

Action Research on Construction of the Formative Evaluation System of English Reading Course under the Multimodal Teaching Mode

Ling Zhao^{1, a}, Xi Chen^{2, b}

¹School of Foreign Language and Culture, Xi'an Fanyi University, Xi'an, Shaanxi, China

² School of Humanities and Social Sciences, Xi'an Polytechnic University, Xi'an, Shaanxi, China

^atuolingzhao@163.com, ^bxiwest@163.com

*Ling Zhao

Key words: multimodal teaching; formative evaluation system; action research;

Abstract. This paper explores the construction of formative evaluation system for English Reading course in multimodal classroom teaching. Through data analysis, reflection and effectiveness evaluation, this paper conducts action research on the design, implementation effect and improvement measures of formative evaluation system of the blending teaching by means of interviews, questionnaires and reading proficiency tests. It explores the relevance of formative evaluation on students' reading evaluation and the improvement of students' reading literacy, as well as their reading attitude, self-efficacy and motivation, the formation of students' thinking ability in English reading and the development of their critical thinking ability.

1. Introduction

"Modal" is the way in which human beings interact with external environment such as other people and objects through senses such as seeing and hearing [1]. With the wide application of multimedia technology in the field of education and teaching, the open, sharing, self-directed and personalized online open-course learning platforms are constantly emerging. Microlecture, Flipped Classroom, MOOC (Massive Open Online Course), SPOC (Small Private Online Course) and other blending teaching modes, which combines modern technology with traditional classroom teaching, have become the direction of educational science reform, and the features of multimodality of language teaching are becoming more and more obvious.

With the formation of multimodal teaching and learning environment, multimodal evaluation makes the process of evaluation an important factor affecting students' reading motivation, cultivating students' reading literacy and improving students' critical thinking ability. Based on systemic functional linguistics and sociosemiotics, from the perspective of multimodal discourse analysis, this paper explores the construction of formative evaluation system of reading course for English majors under the blending teaching mode. By analyzing the current teaching mode of reading course for English majors, this paper evaluates the students' reading effect and performance in the multimodal perspective, and puts forward an index system to improve the students' high-order thinking ability and meet the needs of evaluating the effect of multimodal teaching of reading course for English majors by means of action research. This paper attempts to establish an evaluation system model of English reading teaching under the multimodal network environment, design and use multimodal teaching and evaluation methods to improve the reading effect, and hope to promote the reform of English reading teaching mode and the improvement of teaching quality. Changing teachers' and students' views and inherent understanding of reading courses for English majors will lighten students' cognitive burden. The acquisition of multimodal learning materials will enable students' reading to truly achieve self-direction, self-control, self-entertainment and students can enjoy the pleasure of reading.

2. The concept and implementation process of action research

Action research aims at solving practical problems and improving the current situation, with the

characteristics of action, participation, exploration and reflection [2]. Action research is a kind of systematic and introspective inquiry activity; it is directly participated and carried out by teachers in accordance with their own teaching problems, which needs a series of steps to complete; its purpose is to constantly improve teachers' teaching, so that teaching can achieve the best results, while improving the understanding of the teaching process[3]. The implementation process of action research includes observation, analysis, planning, implementation and evaluation; reflection and data collection and analysis run through it. (as shown below)

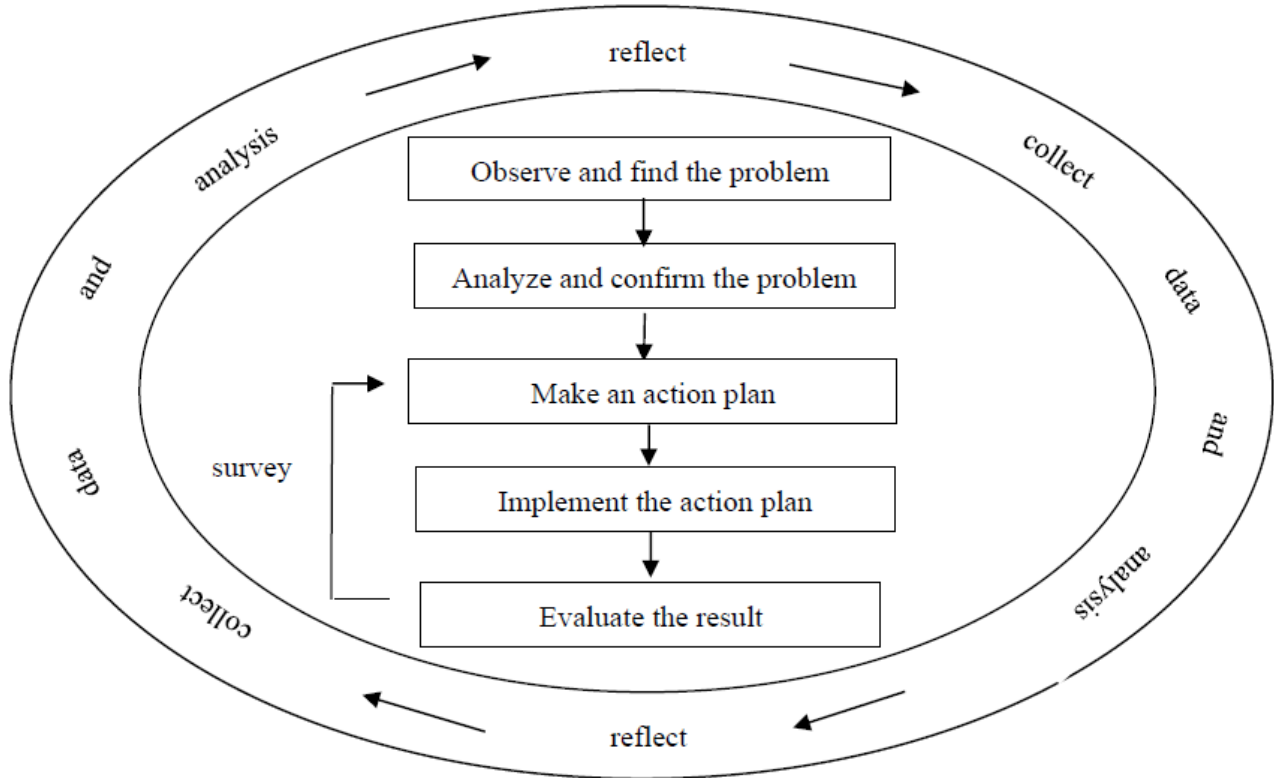


Fig. 1. The basic process of action research [4]

3. Action research on the construction of formative evaluation system of multimodal teaching

Multimodal teaching mode is adopted in English reading course by applying online resources such as voice, picture and cartoon to the process of language teaching, so as to promote students' participation in dynamic language learning. Multimodal teaching of English reading course relies on Fanya Online Open-course Learning Platform and mobile App Superstar. On the Fanya Platform, according to Bruce's three variables that affect academic performance: knowledge premise, emotional premise and teaching quality, the classroom teaching objectives are reconstructed. The pre-class task goal, classroom teaching goal and after-class expansion goal are achieved from the two aspects of low-order thinking development goal and high-order thinking development goals. Based on the feasibility of asynchronous SPOC multimodal teaching mode in reading course, this paper designs the multimodal teaching process of reading class for English majors. The construction of online learning resources is planned from pre-class tasks, classroom teaching and after-class expansion, and a formative evaluation system with unit assignments, stage tests, course discussions and independent learning as evaluation modules is constructed, and finally a multimodal evaluation system is implemented. In order to understand the changes in students' reading performance, this course carries out a process reform, and makes statistical analysis of students' acquisition scores and periodic evaluation results. The formative evaluation system of curriculum includes offline unit assignment, online stage test, online course discussion and online self-directed learning, in which online weight score (70% of the total score) are automatically generated on the Superstar /Fanya Platform and offline weight score (30% of the total score) are evaluated offline and input into Fanya Platform.

3.1 The focus of problems

In the process of implementing formative evaluation of multimodal teaching, the following problems are found: firstly, students do not have a clear understanding of the multimodal teaching mode of English reading course, and they are not sufficiently adapted to the learning requirements of "online + offline" blending teaching; secondly, the evaluation system of "Flipped Classroom" teaching mode under the blending teaching model cannot correctly reflect the process evaluation of students.

According to teachers' reflective logs and students' questionnaires, firstly, due to the proportion of online and offline courses, this course can only guarantee the basic learning load of 32 hours offline, while students' online learning time is limited, and the online learning time of each chapter cannot be guaranteed, and some students cannot fulfill the teacher's requirements for learning the various parts of the course in the process of blended learning. At the end of the semester, they rush to complete task-point learning or discussion links, failing to meet the basic standards of curriculum assessment. Secondly, students don't have enough understanding of the essence of the Flipped Classroom and process assessment. For example, in the two setting tests of curriculum, some students, in order to get high scores, use various means to answer the reading comprehension, which deviates from the original intention of teachers to test students' reading level; and some students cannot complete online learning on time and in good quality according to teachers' requirements. In the discussion section, regardless of teachers' repeated warnings, they release posts unrelated to the curriculum.

The reasons for the above problems may be that the evaluation system is not reasonable enough and students' understanding of the essence and objectives of the "Flipped Classroom" teaching mode is not precise enough. In order to evaluate students' reading level more reasonably and objectively, stimulate students' interest in reading, increase their reading quantity and improve their reading literacy, this study explores whether asynchronous SPOC under multimodal teaching mode can effectively improve students' English reading ability, reading literacy and improve teaching quality of reading course for English majors from the perspectives of teachers, textbooks and students. Compared with traditional reading teaching mode, it also explores whether the formative evaluation system in multimodal teaching can have a positive impact on students' English reading motivation or not. By means of action research, teachers can be helped to understand students and teaching environment so as to reflect on their own teaching in time and adapt to the modern multimedia education environment.

3.2 The implementation of action plan

In the course system of National Standard for English majors, the proportion of English knowledge and skills modules is 20%-40%, which aims at the cultivation goal of core knowledge, ability and accomplishment for English majors. Under the multimedia network environment, in the design of reading course for English majors, various modern teaching methods should be reasonably applied, and various modal resources such as pictures, audio and video should be synthetically integrated, so as to have students' senses engaged such as hearing and vision from different dimensions and to maximize their ability to input and output through reading. With the formation of multimodal learning environment in foreign language reading teaching, multimodal evaluation makes the process of evaluation an important factor affecting students' reading motivation, cultivating students' reading literacy, and improving students' critical thinking ability.

In view of the influence of the current teaching mode and multimodal methods on students' reading effect and the problems in its performance evaluation, in order to further improve students' ability of high-order thinking, and to establish an index system for evaluating the effectiveness of multimodal teaching of reading course, based on the asynchronous SPOC teaching design (e.g. the design and implementation of pre-class activities, class activities, after-class activities, etc.) of multimodal reading course for English majors, the construction of the multimodal formative evaluation system of English reading course is adjusted from the multimodality of evaluation mode (e.g. self-evaluation, group evaluation, teacher's evaluation, multiple evaluation, etc.), the multimodality of evaluation means (e.g. paper evaluation, work exhibition, class report, online learning, discussion, reading, etc.) and the multimodality of evaluation dimension (e.g. thoughts, feelings, cognition, results, etc.).

Multimodal teaching design of reading course for English majors is based on the planning of the construction of online learning resources from pre-class tasks, classroom teaching and after-class expansion, to a formative evaluation system composed of offline learning (30%), stage testing (two online tests, 30%), course discussion (including classroom activities and discussions, 20%) and self-learning (including homework weight, check-in weight, course video weight, 20%). Classroom activities of English reading course involve check-in, mind mapping, questionnaires, answering questions, critical thinking and other activities, all of which are scored online in class. Students will study in groups in Superstar. According to the completion of the students' curriculum tasks, the offline scores of group classroom presentation, group mutual evaluation and group reading are gradually input into the Fanya online learning platform. The plan of action research is as follows:

Table 1. The plan of action research

Stage	Goal	Strategy	Expected result	Research method
One	Master the basic requirements of multimodal teaching mode, the way and method of blending learning and the basic steps of curriculum implementation.	Introduce the use of asynchronous SPOC platform for online open-courses and the mobile APP Superstar.	Understand the multimodal learning mode, enhance the classroom learning effect of English reading class, and increase the amount of extra-curricular reading.	Questionnaire and introspection
Two	Construct a multimodal formative evaluation system, adjust the proportion of each part of the online and offline process evaluation system from the evaluation modes, means and dimensions.	By means of multi-evaluation, classroom presentation, online learning, discussion and offline reading homework, reasonably set the weight of score in the formative evaluation system of students.	Objectively evaluate students' English reading ability, stimulate the improvement of English reading literacy, and strengthen the teaching effect of reading courses for English majors.	Interview and questionnaire
Three	Examine the effectiveness of the first two stages.	The students' English reading level is tested by Lexile Measures for Reading and other reading tests.	Increase students' interest in English reading and their reading level.	Tests and questionnaire

The implementation schedule of the plan of action research is as follows:

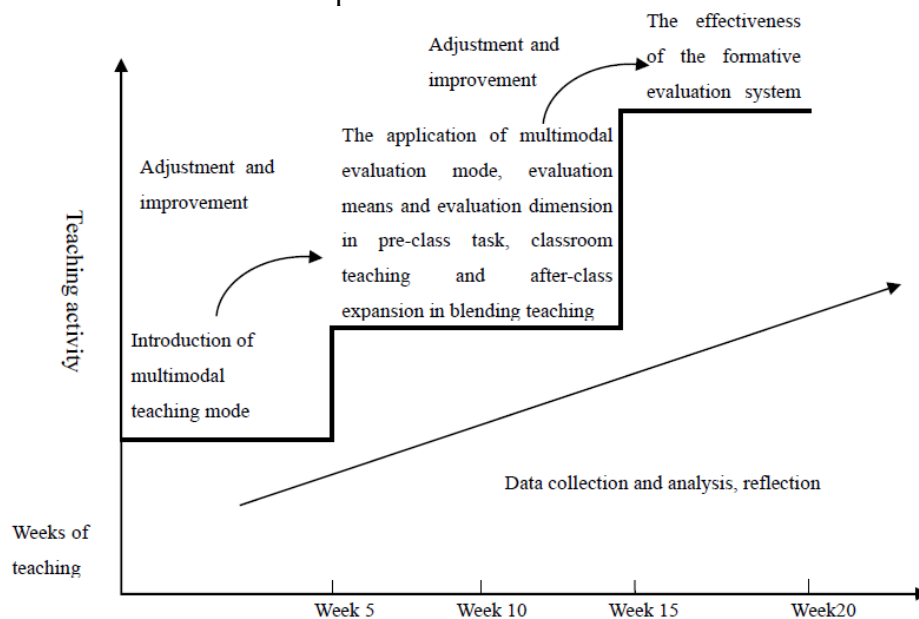


Fig. 2. The implementation progress of action research plan
(Note: This table is the implementation progress of one semester)

3.3 Collection and analysis of research data

Guided by the theory of multimodal teaching, through putting forward hypotheses, making plans, evaluating action plans and modifying action plans and evaluation mode, we carried out action research for two semesters to optimize the formative evaluation system of multimodal teaching. Interviews, questionnaires and reading level tests are used to verify the positive impact of formative evaluation system of multimodal teaching mode on students' reading motivation and the improvement of reading effect. In this study, the original data of the conversation by writing in the two stages of action research, which are meaningful units relevant to research, are selected and preliminarily coded. Then the subjects are classified: Secondary coding is carried out from the aspects of pre-class tasks, classroom teaching, after-class expansion, blending teaching mode and reading literacy. In the pre-class, classroom and after-class aspects, three students mentioned the role of pre-class task objectives in helping English reading. For example:

Pre-task is quite helpful for reading, for which make it possible for us to preview the learning focus and background information.....

(IS5-20181226-1)

In the construction of formative evaluation of this course, group task and videos are one of the pre-tasks; in classroom teaching, for the data collected in the first and second stages, nine students agree that online check-in, quick answer, buzzwords of the week, and online group discussion motivate their reading interests, for example:

Group practice and classroom discussion are very helpful to my reading. Through group practice, my execution and cooperation have been greatly improved.

(IS3-20181226-1)

Buzzwords of the Week has helped me a lot. I know some words I didn't know before, which enriches my reading vocabulary.

(IS6-20181226-1)

By getting familiar with, racing to be the first to answer questions and answering questions online, Classroom check-in and Rush-answer sessions have improved my interest in learning and classroom enthusiasm.

(IS10-20190628-2)

When learning and exploring articles in groups, we can exchange different ideas and collide more ideas, which improves our creativity.

(IS9-20181226-1)

It can be seen that in the process of constructing formative evaluation system, multimodal evaluation forms and means can stimulate students' reading enthusiasm and increase their reading quantity. After continuous exploration and practice, in order to avoid invalid replies, teachers assign online group discussion tasks, and group representatives answer online and publish discussion results, which greatly urges brainstorming among team members, and the execution and cooperation among students are further strengthened. In the extracurricular links, teachers push out articles for after-class expansion to inspire students to read critically. From the data of conversation by writing, it can be seen that students are gradually adapting to the multimodal learning mode. It is generally believed that it can activate the classroom atmosphere and facilitate the integration of reading content in class. At the same time, students' reading literacy has also improved to some extent. For example:

I think we should use this online and offline blending learning method to learn, which may enhance the interest of the classroom.

(IS4-20190628-2)

I am adapted to this kind of online and offline blending learning. The combination of the two will be more conducive to our learning of article content and extracurricular knowledge, and broaden our knowledge.

(IS9-20190628-2)

But now I think reading can let us see a different world, understand a lot of culture and etiquette of other countries that we did not know before. Reading makes us understand a lot of things, and we should often read in the future. It's good.

(IS2-20181226-1)

I feel that I have some changes in reading, mainly mastering some reading skills, which make my understanding of the article more profound. It also enables me to enter the author’s world, to feel their society at that time, increasing my interest in reading.

(IS7-20190628-2)

Formative evaluation under the multimodal teaching mode is helpful to the improvement of students’ reading evaluation and reading literacy. Students’ English reading attitude is positive and their learning initiative is good. The experience of self-efficacy of English reading ability level is obvious, and the students’ English reading test scores in the two semesters show a marked improvement trend, as shown in the figure below.

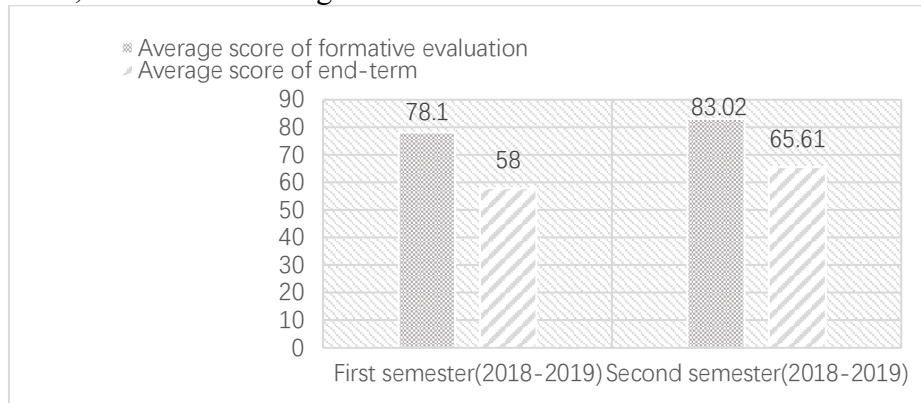


Fig. 3. The comparison of class average scores during action research

3.4 Evaluation of effectiveness

In the process of multimodal teaching of English reading course which combines online and offline learning, problems in the construction of formative evaluation system are found, hypothesis is put forward, essence of the problem is focused, action research on the design, process and effect of formative evaluation system is carried out. Through classroom observation, conversation by writing and English reading level test in two semesters, collecting and analyzing data, qualitative data of action research show that: first, compared with traditional reading teaching mode, multimodal teaching has a positive effect on improving the quality of reading teaching for English majors; second, multimodal teaching mode can improve students’ English reading ability and reading literacy more effectively; thirdly, the construction of formative evaluation system stimulates students’ learning initiative to a certain extent and has a positive impact on their English reading motivation. Action research helps teachers understand students and teaching environment, reflect on teaching in time, and adapt to the modern multimedia education environment.

4. Conclusion

This study is another reflection of the interdisciplinary and multi-perspective study of English reading teaching, which enriches and develops the research field of multimodal discourse analysis. The evaluation of students’ reading is an important link in multimodal teaching. The construction of formative evaluation system can not only help to reflect the formation of students’ thinking ability and the development of critical thinking ability, but also explore effective ways to help students improve their reading interest, improve reading effect and stimulate students’ perseverance in reading, so as to cultivate students’ reading literacy. It is an innovation of teaching method and evaluation mechanism to construct a blending teaching mode based on asynchronous SPOC and to make formative evaluation of students’ reading ability, which can provide reference for reading teaching of English majors.

Acknowledgement

This research was financially supported by “Shaanxi Province Educational Science Program during

the 13th Five-Year Plan Period” (Grant NO. SGH18H465) and “English Reading and Writing Course” Teaching Group of Xi’an Fanyi University (Grant No. T1801).

References

- [1] Gu Yueguo, On Multimedia Learning and Multimodal Learning, *Technology Enhanced Foreign Language Education*, vol. 2, pp. 3-12, 2007.
- [2] Wang Qiang, *Action Research for English Teachers*, Beijing: Foreign Language Teaching and Research Press, 2002.
- [3] Wang Qiang and Hu Yalin, How to Do Action Research to Be a Research-based Foreign Language Teacher, *Foreign Language Teaching in Schools*, vol. 1, pp. 1-6, 2014.
- [4] Wen Qiufang and Han Shaojie, *Research Methods for English Teachers: Case analysis*, Shanghai: Shanghai Foreign Language Education Press, 2011.