

# Clicker Interactive Teaching Feedback Interactive Method Based on Animeter

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**Keywords:** interaction; interactive learning; interactive teaching

**Abstract:** Interactive learning has developed rapidly from traditional feedback learning to various forms. Because of its remarkable learning effect, it is also widely used in all walks of life. However, the existing research at home and abroad focuses more on the application of interactive learning, and there are relatively few studies on the origin and Realization of interactive learning. In order to understand interactive learning more comprehensively, the concept and origin of interactive learning are analyzed in this paper. On this basis, the realization form, theoretical model and application status of interactive learning are described. Finally, on the basis of the existing research, this paper summarizes the teaching methods and future research directions based on interactive learning, with a view to improving the theory of interactive learning and improving the effect of interactive teaching.

## 1. Introduction

Since the 1990s, British higher education personnel training model has undergone a wide and far-reaching reform, which takes "ability education" as the core and advocates "action-based learning". What "ability education" advocates is to make students take on the responsibility of cultivating their abilities and learning independently. Through exploratory and autonomous learning, students'comprehensive abilities to engage in practical work and adapt to social life are trained. After this educational declaration, interactive learning has become the main mode of action-based learning. Interactive learning can stimulate students'enthusiasm and initiative in learning, and help to improve students' self-confidence and self-learning ability. Therefore, in order to improve students'subjective initiative, it is necessary to apply interactive learning to practical teaching.

In recent years, interactive learning has developed rapidly from traditional feedback learning to various forms. Because of its remarkable learning effect, it is also widely used in all walks of life. However, the existing research at home and abroad focuses more on the application of interactive learning, and there are relatively few studies on the origin and Realization of interactive learning. In order to understand interactive learning more comprehensively, the concept and origin of interactive learning are analyzed in this paper. On this basis, the realization form, theoretical model and application status of interactive learning are described. Finally, on the basis of the existing research, the teaching methods based on interactive learning and the future research directions are summarized.

## 2. Analysis and definition of the origin of interactive learning

In previous studies, researchers have not systematically sorted out the origins and definitions of concepts such as interaction, interactive learning, and interactive teaching.

Interaction was originally a computer term, "human-machine dialogue." The concept of interaction was first proposed by educational scientist Devey. This concept "implies the interaction between individuals, environments, and modes of behavior in a certain situation." In educational psychology, interaction is a complex concept that can be understood at many levels. In the traditional theory of educational psychology, interaction is marked by feedback. Therefore, feedback affects the learning effect, and the timeliness and accuracy of feedback play a crucial role in the success or failure of learning. In modern learning psychology, interaction has become its core term. Especially in cognitive psychology, researchers generally believe that interaction is the

essence of learning. Among them, Piaget regards learning as an interaction between individuals and the environment; American psychologists Ausubel and Bruner believe that learning is the interaction between learners' cognitive structures and learning materials. Since then, with the development of constructivism, the concept of interaction has been further deepened and expanded. Among them, the subject construction theory believes that learning is the interaction between the old and new concepts; Situational cognitive theory believes that learning is the interaction between learners and the context of learning situations; Learning activity theory believes that learning is the interaction between the various elements of the activity. It can be seen that interaction refers to the various interactions between learners and learning objects in the learning process.

Interactive learning, as a criticism of the neo-classical concept of the market, originated from the economic and technological changes and first appeared in the research on enterprise innovation in the field of economics. In 1985, Lundvall proposed the concept of interactive learning. He believes that many important learning and innovation are interactive processes. Interactive learning is a dynamic process of interaction and interaction. For example, the interaction between different sectors in the enterprise (R&D, sales, etc.), between the enterprise and other enterprises, knowledge providers (e.g. universities and research institutes), financial institutions, training and public administration institutions. The interactive learning discussions initiated by Lundvall focused more on the impact of institutions on innovation and the setting of the agenda for technology policies than on substantive interpretation. Therefore, Lundvall gives a wide introduction to interactive learning in the process of innovation, but lacks a concise and precise definition. Instead, Morgan pointed out that interactive learning is a process in which learning takes place between elements, and it can also refer to the process of interactive knowledge generation, diffusion and application in which elements participate, which is influenced by institutional norms and social customs.

Interactive teaching originated in the 1970s and was first proposed by Palincsar and Brown, American educational psychologists, and quickly attracted the attention of researchers. Based on humanistic psychology and psycholinguistics that emerged in the late 1960s, interactive pedagogy focuses on cultivating communicative ability. It is a teaching method aimed at improving students' reading comprehension and self-learning ability. It emphasizes that language teaching should be centered on "students", and teachers should provide students with meaningful language materials, create a real language environment, and enable students to carry out meaningful learning. Interactive teaching advocates that teachers no longer merely mechanically transmit professional knowledge, and students no longer only passively accept this knowledge. Knowledge should interact in many ways, including multiple interactions between teachers and students, and between students and students. The social constructivism that emerged later paid special attention to the interaction between students and mentors in learning, and proposed some specific teaching models for interactive learning, such as, Cognitive learning, issue-based teaching, peer cooperation, and good results in teaching.

It can be seen that the connotation of interactive and interactive learning is constantly expanding, and the interactive teaching model is gradually maturing. In short, interactive learning refers to all the interactions that help learning. It not only exists in the field of learning and teaching, but is also widely used in the fields of enterprise innovation and communicative ability development. It not only includes mutual communication, but also includes mutual learning, mutual inspiration, and mutual influence, so as to play a role in both learning and achieve good learning results. Interactive learning is applied to the field of education. It refers to the rational use of diverse teaching methods in teaching, including speech, multimedia, network technology, issue-oriented learning, and group learning. A dynamic two-way communication and cooperation between students and teachers, between students and students, and between students and learning content is formed to promote teaching results.

### **3. Implementation Forms and Theoretical Models of Interactive Learning**

In order to apply interactive learning to teaching, it is necessary to clearly understand the realization form of interactive learning and the relevant theoretical basis. Doloreux pointed out that

interactive learning occurs in many forms depending on the situation and process, and interactions occur in a vertical or horizontal manner. Among them, the traditional interactive learning in the classroom is characterized by feedback and communication. In a learning atmosphere of mutual trust, equality and harmony, two-way communication between teachers and students and students is realized, and students' understanding of knowledge is improved in interaction. And cultivate its ability to study independently, explore cooperation and so on. Studies have shown that interactive learning has a wide range of applications and plays an important role in human anatomy, civil engineering, mathematics, physics, college English, and nursing. In the specific teaching practice of these disciplines, researchers have also developed a series of interactive teaching methods based on these specific disciplines, and have achieved good results in practical applications.

With the wide application of computer network technology in education, the interactive learning model based on network environment has rapidly emerged. It breaks through the limitation of time and space and is conducive to cultivating students' ability to study and explore independently. In educational practice, web-based forms of real-time communication (such as online communication, voice, videoconferencing) and non-real-time forms of communication (such as forums, blogs) have emerged. At present, most of the online colleges of 67 pilot universities have BBS (forums) in online courses or on the home page, providing interactive learning support services for students through BBS. At the same time, microblogs, videoconferences, etc. have rapidly emerged. They have changed traditional teaching patterns and separated from time and space constraints. They can promote efficient knowledge construction, optimize the integration of teaching resources, and promote teacher-student exchanges. In addition, based on summing up a large number of learning system design and development experiences, Liuyiming proposed a web-based three-layer B/S structure interactive learning system. Lixiaohua and others put forward a web-based learning platform design scheme, which effectively realizes the interactive teaching process. Zhanglu used the B/S model of the three-tier architecture system and developed an interactive learning website based on database and ASP.NET technology design. The Humanites Computing and Media Center team at Victoria University in Canada has developed a practical tool "Hot Potatoes" to help teachers quickly produce online exercises and tests. The emergence of these systems, websites, and tools has created conditions for interactive learning, stimulated students' enthusiasm for learning, and developed individual learning programs for each student based on the results of the tests, so that teaching is no longer confined to the classroom. It conforms to the trend of comprehensive and final biochemistry of education in the future. In theory, Tangjianrong proposed a web-based interactive learning model. In 1989, distance education expert Moore proposed three major interactive concepts of distance education: student-learning content interaction, student-teacher interaction, and student-student interaction, which marked the maturity of distance education theory. The emergence of the above-mentioned network interactive learning methods and models shows that the integration of interactive learning and network technology is increasingly close.

In the area of enterprise innovation, Lundvall believes that interactive learning exists in interaction. However, the implementation of interactive learning depends on changes in the way of thinking and depends on the learner's motivation. In the process of exchanging and sharing knowledge resources, interactive learning forms a feedback loop and can be more efficient. On the basis of analyzing the performance theory of technological innovation, Qianshaoqing built the concept model of interactive learning that affects the performance of technological innovation in the technological innovation network, and established the technical analysis model based on structural equations, and discussed the interaction between its elements. relationship. The design of the measurement indicators uses the Likert scoring system. The intensity and density of interactive learning are mainly based on the studies of Renko, Li Zhangshixun, and Li Zhigang. On this basis, the discussion and revision are completed. The Cronbach's  $\alpha$  coefficient is used to analyze each factor, which has a good reliability and validity.

The above theoretical model based on interactive learning shows that interactive learning is not simple communication. Interactive learning exists in the interaction and mutual connection of the subject. The rationality of the model depends on the rationality of interaction and mutual influence.

Interactive learning is widely used in enterprise innovation, communication and teaching because of its advantages. Fritsch et al. pointed out that innovation is mainly understood as an interactive learning process. As Capello points out, SME innovation stems from interactive learning. Qianshaoqing introduced the application of interactive learning in enterprise innovation in detail. Scholars at home and abroad pointed out that the core of the current communicative ability cultivation is the interactive nature of communication. Only through interactive learning can we improve the communicative ability. In addition, numerous studies have shown that interactive learning plays an important role in teaching human anatomy, civil engineering, mathematics, physics, and nursing.

#### **4. Teaching Method Based on Interactive Learning**

The application of interactive learning to teaching mainly focuses on the exploration of interactive teaching methods, which is an interactive teaching method. In previous studies, the classification of interactive learning teaching methods is not perfect, so it is necessary to summarize the teaching methods of interactive learning based on the existing research, in order to guide teaching and improve learning effect. Interactive teaching methods include the following three points:

##### **4.1. Interactive Teaching Based on Classroom Interaction**

Interactive teaching, characterized by classroom interaction, is an activity in which teachers and students participate together, and is a kind of "human-human" interaction. As the main body of teaching activities, students are not only the receivers of knowledge, but also the creators of knowledge. Teachers also change from knowledge imparters to knowledge guiders and instructors, depending on a certain "hard environment" and "soft environment" to fully mobilize students' subjective initiative. "Hard environment" mainly depends on the conditions of classroom seating layout, while "soft environment" mainly refers to the interaction between teachers and students, and between students and students. It is mainly realized by problem-oriented interactive teaching and group-oriented interactive teaching.

Problem-oriented interactive teaching is an independent teaching method to cultivate students' pioneering and innovative spirit. It can cultivate students' sense of teamwork and problem. The primary task of problem-oriented interactive teaching is to cultivate students' questioning consciousness. Teachers should guide students to put forward and think scientifically, criticize and criticize on a basis, not only to let students "dare to ask questions", but also to "be good at asking questions", and gradually enhance their creative thinking ability in the process.

Group interactive teaching means that students are randomly divided into several homogeneous groups according to the requirements of learning content. Team activities are the main link in the teaching process, requiring cooperation in completing learning tasks, and evaluating and rewarding the overall performance of the group, so that students can truly become the main body of learning, and their initiative can be developed accordingly. Students' sense of cooperation can be enhanced through such cooperative and interactive activities as group discussion, mutual evaluation, mutual feedback, mutual encouragement, mutual help and learning, and mutual teacher-student interaction. Final consensus on ideology is helpful to the cultivation of students' open thinking and to the optimization of the relationship between teachers and students, students and students.

##### **4.2. Interactive Teaching Based on Internet**

Interactive teaching under the network environment is the "man-machine-man" interaction realized by means of network communication technology. Web-based interactive teaching is generally divided into two ways: one is real-time interaction, that is, teachers and learners participate in online teaching process at the same time, such as video conferencing, online communication; the other is non-real-time interaction, that is, learners communicate with teachers or other learners through network communication means, such as forums, blogs and so on.

### 4.3. Computer-based Interactive Teaching

This interactive teaching is the "man-machine" interaction realized by the intelligent system, software or multimedia environment generated by computer design. It belongs to a two-way communicative learning mode. Learners can get instant feedback through their own practical operation. At the same time, according to learners' learning experience and characteristic data, computer systems and software will provide individualized different teaching services for learners through analysis, and use the sharing of multimedia to achieve learning purposes and improve teaching effect.

### 5. Summary

Interactive learning refers to all the interactions that contribute to learning. It is widely used in various fields such as enterprise innovation, communicative competence training, teaching practice, and has achieved good results. Most of the existing research on interactive learning focuses on the effects and teaching methods of interactive learning in various disciplines, the interactive learning system based on network environment, mode, website development and the construction of interactive learning model based on enterprise innovation research. On the basis of summarizing the existing research, this paper summarizes interactive teaching methods, such as classroom interaction based interactive teaching, Internet-based Interactive teaching, computer-based interactive teaching, in order to flexibly and extensively apply these teaching methods in future teaching practice and achieve good teaching results.

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