A Contest Event in the Connected Classroom Using Wireless Handheld Devices

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Abstract

In this study, an English contest event with across-classroom mode was held in the connected classroom equipping with wireless remote controller (EduClick). The learning scenario of contest event embedded into event-driven learning model is designed by integrating activity-centered design and learner-centered design to conduct students to learn individually before event and collaboratively participate with classmates during the event stage. The contest event is held by the activity-centered design. A web site with web-based content and online testing system is built by learner-centered design. We desire the students to learn for participating in the event. Connected classroom is an environment constructed by connecting classrooms located in the same or different schools, or schools of different countries. More various learning activities could be held in the environment. Here, we built a prototype of connected classroom using the simplest wireless and mobile technologies and held contest event.

Keywords: individual learning, collaborative learning, connected classroom, event-driven learning, activity-centered design, learner-centered design

1. Introduction

A different learning mode is to connect classrooms at different places and precede the interaction through Internet. The concept of “class” and “classmate” could be extended and expanded. More types of interaction would be brought into this environment, including inter-class, intra-class, in different grade students and in school. More various learning activities could be held in the environment. Individual learning and collaborative learning are the same important in the world. Different designs of learning activities could conduct different types of learning.

The study of Chang et al. [2] in 2002 focused on the learning strategy of contest event with event-driven learning. We extend the study to hold a contest event in connected classroom and integrate with activity-centered design [3] and learner-centered design into the event process.

2. Connected classroom

Connected classroom is constructed by connecting different classrooms located in the same or different schools, or schools of different countries. Chan et al. [1] point out in the future classroom learning, connected classrooms through computers will change the organizational structure of schools and the definition of a class. Traditionally, a classmate just means the one stays at the same place with you and you two could see each other. In connected classrooms, the concept of “classmate” is extended. Any one who could communicate with you and participate in the same learning activities could be your classmate. You also could get instruction from instructors in different classrooms, just like the students at that classroom are taught by the instructor. In connected classrooms, more various learning activities could be held. The teachers of the connected classrooms can collaborate to design better learning activities, and students can form teams, across different classrooms, to participate in the activities.

Connecting different classrooms is not only to expand the scale of the classroom, but to increase the interaction among these classrooms. Video conference is just used to give members in other classrooms a general view to realize what activities are held, what material are displayed, and lecturing from teachers in the main classroom. Internet and wireless and mobile
technologies could promote interaction in the environment. A number of researches have exploded to use wireless and mobile technologies to enhance the single classroom. Integrating with Internet could extend the impact of Internet and mobile technologies to the connected classroom. More application also could be provided in the environment.

In this study, we construct the connected classroom by integration the wireless remote controller in highly interactive classroom with Internet. Two or more classrooms equipped with EduClick [4] connect to a central server by client-server structure. The central server gathers and processes all data from EduClick, and the information of the activity is displayed to all classrooms participate in the activity. By the design of using EduClick to construct connected classroom, the interaction is extended from single classroom to multiple classrooms. And more applications of EduClick could be generated, like classroom-based contest.

3. Scenario of the contest event

An English contest was held in two phases. The first phase is online learning phase. A web site is designed with web-based content, provided by two content provider, and online testing system. Students register accounts to login to the web-site, and then read the web-based content and do the exercise on the testing system. The testing items are divided into four types, including vocabulary, grammar, conversation, and listening. The rule of the testing system for students is answering correctly all ten items of each testing challenge to pass one type of item classifying and passing each type of item classifying. The learning stage is lasting about three months.

The second phase is the event phase for contest event in the connected classroom. All participating classroom is equipped with wireless remote controllers (EduClick). The participants stay in their classroom, login the remote server to download the contest material, and answer the items of the contest material to generate their own grade.

4. Discussion

We held the contest event embedded into the event-driven learning model. The event-driven learning is divided into three stages [2], including goal setting stage, preparing stage, and participation stage. The two phases of the contest scenario is corresponding to the last two stages of the event-driven learning. In our design, the specific percentage of items is from the content at the online testing system. So doing the testing system is helpful their participation of the contest event.

Wireless and mobile technologies have benefits for the contest event. It could expand the scare of the event. More and more participants could participate in the event, not limited in the fixed size of space. It could bring more interesting and interaction in the event. Other benefits, like easy to use and efficient, also enhance the events.

Two learning designs are integrated in the contest event. It focuses on the individual learning at the first phase. This phase is learner-centered design phase and focuses on learning by learner himself. The second phase focuses on the collaborative learning. All students in the same classroom participate in the contest event together.

5. Summary

In this study, we develop a prototype of connected classroom and hold a contest event embedded into event-driven learning. Activity-centered design and learning-centered design are integrated into the contest event process. The evaluation is ongoing. We focus on the benefits of wireless and mobile learning devices in the event and the impact of the design of the whole learning process.

10. References


