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Integration of Self-regulation Learning and Online Participation Learning Strategies for Improvement of Distance Learning Effectiveness

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Abstract

During processing online learning, study effectiveness is improved by strengthening the issues in term of regulation and interaction of learners. The strategies of self-regulation learning and online participation learning are well-popular to respectively address them. In this paper, a study architecture is established by skillfully combining these two strategies since none of them can solve challenges of regulation and interaction simultaneously. Experimental data is collected by in-depth interview with participants, thus prototyping an online learning system according to the analysis result derived from the collected data.

Key words: self-regulation learning, online learner participation, online learning

Introduction

Rapid development of technology and computer makes education of computer a serious change. By widely introducing wire- or wireless-network techniques, learning and teaching can be easily performed without the restriction of time and space. Nowadays, multimedia material and application are associated with education to prompt not only many and various scenarios, but also rich mutual message delivery.

Online learning is a kind of educational system with comprehensive learning interaction environment by variously making use of information technology. The system of online learning is helpful to remove the restriction of traditional study. Online learning is more flexible and mobility since instructional evaluation can be customized, as well as the study discussion can be performed face-to-face via constructing video and audio electronic classrooms. Teaching related activities can be provided with multi-dimensions works generated by learners. As a results, the development of teaching activities establishing online learning techniques obtains border future.

However, three main crucial concerns, raised due to the property of online learning, have to be addressed while using the system for teaching and learning[1] [2]. First, it is in the state of alienation because the while participants have no way to see each other throughout whole learning procedure. Second, people have insufficient interaction. The factors of corporate wisdom understanding are interacting with others who have enough knowledge and motivation. Finally, it is hard to communicate and express with others because of the limitations of online discussion.

Apart from decreasing study motivations, those three issues may also directly or indirectly lead to higher student drop-out rate. For instance, the phenomenon caused from the issues have been observed in the USA and the Europe [3][4][5]. Therefore, the self-learning and the interaction with others has to be fully considered and well integrated in order to obtain better performance while processing online learning.

The remaining paper is organized as follows. In chapter 2, the literatures in terms of related educational strategy including self-regulation learning strategy, online participation learning strategy will be briefly reviewed to realize the motivation of our design. Furthermore, online learning will also be mentioned since it is critical in this study. Then, methodology is depicted in chapter 3 to show our idea and solution addressing the current challenges of online learning. To demonstrate the result, experimental result and its corresponding analysis will be given in chapter 4. Finally, the conclusions and suggestions are given in chapter 5.

Literature Review

A. Self-regulation Learning Strategy

Self-regulation learning is a continuous adjustment during whole learning process and its factors of learning experience involves emotion, cognition ad behavior. Accordingly, the study achievement can be expected and obtained by doing so [6].

In the self-regulation learning environment, learners are able to set and control the resource which consists of cognition and metacognition, thus aiming the goal of learning. Under the strategy, learners take part in their study by handling works consists of plan of goal and activates, evaluation of whether success or not. Then, the items mentioned can be redeveloped and adjusted by learners as necessary [7].

Learners can do self-regulation by two ways: full self-exploration and guidance from capable person. By encouraging learners to use their intrinsic motivation, learning becomes a more active process. In other words, under the concept of non-supervising and non-intervention, learners can make use of intrinsic motivation, self-exploration and learning through a small part of stimulation or assistance.

B. Online Participation Learning Strategy

Online participation learning means that online learners maintain full relationship between learners to achieve the goal of improving online learning. Another consideration is that

learners should participate in various activities in the teaching process, especially focuses on sharing and discussing with other learners.

C. Distance Learning

Online learning is a kind of advanced distance learning technology, which contains the consideration of time and space factors in distance learning [8]. According to the definition from the US Department of Education, online learning is defined as a kind of learning performed partially or entirely via the support of Internet [9].

The main core of online learning system is learning management system (LMS). The remaining parts include learning content management system (LCMS), synchronous instruction system (SIS), streaming media system (SMS), and so on.

According to the architecture of online learning, three major roles are involved: administrator, instructor, and learner [10]. To clarify the level of affect, therefore, this study conducts in-depth interviews with both the instructor and the learner.

Methodology

In qualitative research, the researcher himself can be regarded as tools to deal with the process of research. Semi-structured in-depth interview is the major method applied in this study.

To collect complete data, digital tools such as notebook computers and voice recorders are operated. The consent of the relevant stakeholders associated to all records and equipment are properly obtained prior to performing the research. The verbatim draft of the interview has also been reviewed by the interviewee after the completion. That is a helpful way to avoid misunderstanding of both the text and semantics.

1. Interview Outline

According to the theory of literature review and the content of preliminary interviews, a formal interview outline is generated for researchers to obtain more structured information.

However, in reality, it is not easy to ask in accordance questions and receive full words of answer with the pre-defined order. Due to the development and adjustment of the interview situation, the main axis and meaning of the problem as far as possible is instead of.

(1) Will the learner pay attention to the results of the evaluation at each stage of the study, and strengthen the study for those with poor assessment results or lack of self-awareness?
(2) Is the online teaching platform helpful for self-defined learning goals and the progress of learning?
(3) Can the online learning platform help self-adjust the learning goals and the way they learn?
(4) Will the learner be mindful of the goals of each stage of the self-learning process? For the unfulfilled part of the monitoring, do you want to supervise your own learning attitude?
(5) The online learning platform can effectively assist learners in monitoring the various stages of self-adjustment learning and the operation of the strategy.
(6) The online learning platform can facilitate learners to maintain a good interaction with others in the process of learning.
(7) Is there any restriction or inconvenience in the use of the online learning platform? Will it create additional burdens for learning?
(8) Will learners use the online learning platform to discuss learning content and share learning experiences with others?

2. Researcher

Before conducting interviews, the researchers have fully understood the teaching objectives and content of the English basic courses through literature exploration, personal professionalism and practical teaching experience. The researcher has studied the "Quality Research" course and has participated in the research team led by the professor who is expert in related education domain. She has conducted many interviews and has practical experience in interview work and data analysis.

3. Research Object

This study is based on a college freshman who pursued a compulsory "English" course in a private technical college in Taiwan. The teachers' willingness is sought, and it is convenient to sample one teacher and 4 students in 2 classes to be in-depth interviews within this study.

4. Research Process

In-depth interviews are mainly divided into two stages.

The first stage deals with a series of unstructured interviews. Through the new findings of each interview, the research direction is continuously modified to make the research topics more focused and the research tools more stable and mature.

The second stage is based on semi-structured interviews. According to the results of the first stage of the interview, the interview outline is summarized in advance, and the research materials are systematically collected again. Finally, after all the interview data were collected, the preliminary results of the study are retrieved by performing qualitative data analysis.

Result Analysis

During the process of data analysis, the event phenomenon presented by the relevant data must be repeatedly verified to confirm data reliability. To guarantee consistent, this study follows the principles of cross check and triangulation of interview results for different subjects.

Through the results of in-depth interview analysis, we learned that self-regulation learning and online participation

learning strategies are in the event phenomenon of interviewees. The frequency of occurrence is listed in Table 2 as follows. The table also shows the importance level of each variable from the interviewee.

Table 1. Interview outline

Stage	Item	Date	Code of Interviewees	Time	Meeting Room
1	1	December 10, 2010	Instructor(A)	PM13:00 ~13:10	Administrative meeting room
	2	December 17, 2010	Students(B, C)	PM12:15 ~12:25	Meeting room
	3	December 24, 2010	Students(B, C)	PM12:25 ~12:40	Meeting room
	4	December 24, 2010	Instructor(A)	PM13:00 ~13:10	Administrative meeting room
2	5	December 31, 2010	Instructor(A)	PM13:00 ~13:10	Administrative meeting room
	6	December 31, 2010	Students(B, C)	PM12:25 ~12:45	Meeting room

Table. 2 The frequency of occurrence.

Variable event	Event	Interview
Self-regulation learning	Self-assessment and monitoring	5
	Plan and target setting	7
	Strategy implementation and monitoring	10
	Monitoring of policy results	10
	Systematic adjustment	5
Online participation learning	Maintenance of community relations	12
	Enrichment of learning content	11
	Learning participation	14
	Combination of active content	6

Conclusions and Suggestions

The qualitative data analysis understands that the elements that the instructor believes must be combined with the self-regulation learning and online participation learning strategies include:

(1). Teachers and students agree that LMS must have the ability to set their own learning progress, monitoring, and assessing according to individual needs.

(2). Teachers believe that the possible problems in the design of the system, including film fluency, lack of bandwidth, quality, etc., must be considered.

(3). Teachers and students agree that the user-friendly interface of the system must be considered. Another alternative is for teachers to explain in a physical face-to-face course. Students may be confused when they are unfamiliar or infrequently used. This type of problem may affect the frequency and willingness of students.

(4). Teachers and students believe that learning assessments should be formative, and it is better to cooperate with each small unit for immediate feedback. Students believe that they will care about the results of the assessment and gain an additional sense of accomplishment beyond the assessment itself. Teachers believe that the retention and analysis of the results of each learning assessment can help to observe the attitudes and achievements of the learners.

5. The teacher believes that the system can be regarded as a teaching assistance that helps more practice for the student. Pre-class preparation, physical face-to-face courses, and repeated exercises after class.

6. Students tend to be positive about being able to interact with others online, and they can communicate with their peers immediately, whether it is outside the curriculum or related to the course. However, although the teachers agree that the students can communicate with each other, they do not agree with the students to discuss topics that are not related to the course.

7. Interviewed teachers and academics believe that the diversity of tools can make teaching more attractive, permitting learners to learn actively and happier.

As a result, this online learning system is expected to be able to combine learning with learners to self-adjust and learn to interact with their peers. The modules designed in the system are briefly illustrated in Figure 1.

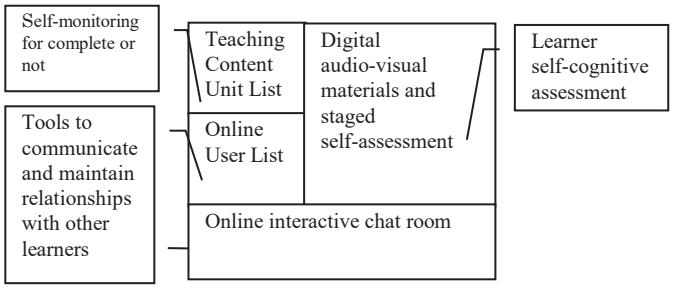

Figure 1. The modules of proposed online learning system.

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