

A synchronous distance discussion procedure with reinforcement mechanism: Designed for elementary school students to achieve the attending and responding stages of the affective domain teaching goals within a class period

Kuo-An Hwang^a, Chia-Hao Yang^{b,*}

^a *Department of Computer Science and Information Engineering and Graduate Institute of Networking and Communication Engineering, Chaoyang University of Technology, No. 168, Jifong E. Road, Wufong Township Taichung County 41349, Taiwan, ROC*

^b *Graduate Institute of Informatics, Doctoral Program, Chaoyang University of Technology, No. 168, Jifong E. Road, Wufong Township Taichung County 41349, Taiwan, ROC*

Received 31 August 2006; received in revised form 5 February 2008; accepted 11 February 2008

Abstract

Distance education courses must cope with the difficulties imposed by delivering a class at a distance. As most courses only emphasize the cognitive aspects of the class and neglect the course's effect on the students, this gives no help for reaching the affective domain teaching goals. Especially for younger students, in distance education, when younger students are out of the sight of teachers, they could easily be distracted by the environment around them. This research outlines a synchronous discussion procedure with reinforcement mechanism designed for elementary school students to integrate the affective aspects of teaching into distance education within a class period. The mechanism allows teachers to understand students' attitudes within the class and provides instant feedback to the teacher. Learners can also get information about their attitudes and help to reach the affective domain teaching goals of the courses. This mechanism was implemented and investigated. Comparative assessments were made by administering interviews and questionnaires to elementary school students. The results show that the procedure can supervise learners and help them reach the response stage of the affective domain teaching goals. © 2008 Elsevier Ltd. All rights reserved.

Keywords: Distance education and telelearning; Interactive learning environment; Computer-mediated-communication; Teaching strategies

1. Introduction

On-line learning, learning by means of personal computer and computer networks (Harasim, Hiltz, Teles, & Turoff, 1995), is a way largely utilized in distance education. E-mails and discussion forum are often

* Corresponding author. Tel.: +886 4 2332 3000x7708; fax: +886 4 2330 4902.
E-mail address: s9433901@cyut.edu.tw (C.-H. Yang).

adopted as the interaction tools (Eisenstadt & Vincent, 1998; Wolfe, 2000). Before delivering a class, the teacher must set the teaching objectives. According to Lefrancois (1982), teaching goals could be classified into three domains: cognitive domain, knowledge; affective domain, attitude; and psychomotor domain, skills. However, most teaching courses merely lay stress on knowledge impartation, namely, cognitive domain, and neglect students' learning attitudes and the affective domain teaching goals (Keller & Sherman, 1974). The teaching strategies of the affective domain teaching objectives must be administered in ordinary courses by managing the students' learning attitudes during class to guide their moral characters and achieve the teaching objectives of affective domain (Goge & Broiler, 1992).

There are also affective domain teaching objectives in the courses of distance education. Learning objects must be set for achieving the attending and responding learning objects within every class period. However, in distance education, mostly, class discussions and interactions are made merely by means of discussion forum, which is similar to chat room. Provided common discussion forums are taken as the only interaction mechanism of distance education, then, teachers could neither manage the order of the discussion process, nor give the students instant and apparent feedback, not to say to urge the students to take part in the discussion. Instead of helping the teacher to reach the attending and responding learning objects of the affective domain (Beth & Cathy, 2001), such a discussion education may result in passive learning attitude and distract the attentions of many distance education students. Especially for younger students, in distance education, when younger students are out of the sight of teachers, they could easily be distracted by the environment around them. Therefore, mostly, distance education is not applicable to younger students. Nevertheless, provided the effect of distance could be eliminated by adopting the operant conditioning learning theory to have the teachers of distance education take hold of the learning conditions of students, then, the distance education system suitable for elementary school students could be developed.

According to the learning theory of operant conditioning, giving students instant reinforcement and feedback by means of reinforcement through the interaction between teacher and students could help students to achieve the substantial behavior objectives desired in class (Gagne, 1985). Provided reinforcement mechanism is equipped in the discussion course of distance education, it could urge the students to give more attentions and responses to the class.

The purpose of this research is to explore the interaction mechanism of the discussion course in distance education from the perspective of affective domain teaching objectives. According to the learning theory of operant conditioning, reinforcement mechanism and procedure are designed to make up the disadvantage of the discussion course in distance education, and interaction mechanism implemented for conducting the experiment on discussion course. By investigating the discussion course designed in this research and its actual effect on achieving the attending and responding stages of the affective domain teaching goals, it is hoped that the discussion course of distance education could also give consideration to the affective domain teaching goals. This research, based on "the affective domain related to the academic course," is centered on investigating the effect of the teaching mechanism, not involving the activities the students engage in after class. It neither includes the effect of teaching materials nor the learning achievement. The affective domain teaching goals aimed to be achieved in this research are focused on the attending and responding stages, e.g., "Students are willing to participate in course discussion actively," and "Students can hold attending and enjoyable attitudes in participating in the course discussion." It takes longer time and further steps to urge the students to participate in the class. As this involves other factors, for instance, teaching materials and teaching methods, it is not investigated in this research.

Section 2 includes the discussion on the affective domain teaching goal and teaching strategies, and the way of interaction in most of the current distance education systems. In Section 3, an "instant reinforcement mechanism" for synchronous distance education is designed to help teachers to supervise the students in the discussion procedure. In Section 4, we evaluate the use of the "instant reinforcement mechanism" for synchronous distance education by designing and implementing actual discussion course. In Section 5, discussions on the evaluation results and the actual effects of the mechanism on achieving the attending and responding stage of affective domain teaching goal are made. Finally, the last section is the conclusions and suggestions for future researches.

Download English Version:

<https://daneshyari.com/en/article/349876>

Download Persian Version:

<https://daneshyari.com/article/349876>

[Daneshyari.com](https://daneshyari.com)