



RESEARCH ARTICLE

Vol. 2. Issue 4., 2015 (Oct. -Dec.)



INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

2395-2628(Print):2349-9451(online)

INTEGRATING AND OPTIMIZING DIGITAL RESOURCES FOR HIGHER EDUCATION IN
CHINA TAKING COLLEGE ENGLISH COURSE AS AN EXAMPLE¹

LIU Yan-mei

School of Applied English Studies, Shandong University of Finance and Economics, Jinan, China



ABSTRACT

Digital resources gradually shows their advantages in helping promote higher education. However, repetitive construction, low utilization rate and inconvenient sharing etc. have prevented the effective and efficient use of digital resources. In view of such problems, this study first examined the current situation about the digital resources use through a questionnaire. Then based on the problems and the needs that students revealed in the questionnaire, this author integrated and optimized the digital resources for College English Course. To investigate the effectiveness of the integration, interview and Independent Sample T test were conducted. The findings show that students favored the supplementing role of digital resources for College English Course and those who used the integrated digital recourses significantly outperformed those who did not. Finally, a blended teaching mode was suggested in combining online resources with the classroom teaching in higher education.

Key words: digital resources; integration and optimization; College English Course; blended teaching mode

©KY PUBLICATIONS

1. INTRODUCTION

With the advance of information technology and internet popularity, teaching resources for higher education have changed drastically. Digital teaching resources have successfully achieved vividness, interactivity, situationality, and other advantages by using sound, light, electricity and other modern technology. The introduction of digital resources renders higher education multimodal and three-dimensional. In this context, the development and utilization of digital resources has become an important factor to influence the quality of higher education in the information age. Higher education resources are numerous and varied. On the one hand, it is beneficial as it provides a variety of resources for students to choose from. But on the other hand, too much resource causes confusion and ineffective and inefficient use. This paper

¹本论文系山东财经大学校级教研教改课题“基于SPOC的大学英语混合式教学模式应用研究”(jy201529)阶段性成果之一；山东财经大学校级教研教改课题“信息化环境下的大学英语翻转课堂教学设计研究”(jy201446)的阶段性成果之一。

intends to take one university as an example and study the current situation about the use of digital teaching resources in College English teaching. On this basis, the paper puts forward the integration and optimization of College English teaching resources, in hope to achieve the organic combination of College English classroom teaching and extra-curricular learning, and provide an empirical reference for the reform of College English teaching mode.

2. Literature Review

Digital teaching resources refer to multimedia teaching materials which are run in the multimedia computer and network environment. The development and utilization of digital resources has started earlier in foreign countries, such as Japan, the United States and many European countries, where the digital resources have become an essential part of the teaching, and effectively promote the teaching. With the popularization of computer technology and network, the construction of educational informationization has been started in China since the middle of 1980s. The construction of the digital resources has experienced the construction of the multimedia teaching mode to the independent learning center, to the construction of the MOOC class platform and to the emergence of the digital campus, and so on. After 30 years, China has made great achievements in the construction of digital foreign language education resources, and has accelerated the pace of the reform of College English teaching, but there are still many problems that are not suitable for College English teaching, such as the low digitalization level, the duplication of resources, less efficient resource utilization, and poor resource sharing etc

In view of such problems, domestic scholars have carried out in-depth theoretical discussion and empirical exploration for these problems. Through the search of CNKI database, the researcher summarized the previous studies on the digital resources as the following categories.

- 1) Studies on integration strategies. Cao&Wang (2007) analyzed the strategies of integrating foreign language resources based on computer and internet technology; Wang etc(2011) and Shi&Zou (2013) studied the optimization strategies for foreign language information resources.
- 2) Studies on the technology in digital resources construction. Dong (2004) discussed the allocation of foreign language education in Colleges and universities from the view of system; and Zhang etc. (2007) proposed the mechanism and challenge of foreign language education resource sharing based on grid technology.
- 3) Studies on the evaluation of digital resources. Wan (2013) analyzed the evaluation index system and evaluation methods for the quality of digital learning resource and put forward the relevant strategies for the quality evaluation of digital learning resources.
- 4) studies on the application of digital resources in foreign language teaching: Ni (2009) shared the several types of Spanish digital teaching resources and expounded how to use them in Spanish teaching in a flexible and effective way; Cui (2006) explored how to make full use of the cyber source, especially the VOA Special English broadcast into the University English listening teaching to help students improve listening comprehension; Wu (2009) discussed the construction of new model of English extensive reading teaching in digital information environment; Sui(2013) put forward the construction of ecological teaching environment in the network environment based on the practical English teaching reform in Jiamusi University; Yan (2008) explored the cultivation of foreign language skills based on computer and network; Feng&Huang (2013) recommended the integration and optimization of English teaching resources oriented for College Students' autonomous learning, based the study in 3 colleges located in Changzhou, and tested the teaching effect with the help of the integrated and optimized resources.

From the analysis above, it is not difficult to find that more researches are exploratory, and fewer are empirical; more are concerned with the theoretical perspective, and fewer are from the practical effectiveness of digital resources; more are concerned with the construction of digital materials, fewer have tested the effectiveness of the use of the digital resources. Based on the previous theory research, this paper tries to answer the following questions:

- 1) What is the current situation about the use of digital resources?

- 2) How should digital resources be integrated and optimized? Take College English Course as an example.
- 3) What is the effect of college English teaching after the use of the integrated and optimized digital materials?

In order to find out the current situation about how effective students are using digital learning resources and what their needs are, a questionnaire was designed and distributed to 300 students on campus. With the result from the questionnaire, the researcher integrated and optimized the digital learning resources for English learning on the platform of Blackboard. Finally, independent T test was conducted to investigate the effectiveness of college English teaching with the help of the integrated and optimized digital resources.

3. The Current Situation about Digital Resources Use

A questionnaire containing 16 items were distributed to 300 students on campus and 199 valid were collected for the final analysis. The 16 items included students' attitude to digital resources, the current use of digital resources and effectiveness of their use and their suggestions for the improvement of digital resources.

The results showed that most (75.3%) regarded digital resources were very necessary for their study, and 47% spent more than 4 hours online either through computer or mobile phones, which means that digital resources have become accessible to many students and they have, to some extent, rely on digital resources for their study. As for the advantages brought by digital resources, more than half mentioned that digital resources had changed their mode of leaning and cultivated their autonomous leaning and had broadened their knowledge base and deepened their understanding. But only 36% reported to be quite familiar with the use of digital resources and about 32% said that they were not very familiar or quite strange with digital resources, which indicates that some training or guidance from teachers are necessary for the students to better avail of the digital resources.

When it comes to the effectiveness of their use of digital resources, only 43% showed strong interest in the use of digital resources and 57% regarded it could help improve their study, and about 40% regarded it ineffective for their learning. Only 20% revealed that they could find the materials online very quickly and about 30% complained that it took them rather long time to get what they wanted. As for the reasons for the inefficient searching, 59% attributed to the information explosion and the unscientific classification of resources; 51% thought outdated information disturbed their searching efficiency; 44% said that their operation skill in searching relevant information prevented their efficiency and 26% revealed they needed teachers' guidance in how to efficiently use digital resources.

About the factors they may consider in using digital resources, relevance to their learning content and the accessibility of ready-made materials ranked the first and second, and of course whether they can operate is another factor they think important. As regards their need for digital resources, the most needed is some video course for certain lessons and tests for what they have just learned and relevant materials to consolidate their learning and media resources helpful for their learning are all included.

4. Integrating and Optimizing Digital Resources---Take College English Course as an Example

(1) There are three rationales for the appropriate use of digital resources: input hypothesis, the zone of proximal development and scaffolding theory. Input hypotheses put primary importance on the comprehensible input that language learners are exposed to. It states that learners progress in their knowledge of the language when they "comprehend language input that is slightly more advanced than their current level" (Krashen,1982). Krashen called this level of input "i+1", where "i" is the learner's interlanguage and "+1" is the next stage of language acquisition. This hypothesis reveals what kind of materials should be offered, and indicates that students of different levels should be provided different input, as they have different i, thus different i+1.

While input hypothesis stresses the importance of what materials are appropriate for learners, the zone of proximal development emphasized the interactive nature of the learning process. According to Lev Vygotsky(1978) , learning is an interactive process between learners and the environment, which does not only include the learning material, but their peers and teachers. The zone of proximal development is an area of learning that occurs when a person is assisted by a teacher or peer with a skill set higher than that of the

subject. That means the task assigned should be a little bit challenging for the learners, so that they can attain the skill with the help from other more competent peers or teachers at the beginning, and as they progress, finally they can deal with the task independently. In this process, the more competent peer or the teacher is just like a scaffold, which is necessary at the beginning of building a house, but will be removed after the construction is completed. What the social cultural perspective offers is that necessary guidance is necessary for the students to better avail of digital resources.

(2) The integration and optimization of English digital resources

Guided by these principles and taking students' needs into consideration, the researcher, with the help of colleagues and students, collected and searched and sorted out the materials relevant and beneficial for the consolidation of college English. Such materials have several sources, including the Internet information resources (foreign websites of learning value and specialized English websites, micro lecture video course) and campus network information resources (quality course video, materials from electronic reading room, network learning platform), non network information resources such as paper resources (books, newspapers, magazines) and electronic resources (courseware, CD-ROM, electronic documents, voice lab electronic resources). After the collection, we sorted out all the materials according to the proficiency level of the students and the relatedness to the textbook and classified them into several ranks, so that students can find materials suitable for them. Finally, we put them on the platform ---Blackboard. With Blackboard as the platform, this research intends to link the digital resources, and make the distributed information resources to the complete system, and guide students to make more efficient and effective use of the relevant foreign language information resources.

In the use of resources, especially at the very beginning, teachers or students better at computer skills should play the role of a scaffold for the less capable students and offer necessary instructions about how to use the platform so as to guide students to choose and use targeted resources suitable for their own level. At the same time, it is necessary to have timely maintenance, management and monitoring for the resources according to the needs of the course and students' feedback to update the resource content. Evaluation is an incentive and it is necessary to evaluate the creation and use and sharing of the digital resources so as to guarantee the quality. Meanwhile, timely dynamic and comprehensive evaluation system oriented to the learning process of the students is also established, which will provide guidance for the further integration and optimization of the digital resources.

5. The Effectiveness of College English Teaching with the Help of the Integrated and Optimized Digital Resources

After the integration of digital resources, the researcher conducted a quasi-experiment to test whether integrated resources could help effectively promote the teaching quality of College English. The experiment lasted one term. Two classes of the same proficiency level took the experiment and one served as the control group and the other the experimental group. The experimental group was instructed by the researcher and the control group was taught by another equally competent teacher. For the control group, traditional teaching mode was adopted and students were required to carry out autonomous learning, but they were not provided the integrated digital foreign language information resources and guidance. For the experimental group, the researcher adopted a teaching method that combined the classroom learning with the supplement learning based on the integrated and optimized digital resources and students were guided on how to use these materials.

At the end of the semester, an informal interview was conducted to investigate whether they benefited from the integrated digital resources. In line with what the previous research had found, while the control group's attitude did not change a lot on the use of digital resources, students of the experimental group held more favorable attitude towards college English learning and many of them reported that the integrated digital resources saved them a lot of time in searching and choosing, and it had greatly promoted their English learning.

Besides the interview, independent sample T test was conducted to compare the achievement of students of these two groups. Similar to what Feng&Huang (2013) and Sui (2013) had found, significant

difference was found between these two groups($t=3.56, p<.05$), with the experimental group significantly outperformed the control group, which shows that the integrated digital resources serving as good supplement to the classroom learning, greatly enhanced students interest and effectiveness of English learning.

6. The Innovation of College English Teaching Mode with the Aid of Digital Teaching Resources

In view of the effectiveness of digital resources in helping learning, a blended mode is recommended for college English teaching. In this mode, classroom teaching still plays the main part, and autonomous learning under the guidance of teachers can serve as a better supplement. In this way, digital resources become the supplement to the teaching content, and the reasonable use of network resources becomes the extension of classroom teaching. Within this model, the role of students and teachers will change, that is, students will take more responsibility in their own learning and will play a more positive role, while the teachers will become the guide, organizer and facilitator of the learning for the students.

7. Conclusion

Based on the empirical study on the current situation about students' use of digital resources, this study put forward that digital resources requires more integration and optimization in order to be more effectively and efficiently used. In the integration and optimization of digital resources for English learning, we bear the input hypothesis, the zone of proximal development and scaffolding theory in mind and take the students' need into account, and searched and collected and sorted out the digital resources so as to suit for students of different proficiency levels. After the integration and optimization, we tested the effectiveness of its use in college English teaching and learning, both the interview and the independent sample t test revealed that students benefited a lot from the integrated resources and hold a more favorable attitude to college English learning. Finally, the blended mode was proposed to reform the college English teaching.

There is not without limitations in this study. First, we took only one school as the example when examining the current situation of digital resources use and the response rate is not very high, and of course situation in other universities will show some difference. Another limitation lies in the quasi-experiment that we conducted where intervening variables could not be well restricted in order for the regular teaching to be carried on. Additionally, this study took only College English Course as an example, the appropriate integration for other courses may show great variation, as the appropriate way of integration and optimization may vary according to the different needs and proficiency level of students.

REFERENCES

- [1]. CAO Jin, WANG Hao. (2007) On Reorganizing Computer- and Web-Based Foreign Language Curricular Resources, *CAFLEC*,6.
- [2]. CUI Ling.(2006). Web-based English News casting Programs and College English Listening Teaching. *CAFLEC*,2.
- [3]. Dong Jian-qiao. (2004).Systemic configuration of Edunologye Resources for EFL in Colleges and Uulversiites, *ETFLI*,10.
- [4]. FENG Xia, HUANG Fang. (2013). A Study on the Integration and Optimization of Autonomous Learning Based Foreign Language Information Resources, *CAFLEC*,3.
- [5]. Krashen, S. D. (1982). *The Input Hypothesis: Issues and Implications*. New York: Longman.
- [6]. NI Mao-hua. (2009). The application of digital resources in Spanish Teaching. *CAFLEC*,11.
- [7]. SHI Guang-xiao, ZOU Jia-xin. (2013). Strategies in the Optimization of Foreign Language Information Resources at Chinese Universities. *CAFLEC*,5.
- [8]. SUI Xiao-bing. (2013). The Optimization Research on Web-Based College English Classroom Teaching--An Empirical Study in Jiamusi University[D]. Shanghai International Studies University.
- [9]. Vygotsky, L.S. (1978). *Mind in Society: The Development of Higher Psychological Processess*. Cambridge , MA : Harvard University Press.
- [10]. WAN Li-yong. (2013). Research on Quality Evaluation of Digital Learning Resources, *Modern Educational Technology*,1.

- [11]. Wang Juan, Yang Gaixue, Kong Liang.(2011). Research on the Development Strategy of Domestic Digital Learning Resources, *Modern Distance Education Research*,5.
 - [12]. Wu Jun-ru. (2009). An Exploration on a New Approach to English Extensive Reading in the Environment of Digitalized Information. *CAFLEC*,11.
 - [13]. YAN Tao (2008). A Theoretical Exploration and Practice on Foreign Language Skills Cultivation on Computer and Network Base, *CAFLEC*,7.
 - [14]. ZHANG Guo-ying, HUJi-yue, LIPing, SHEN Shu.(2007). Mechanisms and Challenges in Co-construction and Sharing of Foreign Language Educational Resources Based on Grid Technology, *CAFLEC*,12.
-