Research and Practice on Task-Driven Teaching Based on Blended Learning

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Abstract. Blended learning is a new teaching form with the guidance of blended learning theory and the help of information technology. It is the research hotspot and important development direction of college teaching reform. Based on the teaching philosophy of blended learning, with task-driven teaching as a teaching method, using "Flash animation-making" curriculum as an example, this paper discusses the design and implementation of task-driven teaching based on blended learning, so as to provide a new reference for the research and practice of the task-driven teaching.

Introduction

With the continuous development of computer network technology, the ecological environment of all walks of life in the economic society has also changed. The emergence of the Internet plus, a complete set of information technology, which integrates mobile Internet, cloud computing, big data, will combine with traditional industries, and promote its transformation and upgrading. Blended learning is a learning mode of Internet plus education. The Internet plus has injected more technology and learning resources into online and classroom face-to-face blended learning, and made the fragmentation design of network teaching content become realized, so that the learners through the intelligent mobile phone terminal can achieve online learning, truly according to the individual needs of learning, which makes up for the lack of classroom teaching.

Blended Learning and Task-driven Teaching

Blended Learning

Blended learning is a teaching philosophy, advocated that the teaching problems should be solved by using different teaching methods, and we should provide a suitable learning channel to transmit information through autonomous learning for learners, promote effective learning, so as to achieve the ideal teaching effect. Blended learning is mixed learning theory and teaching mode based on constructivism, behaviorism. The main manifestation of blended learning is the combination of traditional face-to-face learning and online learning, the combination of teacher's teaching and students' learning.

Task-Driven Teaching

The task-driven teaching is a teaching method which is based on the teaching
objectives, focusing on the teaching content, in accordance with the principle of gradual, integrates the concept of subject knowledge, principle into a skill learning task. This teaching method focuses the teaching content and makes the students clear what to do, and takes the completion of the task and the solution of the problem as the main teaching activities, and runs through the whole teaching process. Thus, it can promote students' participation and realize the ability of independent inquiry, practice, thinking and application when they acquire the system subject knowledge.

**Analysis of Teaching Theory**

**The View of Knowledge Acquisition**

The purpose of task-driven teaching is to understand and grasp the declarative knowledge, procedural knowledge and strategic knowledge of the concepts covered by the tasks through the completion of the tasks, and to achieve effective migration. However, modern cognitive psychology research shows that the knowledge with different expression ways in the human brains requires different learning methods and learning environment. The acquisition of declarative knowledge requires such cognitive processing as attention, perception, repetition, organization and retrieval; acquisition of procedural knowledge requires cognitive processing such as understanding, practice and feedback; the acquisition of strategic knowledge need the corresponding knowledge and experience and higher self-efficacy based. Thus, students in the process of learning tasks need to have visual and auditory information media and different transfer mode to support. The nature of blended learning is how to apply virtual reality and information transmission channel to promote learning effectively by the min cost with the support of the modern information technology. [1]

**Learning View**

The purpose of teaching is to promote a change in the mental structure or external behavior of a learner. Only by understanding and mastering the psychological characteristics of students and designing the teaching content and implementing strategies can we make the teaching activities vigorous and effectively promote the realization of teaching objectives.

Undergraduate students are basically admitted to the campus after college entrance examination. They not only have high cultural knowledge, strong observation ability, memory and imagination, but also have strong independent consciousness and good independent learning ability, and they have individual learning styles. However, meta cognition of college students is still poor, do not know how to learn according to the specific conditions of knowledge application and context, extract useful information from the construction of meaningful learning materials, and the lack of capacity problems of reflective learning. Their self-control is poor, and in the face of difficulties, their will is not strong enough, lack of persistent learning spirit. Therefore, the teaching process should not only give the students "teaching" process, but also provide the time and autonomous learning environment for students. [2]

The essence of task-driven teaching is to induce learners' learning motivation, and to create the conditions and environment for independent exploration, discovery and innovation by the task. Therefore, task driven teaching is suitable for students in regular undergraduate colleges. While blended learning emphasizes the specific teaching problems, we should choose the appropriate
media to solve it in a unique and effective way. The idea of blended learning has good theoretical guidance for the design and implementation of teaching tasks, activities and strategies.

**Organization and Implementation of Teaching Activities**

Next, we take Flash animation-making as a practical carrier, and introduce in detail the teaching design and the organization and implementation of teaching activities.

**Teaching Analysis**

The first is analysis of teaching objectives. The teaching objectives of this course are as follows: (1) Knowledge objectives: understand the basic principles and methods of Flash animation-making, learn how to make use of the knowledge to make more thematic elements and more complicated theme animation. (2) Ability objectives: let the students through the learning tasks, grasp the actual application and the principle of making animation concepts, skills training, knowledge acquisition ability, practical ability, innovation ability, cooperation ability. (3) Emotion objectives: through the reality design task, and make it close to the student life experience caused by their practical interest; through the use of QQ and WeChat to build communication platform to promote students’ persistence.

The second is analysis of learning object. These who select this course are mainly from grade two or three of the whole university. Because of their different grades and majors, there are great differences in the existing computer application knowledge and ability, which affects the acquisition of curriculum knowledge and skills to master the different speed and quality. But the same thing is that they have been exposed to a variety of applications of the Internet in real life since childhood, and they are adults who have passed the college entrance examination. They have the ability to learn independently and understand and deal with problems.

The third is model analysis of task organization. There are two modes of task-driven teaching: one is to use the work as the driving force, the other is to use the problem as the driving force. The former pays attention to the training of the comprehensive application ability of knowledge and skills, while the latter pays attention to the collection and selection of information and the cultivation of the ability to define problems. Because Flash animation-making is a highly practical course, its teaching objective is to train students to use Flash software to make animation. Therefore, the task organization model is mainly the production of theme animation works. In view of the total class hour of the class is only 32 hours, divided into once a week, 3 lessons each time, so the teaching content will be designed as 10 comprehensive tasks, that is, the production of 10 themes animation works. After the end of the course, the assessment method is also to produce a theme animation works.

The fourth is conditions analysis of blended learning. Learning styles include classroom learning and online learning after class. Learning materials include paper learning materials, multimedia learning materials related teaching content (audio and video, word documents, ppt documents and animations), the fragmentation of learning materials on QQ and WeChat, the MOOCS and micro-lessons. [3]
The Task Design of Driving Teaching

The design of 10 teaching tasks of the curriculum is based on the teaching objectives. According to the gradual principle, we incorporate the concepts and knowledge contained in the teaching content into 10 tasks. We radiate the meaning of the concept into multiple tasks as much as possible and try to make the task characterize the integrated application of multiple concepts so that learners can perform more complex tasks. Such as the key and difficult knowledge "mask layer and boot layer" application, in the "scroll painting" production, "web titles" production, "greeting card" production, "courseware" production, "MTV" production and so on. They are mixed with other different concepts in these different tasks to produce different animations. Through the completion of these tasks, students can master the application of these 2 concepts in different situations.

The purpose of task-driven teaching is to make teaching problems closely related to teaching activities, so as to improve teaching efficiency and quality. Because of the complexity of the sources of teaching problems, the process and results of problem solving are also diversified, and it is difficult for learners to construct the link between old and new knowledge when they solve problems. Therefore, for the task design, besides the explicit topic for the learner, it also should explain the purpose of production and the new knowledge involved. This allows learners to develop strategies for completing tasks by rapidly focusing their cognitive thinking and positioning, thereby increasing their interest and involvement in problem solving. Such as "Moon animation", making objective: creating and editing component library, using examples; applied to the new knowledge: graphic element, movie components, examples and library, create animation, star tools, open the external library. [4]

The authenticity of the task can not only effectively arouse the learners' cognitive interest and devotion, but also benefit the connection between the old and new knowledge, so as to effectively promote the understanding and application of knowledge. However, the task with appropriate some abstraction is conducive to learning by cognitive thinking. Therefore, the design of the task should be to the real situation as the background, to close their social life experience oriented to design the theme. We should provide support to the new knowledge implied in the task, so that learners can understand the situation by means of knowledge, and build the strategies and methods of the current task required to solve the problems, so as to realize the application and transfer of knowledge.

The Design of Learning Resources

The first is design of network course. Network course is the role of showing ordered learning materials and learning path for learners, showing the teaching content covered between the scope of knowledge, the sequence and contact of knowledge point, providing a learning environment across time and space. Therefore, the network course includes two parts: curriculum knowledge and learning resources and the knowledge points should be arranged by structure chart of curriculum knowledge. Then, the knowledge content covered by each topic is divided into one knowledge point, which is arranged crosswise according to subordinate or preliminary relation. Finally, each learning object in the learning resource is linked to the corresponding knowledge point according to the association relation, and a module is retained in the network course to link the learning materials related to the course on the internet. Thus, the network
course will form a web-based learning environment with clear learning goals, clear learning paths, complete knowledge structure and abundant resources. [5]

The second is design of interactive learning platform. Because of the wide application of QQ and WeChat, the interaction between teachers and students and students can be carried out anytime and anywhere through mobile phones. Therefore, QQ group is set up as an interactive platform for class. On this platform, teachers can give the teaching dynamic information and supplementary learning materials; students can submit homework; teachers and students, students can solve the problem by discussion and exchange. Students are also required to use WeChat group to build communication platform between members, so as to strengthen the team members’ information sharing, exchange and interaction, and provide a more convenient platform for collaborative learning.

The Design of Teaching Activities

The teaching activities are composed of two parts: in class and after class. The classroom teaching activities are mainly teachers teaching. At first, teachers in each class should explain to student hidden concept in the task to help students understand the concept, and then give the process of making students demonstrate task related examples, to enable students to understand the concept of application in reality. In each class, the teacher uses some time to comment on the outstanding work produced by the student after the completion of the previous task. The purpose is to let students understand the reasons to produce excellent works and problems, in order to improve the students' ability of appreciation of works, stimulate students’ interest in learning, and improve the quality of the follow-up tasks. Extracurricular teaching activities are mainly based on students' learning. In order to let the students have enough time to finish the task, each task for students to set aside 1 weeks to complete, and encourage students in the task such as a problem, a message in the class QQ group, let other students give advice to help teachers from monitoring guide. In order to make the students more closely linked, supervise each other, and consult the study, at the beginning of the course, the students will be divided into a study group which includes 5 people, and each team selected a team leader. The team leader is responsible for supervising team members through WeChat or QQ, so that each team can complete the task on time and submit the work.

Teaching Evaluation and Feedback

The subjects and methods of teaching evaluation are diversified, that is, the combination of teacher evaluation and students themselves and their mutual evaluation. The process evaluation of learning is combined with the summative evaluation after the course teaching. Specific practices: teachers promptly correct each student's works, select outstanding works, put on the class QQ platform, so that all students enjoy learning. The next class, the teacher comments, respectively, pointed out highlights and shortcomings of outstanding works. Teachers give students extra points who answer often question in QQ group and record in the usual results. At the end of the course, the evaluation of the works is: first, each group evaluates the 5 works completed in the group, and then the teacher scores all the examined works, which promotes the students' knowledge acquisition ability, practical ability, innovation ability and team cooperation ability.
Conclusion

The Flash animation-making course has been implemented for 2 semesters with this learning approach. Judging from the quality of the students' works at the end of these 2 semesters, the quantity of knowledge, the complexity of the skills, and the visual effects of the pictures are obviously improved. The end of the two semesters, questionnaire feedback also shows that students love this teaching method, and have said that this teaching method can let them learn more knowledge in 32 limited hours, after the end of the course they can make more complex animation.

References


