

# Use of Moodle in College English Language Teaching (Reading and Listening) in China: A Narrative Review of the Literature

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**Abstract**—With the development of technology such as the invention of Moodle (modular object-oriented dynamic learning environment), the teacher-centered mode in traditional English classes is gradually replaced by the student-centered style. This review investigates and evaluates how Moodle is used in college English courses to help students develop their English reading and listening skills by selecting relevant published articles and analyzing the data. Kirkpatrick's mode of training evaluation is used to assess the levels of outcomes reported in each paper. Besides, different research methods used in each paper are also noticed and analyzed. The influence and effect of the Moodle-based teaching method is discussed at last.

**Index Terms**—Moodle, college English language teaching, reading, writing, Kirkpatrick's model of training evaluation.

## I. INTRODUCTION

The invention and development of computer and the Internet have changed every aspect of people's life. China's college English teaching is no exception. Since 2004, the Ministry of Education of China has encouraged the use of advanced computer and Internet technologies to improve English teaching efficiency and learners' autonomy. So far, the college English teaching has been undergoing dramatic reforms powered by a wide range of advanced computers and Internet technologies. Meanwhile, the Chinese government's intention and determination to intensify the use of advanced technologies in its higher education has never stopped. According to the *College English Curriculum Requirements* (2018) which is issued by the Ministry of Education of China, more and more computer- and Web-based courses ought to be designed so as to improve the environment and facilities students are exposed to for learning English. [1] Currently a great number of computer technologies have been used in China's college English classes ranging from E-learning teaching platforms such as blackboard, Moodle to social media. This paper aims to focus on the use of Moodle in college English language reading and listening teaching in China by analyzing relevant papers published on this topic.

## II. MATERIAL AND METHODS

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### A. Search Strategy

CNKI was used to search related publications. CNKI stands for China National Knowledge Infrastructure which is the most comprehensive gateway for people to learn the knowledge of China. [2] During this process, some key words were used. They were: 'Moodle' and 'College' and ('English Teaching' or 'English language teaching') and/or China. This process was carried out on November 23 2019.

### B. Inclusion Criteria

Since this research is about investigation and evaluation of Moodle's use in English language courses at China's universities, related articles were considered eligible no matter they were written in English or in Chinese. Meanwhile, articles analyzed had been published in formal journals.

### C. Exclusion Criteria

Papers which focused on the influence of social media such as WeChat, weblog, Facebook, twitter, and YouTube on College English teaching were not eligible for analysis. At the same time, Papers which discussed use of other forms of online learning environment were not included in this research. Furthermore, use of Moodle on English teaching in Primary and Secondary schools was also excluded from this research. At last, papers which evaluated use of Moodle in college education but did not focus on improving students' English reading and listening skills were excluded.

### D. Screening Process

Title, abstract and full text were scanned and skimmed to check if the paper was suitable for this research. If enough information cannot be found in the title, the abstract was checked. However, if enough information cannot be acquired from the abstract, the full paper was scanned and skimmed to decide whether it was suitable for this study.

### E. Data Extraction

Kirkpatrick's model of training evaluation (Table I) [3] was used to decide the level of outcome due to Moodle's application in English language teaching from the researched papers. The levels of outcomes were included in the extracted data.

Besides, the author names, publication dates, purposes of research, conclusions and findings were extracted. In addition, material and methods were investigated to see if a qualitative or quantitative or mixed method was adopted. A narrative description approach was adopted for the analysis. Based on the specific English skills the studies were categorized into 5 groups, namely, studies about the use of

Moodle in teaching English reading skills, studies about the use of Moodle in teaching English listening skills, studies about the use of Moodle in teaching English speaking skills, studies about the use of Moodle in teaching English writing skills, studies about the use of Moodle in teaching integrated English skills. All of them were about College English teaching.

TABLE I: KIRKPATRICK'S MODEL OF TRAINING EVALUATION

Levels	Contents	Description
Level 1	Reaction	Relates to participants' opinion on the learning experience
Level 2	Learning	Relates to the knowledge and skills acquired due to the program
Level 3	Behavior	Relates to the change of behavior due to the program
Level 4	Results	Relates to the final results due to the program

### III. RESULTS

Using the key words mentioned in the search strategy, 33 papers were retrieved from CNKI. However, only 10 of them focused on use of Moodle to improve students' English reading and listening skills. As a result, these 10 papers were eligible for this study. In the remaining 23 papers, one was about computer technology relating to Moodle. Two focused on writing skills and one focused on speaking ability. Another four were about integrated skills of reading, listening and speaking. The rest of the papers focused on discussing different functions of Moodle without mentioning how they are used to improve students' English skills. None of these papers were published before the year of 2008. All of these researches were carried out in universities in China. Among the ten eligible papers, three focused on use of Moodle to improve students' English reading skill; seven papers focused on listening skills.

#### A. Use of Moodle to Improve Students' English Reading Ability

The study by Bai Pengling [4] involved 31 students from an anonymous university in Guangdong province of China. It adopted a qualitative and quantitative approach, analyzing students' reaction, learning and behavior outcome when the teacher used Moodle to create an interactive reading task for them. When the online course was designed, three stages were included, namely, design stage, implementation stage and evaluation stage. Learner-content interaction, learner-instructor interaction and learner-learn interaction were taken into consideration when the course was designed. In the following implementation stage, four stages were included. The first stage is preparation, followed by self-study stage, collaborative interaction stage and learning outcome assessment stage. According to this study, this new type of reading task was welcomed by the students due to the fact that 86.66% of participants considered that the structure of the task was clearly designed and 80% of them thought they found materials interesting. The majority of them considered that the interaction with the teacher was very good and all of them thought they had the chance to communicate with the teacher in the ways they preferred and

nearly 97% believed that their questions to the teacher were answered in time. As to the interaction with peers, more than half of them took the initiative to express their ideas to others and more than 70% of the students thought their ideas were responded. However, only around 36% of the students encouraged and praised their classmates' participation.

The study by Zhu Xiaomei [5] compared the outcomes of teaching reading on Moodle and the traditional method. 120 students took part in this program and 85% of participants believed that the flipped reading class which used Moodle platform had better class effect than the traditional class. 91% considered that they could learn reading skills more effectively in the flipped class due to the flexibility of study time. 77% of them agreed that reading exercises carried out on the Moodle platform were beneficial to improving their reading skills. However, only 41% of the students believed that the Moodle platform could cultivate students' reading interests. As to the result outcome, all the participants passed College English Test (band 4) and 60% of them passed CET (band 6), which was a remarkable outcome compared with the pass rate of the average Chinese college students.

The third study by Zhang Fengxiang [6] introduced some problems that may exist in use of Moodle for teaching English reading. Also a case of how Moodle is used to develop students' reading skill for key ideas was introduced. Although students participated in this class, the writer didn't provide details about learners' outcome.

#### B. Use of Moodle to Improve Students' English Listening Ability

The study by Wang Hua [7] carried out the research on college English teaching based on Moodle platform in Chongqing Nanfang Translators College of SISU. Personal interview and questionnaire survey were used to examine the teaching effect. With application of Moodle listening teaching became free from the limitation of time and place. Also students' learning autonomy were improved. 150 students participated in the questionnaire survey and 120 valid questionnaires were collected. 84% of the students considered that the teaching contents were diversified and 75% of them believed the course provided useful study guidance. As to personal interaction, 96% of students could establish personal communication between the teacher and classmates. However, 77% of students couldn't find the forum for questions. In terms of opinions on teacher's efforts, 66% of the participants felt satisfied with online feedback and 83% of the students believed they could get help from the teacher. At last, 82% of the students chose the options that they cooperated with classmates for study and 56% of them shared and responded to other students' questions. However, 66% of the students thought that too few people took the initiative to answer the teacher's questions. Later a further research was conducted by Wang and his partner Fan Ziniu [8] on how Moodle could improve interaction between the teacher and students, students and students. 452 year two students majoring in English participated in this program and 150 questionnaires were collected at the end of the semester. 120 of them were valid. It turned out that around 90% of students thought the course provided useful self-study guidance and abundant online resources. 82% of the students

thought they used the platform to cooperate and study and 76% of them shared study experience with each other on the platform. 81% believed the new approach was better than the traditional method.

Tu Wuling's study [9] also researched college English listening teaching based on Moodle. 128 people participated in this program. They were divided into two groups, experiment group (65 students) and control group (63 students). Two tests with one before the intervention program and the other one after the program as well as a questionnaire were used. According to the result, 89% of the students were fond of the new studying mode and 71% believed it was suitable to them. 53% thought teaching with Moodle was better than the traditional method. Around 70% said it could raise their listening interests and reduce anxiety. Meanwhile, 73% believed their listening ability were increased dramatically. The test before the program showed the average scores of both classes were similar, with a difference of 0.09. However, there was a remarkable difference in the scores of the after-program tests. Experiment group had an average score of 24.4 while the number for the control group was 22.14. Thus, the conclusion that teaching listening with the moodle platform could improve students' performance could be drawn.

Yangyang in Yanshan University also designed and implemented a similar research. [10] In his research first year students majoring in mechanic manufacturing and automation took part with one group of 44 people in the experiment group and the other group of 40 people in the control group. For experiment group the new teaching approach equipped by Moodle was used while traditional teaching method was used for the control group. Two tests were used to check the effect. In the pre-program test both group showed little difference in listening performance. However, in the after-program test, students in experiment group had got higher scores in listening and understanding short dialogues, long dialogues and short text while their average score for dictation was lower than that for the control group.

Rao Huahong in Tongren College [11] investigated 98 students' behavior and attitudes toward combining QQ talk (an application similar to MSN) and Moodle platform for listening study. According to the result of the questionnaire, 59% of students thought using Moodle could create an environment to improve learners' autonomy and 80% of them preferred to blend use of QQ talk and Moodle. Another research was implemented by Rao's colleague, Yang Huixin. [12] 192 students participated in this program, majoring mathematics and applied mathematics, chemistry, Chinese and politics education respectively. 2 classes served as experiment classes while the other two classes were control groups. The average score for experiment group before the program was 53.35, while that for the control group was 52.56, with a difference of 0.79. After the program, the average score for the experiment group was 67.15 but the score for the control group was 57.26, which was 9.89 points lower than that of the experiment group. At the end of the program, a questionnaire was carried out among the 95 people in the experiment group. 90 valid questionnaires were collected. It turned out that 83.5% of participants felt

interested in the new teaching method and 87.8% of them believed teaching on Moodle could improve their listening ability. At the same university, Wei Yan also carried out a study on using Moodle to improve students' listening skills. However, in her questionnaire, the factors that influenced students' performance in listening comprehension were studied which was relevant to English listening teaching but not very related to the study of using Moodle platform in English listening teaching. The pre-program and after-program tests taken by two groups of students (experiment group and control group) showed that despite the little difference in the pre-program results at 118.8 and 117.3 respectively, the average score of the experiment group was 139.9, which was much higher than that for the control group.

#### IV. DISCUSSION

An increasing number of colleges began to use moodle-based teaching method after the year of 2008 and the amount of research about the correlation between English teaching and use of moodle-based platform peaked at the year of 2016. Since this study focused on how universities and colleges of China integrated moodle in their teaching of English reading and speaking, all the studies took place in China. All the authors of these papers are teachers who teach college English reading and listening subjects.

##### *A. Use of Moodle to Improve Students' English Reading Ability*

Three papers that were found after the literature search focused on the use of Moodle in English reading teaching. 151 students took part in these studies. According to Kirkpatrick's model of training evaluation, the first three levels were evaluated. Among them two studies by Zhu Xiaomei and Wang Hua used quantitative and non-comparative approach respectively. They evaluated students' interests and attitude toward this new type of teaching method. Overall, more than 70% of students believed using Moodle could lead to better class effect and improvement in learning efficiency. Also the interaction between students and teachers, students and materials could be strengthened. However, the study by Bai showed it cannot improve the interaction between students and students. Also Zhu's study indicated using Moodle cannot raise students' reading interests. The third paper didn't provide much data for this research.

##### *B. Use of Moodle to Improve Students' English Listening Ability*

Seven papers that were found after the literature search focused on the use of Moodle in English reading teaching. All of them used quantitative approaches. Two of them were non-comparative studies while the rest of them were comparative studies. According to Kirkpatrick's model of training evaluation, the first three levels were evaluated. In all, 1218 students participated in these studies and their opinions, study behavior and results were evaluated. According to Wang Hua, Students believed use of Moodle could diversify the teaching contents and provide useful

study guidance. Also it could help them to increase personal interaction with the teacher and classmates for study. Wang Hua and Fan Ziniu’s work showed Use of Moodle could provide abundant resources and useful self-study guidance. Also it could improve cooperation between students in study. Tu Wuling revealed that Moodle-based teaching could reduce students’ anxiety in study thus increasing their listening abilities. Yang Yang found out that use of Moodle-based teaching method could improve students’ performance in understanding short dialogues, long dialogues and short text. However, it cannot help them in dictation. Both Wei Yan and Yang Huixin assessed how Moodle-based teaching influenced students’ attitude toward English listening and the effect. It turned out that their interests were strengthened and English listening abilities were improved. Besides, Rao Huahong researched on combining Moodle and another application QQ talk in students’ listening study. It showed that the joint method was more preferred by students and could lead to better results in study.

C. Use of Moodle in English Reading and Listening Classes

According to the papers, there were two ways of using Moodle in English reading or listening classes, namely, using Moodle as a platform to provide supplementary materials for a class or to provide materials and tasks in a flipped class, and using Moodle as the venue for the class itself. A summary of teachers’ preference was provided. (Table II) According to these papers four researchers adopted the first method. In one of the reading courses Moodle was used as a platform to provide supplementary materials and tasks outside of the class. In another reading course, Moodle was used in a flipped class. Teaching Video and PPT as well as a pre-test were uploaded to Moodle one week before the class so students could study independently by themselves. After that, group discussion took place in class. The teacher also provided help and answered some questions. In one of the listening courses, Moodle played a role after listening skills were introduced in one class. Then, students practiced listening and completed the tasks on Moodle after which immediate feedback was given to each student so that they could decide whether to do the same task again or to continue with a new task. After this stage, further practices could be accessed by students on Moodle for homework. Moodle can also be used in a flipped class where all the listening tasks were uploaded to Moodle and then in class students had group discussions, debates and role plays. Vocabulary and grammar were reviewed in class and quizzes were provided after each lesson.

In the other seven papers, Moodle was used as the platform where the entire classes took place. All of them were listening classes except for one course. In the only reading course, reading learners logged onto Moodle to study independently and completed the vocabulary and reading tasks before deadlines. After that, on Moodle students voted and chose 5 topics that interested them the most out of 10. Then each of the 5 groups was assigned a topic for group discussion. At last an essay by each student was required to submit via Moodle. The other courses were very similar. Different kinds of pre-listening, while-listening and

after-listening tasks were uploaded to Moodle. In one of these listening course, diagnostic questionnaires were given to students in order for the teacher to have a general understanding of the students’ current abilities and problems. After that, students logged onto Moodle to learn the vocabulary and some background information before they took a series of listening tasks, for example, listening for main ideas and listening for specific information. After this stage a dictation task as well as an extensive listening task were taken by the students. At last students should complete their homework on Moodle. Compared with the traditional listening classes which rely heavily on audio and the text, tasks on Moodle were more diversified with different forms such as videos, movie clips and so on. As a result, these components could make the class more engaging. Meanwhile, immediate feedback could be received after students took the test so that the teacher was able to know the progress students had made. In another paper, combing use of Moodle and QQ talk to improve the interaction between students and students, students and the teacher was studied. This was because in some of the Moodle-based course students relied on written language to communicate with each other. As a result, speaking abilities were not able to be fully developed. The integration of QQ talk enabled students to communicate through speaking.

TABLE II: USE OF MOODLE IN LISTENING AND READING CLASSES

Subject and Author	In A Flipped Class/ As A Platform to Provide Supplementary Materials	As the Venue for the Entire Class
Reading, Zhang Fengxiang	√	
Reading, Bai Pengling		√
Reading, Zhu Xiaomei	√	
Listening, Wei Yan		√
Listening, Yang Huixin	√	
Listening, Wang Hua		√
Listening, Tu Wuling		√
Listeing, Yang Yang	√	
Listening, Rao Huahong		√
Listening, Wang Hua and Fan Ziniu		√

V. CONCLUSION

Ten studies were explored to evaluate the effect of Moodle-based teaching approach on students’ reading and listening studies. According to Kirkpatrick’s model of training evaluation, the first three levels were evaluated, namely, reaction, learning and behavior. The studies showed students had very positive attitudes toward this new teaching method, and their abilities and performance in reading and listening could be improved due to use of this method. In terms of behavior, the students became more active in class and students’ learning autonomy as well as interaction with

the teacher and teaching materials were enhanced. In future, Moodle could continue to be either used in a flipped class where students complete the tasks before class or to be used as a platform where students could have the class and access supplementary materials anytime and anywhere. However, according to these papers, more researches were about listening teaching than reading teaching which revealed teachers' preference on the skill that they wished to use Moodle-based approach to teach. Also how to strengthen the interaction between students and how to raise students' reading interests and cultivate their reading habits were still problems that cannot be solved by Moodle-based teaching according to these studies. Thus how to explore more methods to integrate use of Moodle into reading teaching to foster students' interests as well as improve their performance should be further researched.

#### CONFLICT OF INTEREST

The authors declare no conflict of interest.

#### AUTHOR CONTRIBUTIONS

Jing Wen analyzed the data and wrote the paper and Fan Yang revised it; all authors had approved the final version.

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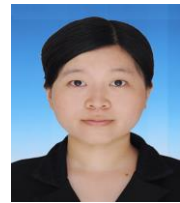
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