and interact with others in a timely manner. They can also access mobile learning management systems such as Blackboard, Moodle, WeLearn (described below) and even a Massive Open Online Course (MOOC). However, researchers and practitioners all discovered that mobile learning may not be appropriate of all forms of learning and therefore it compliments (does not replace) learning that requires face-to-face interaction or hands-on practice in a controlled setting (e.g, lab experiment).

3. Features and Functions of Wechat

Wechat app is available on almost all smart phones including Android, iPhone, BlackBerry, Windows Phone, and Symbian phones.

3.1. Basic Functions

WeChat provides text messaging, hold-to-talk voice messaging, broadcast (one-to-many) messaging, sharing of photographs and videos, and location sharing as well as group chat. It can exchange contacts with people nearby via Bluetooth, as well as providing various features for contacting people who are physically nearby and integration with social networking services such as those run by QQ, another popular social media developed by Tencent. Wechat is based on the user's QQ friends list and their cell phone contacts lists, which are convenient and effective ways of building circles of friends. Users can quickly build a social network circle in a short period of time.

3.2. Public Platform

WeChat has built an ecosystem based on its Public Accounts. Apart from communicating with subscribers and sending them multi-media messages, Public Account owners can develop sophisticated features via WeChat's application program interface (API)s. In computer programming, an application programming interface (API) is a set of routines, protocols, and tools for building software applications. On the WeChat Official Account Platform, a subscription account is allowed to send 1 broadcast message per day, while official accounts using developer mode can broadcast more flexibly using this API.

3.3. Open Platform

Wechat open Platform enables the synchronization between WeChat and websites. Contents on WeChat could be shared from the website or contents on website could be shared from WeChat. Furthermore, Micro-community which can be used on public account allows subscribers to interact with other subscribers and share with their social network circle.

4. Analysis of Wechat Affordances for Mobile Learning

The above-mentioned features and functions of Wechat can provide affordances of creating mobile learning favorable environment for College English learning and teaching. By Analyzing the features and functions of Wechat, we examine the Wechat affordances for mobile learning, as is given in Figure 1. First, the basic functions of Wechat allow interaction communication by using Text messaging or Voice messaging or Group chat, which can provide an environment for collaborative learning between groups and interactive communication among students or between students and teachers. Second, the Public Platform of Wechat allows subscription account owners to push content to every subscriber, which can be used to deliver course content to students' mobile phones. In addition, automatic reply function on Public Platform allows subscribers to retrieve course content. Third, Wechat Open Platform enables the synchronization between WeChat and websites. Contents on WeChat could be shared from the website or contents on website could be shared from WeChat, which allows teachers to easily share learning resources with students. As an American community college teacher noted after using Wechat in his large classroom for student interaction, "One thing that became abundantly clear as an advantage of using WeChat is that you have an instant written record of student discussions. You can't get that with live discussion. That's a pretty powerful tool for being able to gauge student learning and where students might be getting stuck on lecture content. The instructor can go back and look at the WeChat comments versus trying to recall from memory the verbal discussion" (as displayed in Fig. 3).

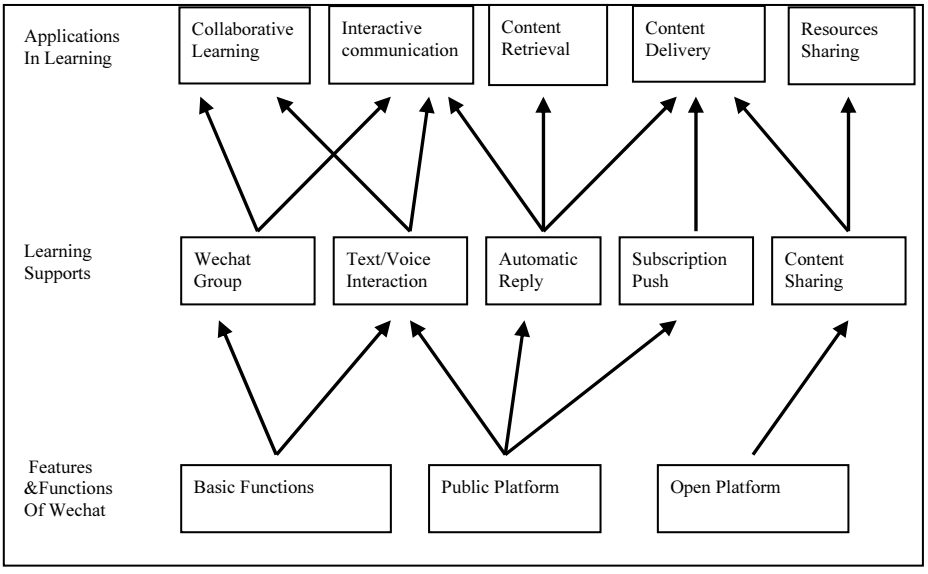

Fig 1. Wechat Affordances for Mobile Learning

Fig 2. The Public Accounts a User Subscribes on WeChat

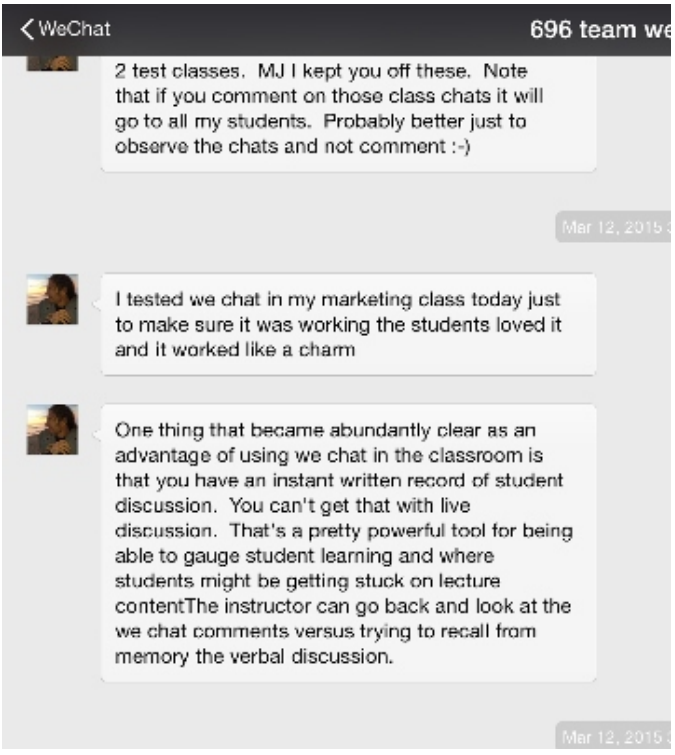

Fig. 3. An American Teacher's Use of WeChat in his Large College Classroom

5. WeLearn: A Learning Management System (Light) Based on Wechat

Taking advantage of the mobile features of Wechat, several leading e-learning companies in China (e.g., Shanghai's Longtime Inc.) developed a learning management platform called WeLearn. Below are a screenshots of a course developed by Seven-in Learn, Inc. in Shanghai, for Hospitality English, a course produced by San Diego State University with the support of Marriott Foundation. WeLearn has the following advantages over a traditional or responsive website:

- Accessibility: once users subscribe to it, they can easily access it from their Wechat account.
- Popularity: In China, almost everyone with a smart phone has the Wechat app installed. They can chat, call, video-conference, transfer files, and form personal and professional groups.
- Flexible menu and navigation: an instructor can customize the menu in WeLearn and encourage students to interact in WeChat.
- Record Tracking: WeLearn is a learning management system Light. It has the ability to track every user's learning path and progress.

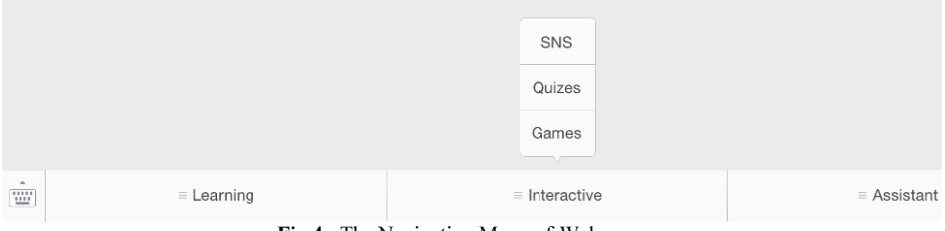

Fig 4. The Navigation Menu of Welearn

Fig 5. An Exemplary WeLearn Course Demo: teaching hospitality English for the Marriott Project

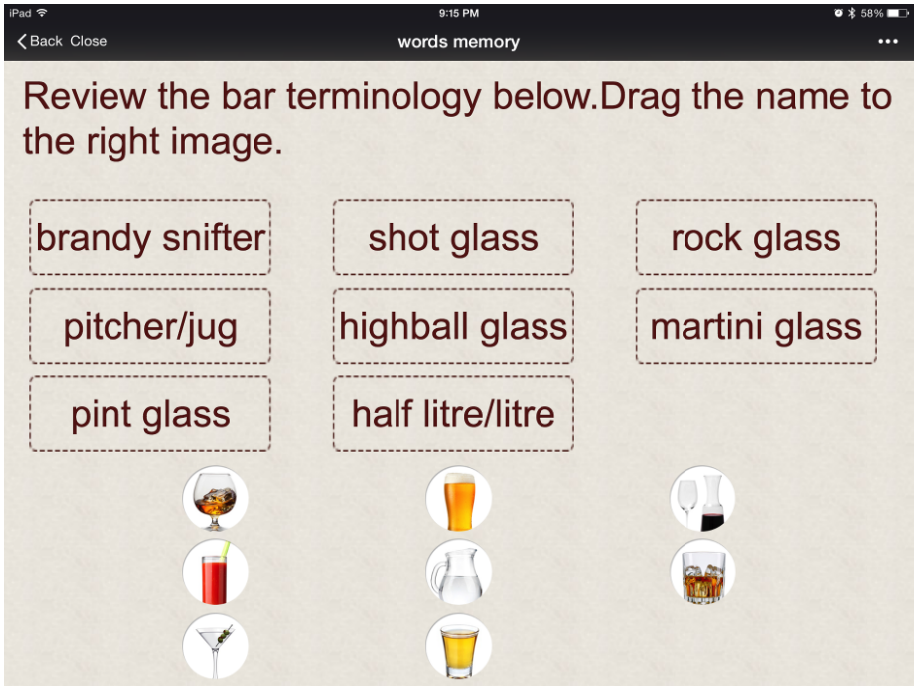

Fig 6. An Interactive Quiz in WeLearn: for Hospitality Training (CHEI)

6. A Pilot Study of Mobile Learning of College English based on Wechat

6.1. A case of Mobile application of Wechat Public Platform

WeChat public platform is a new updated functional module developed by Tencent of China. There are three basic functions which make the platform strong when they are combined as a whole: bulk messaging, automatic reply, and the two-dimensional QR code. Based on the triple functions of the WeChat public platform, we can further explain the specific case: the process of registration of an activity using this platform.

6.1.1. Background of the case

Here we assume the activity to be a seminar about *College English* hosted by a University in Wuhan. The University will host a seminar on a certain time in a certain meeting room. Every seminar will have a theme, information about the speakers, and number of participants the room can accommodate. The media department of the University will notify the students and teachers about the seminar through their WeChat public platform.

6.1.2. Building an instance application of WeChat public platform.

Now we start to build an application named *Seminar Registration* based on the public platform. After building the application, we need to import the lists of students and teachers of this University who might be interested in joining the seminar.

6.1.3. The process of registration of an activity using WeChat public platform

Next we describe the process of registering an activity using WeChat public platform on the basis of the application seminar Registration.

First, the media department submits a seminar and provides the detail information about the seminar. Then the application seminar Registration will send message about the seminar to the list of students and teachers by the function *Bulk messaging*. At the same time, a two-dimension QR code containing the information of the seminar and the registration will be published on the application and the website of the college. Then students and teachers who are willing to attend the seminar can scan the QR code with their cell phone and register in the seminar. The automatic reply function is an information exchange tool. Students and teachers can get the information about the seminar by replying corresponding word to the program and receive the details they want to know. For instance, a student can reply to the program a sentence containing the word speaker which is a kind of replying rules set by the application. Then the program will reply with the corresponding answers.

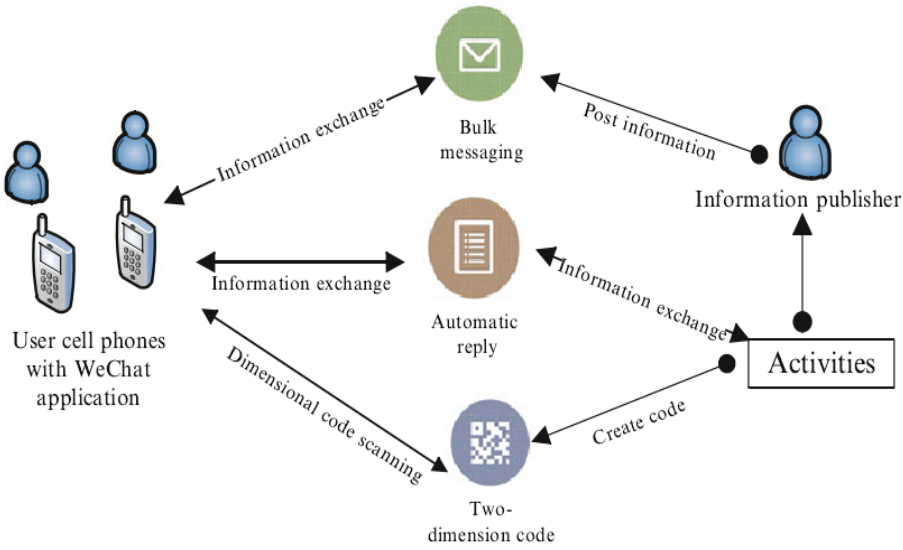

Fig 7. The Process of Registration of an Activity Based on Wechat

6.2. Content design for Wechat-based Mobile Learning Platform

The teacher can use Wechat public platform (subscription account) to broadcast to the subscribers (students) to deliver micro-content on mobile devices of the students and allows learning anytime, anyplace and any pace.

Micro-learning has great potential for learning on mobiles. Leene [9] views micro-content learning as focused, self-contained, indivisible, structured and addressable content. It integrates different forms of media in short form: text, video, audio, interactive element used as micro media in fragmented time .

Regarding many different forms of learning, micro-learning is dedicated to information retention and thus build-up of factual knowledge. Bruck suggests four basic characteristics which can serve as a starting point for designing and developing micro-learning solutions [10]:

1) Repetition of the learning content
2) Continuity in repetition activity
3) Assessment before progressing to next unit
4) Good organization of content in a manner supporting systematic search of information such as in hierarchies.

6.3. The Structure of an Innovative Teaching Model with Mobile Learning

According to College English Curriculum Requirements published in 2007, in view of the marked increase in student enrolments and the relatively limited resources, colleges and universities should reform the existing unitary teacher-centered pattern of language teaching. This model should incorporate the strengths of the current model and give play to the advantages of traditional classroom teaching while fully employing modern

information technology. A new teaching model based on modern information technology including computer-based and mobile phone-based technology is needed in order to achieve student-centered, autonomous learning. The structure of an innovative teaching model of College English is shown in Figure 8:

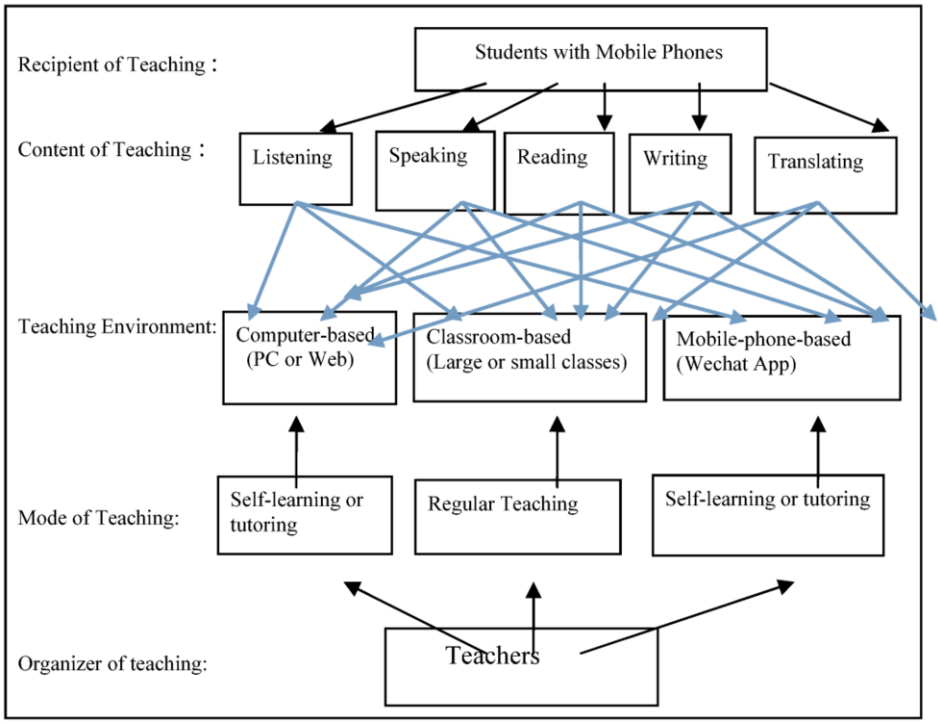

Fig 8. Structure of the New Teaching Model

The goal of the College English course is to develop students' abilities to use English in listening, speaking, writing, and translating. In this new teaching model, as the learning facilitator, before class teachers can ask students to go to study in the self-learning center of the university. After class course content can be delivered to students' mobile phones to learn or review in their free time, especially it helps them use fragmented time. In class, the teacher can give feedback to students based on their performance in both the computer labs and on their mobile phones.

Moreover, Wechat Open platform can be designed to help to track down, record and manage learning and tutoring as well as the monitoring and management of learning and tutoring. Micro-community of Wechat can be developed to achieve interactive communication between students and teachers or among students. The new teaching model with Wechat-based mobile learning can attain to a high level of interactivity, the use of multimedia, and operability.

7. Conclusions

This paper presents an in-progress pilot study of how to integrate mobile learning of College English based on the Wechat public platform with reference to content design and structure of teaching model of College English. We plan to have instructional materials and learning activities developed for the WeLearn platform and conduct systematic research. The research will address the design of the WeLearn course and how teachers and students conduct learning activities on this innovative learning management system.

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