STIMULATING ELEARNING STUDENT VIA EXTRA POINTS REWARDING SYSTEM

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ABSTRACT

A set of different stimulation strategies based on the ARCS model have been adopted to motivate students enrolled in a business undergraduate computer literacy class over two years of four consecutive semesters with a total of research subjects close to six thousand students (fifteen hundred students per semester). A descriptive discussion and/or statistical hypothesis testing for the learning outcome and effectiveness of the set of different strategies are evaluated.

RESEARCH DESCRITON

The affordable and advanced information technology has transformed the old CAI (Computer Assisted Instruction) in the 70's to its new frontier named online learning (eLearning) via the information highway starting in the late 90's. This eLearning has the powerful capability to reach a mass number of students 24 hours every day at anywhere in the universe as long as there is an Internet connection and appropriate courseware. The higher education institute has then quickly embraced this eLearning as the golden and low cost teaching/learning method in addition to its traditional face-to-face classroom learning curriculum whenever it is appropriate.

Meanwhile, the eLearning outcomes achieved by the student and the associated critical success factors for the eLearning effectiveness has become the popular research subjects. Numerous educators and researchers have found that the outcomes are mainly depend on several elements including the student's traits (gender, age and capability), background (experience, knowledge and ethnicity), learning style preferences (guidance, independent, reading, listening, and exploring) and other accommodation constraints (distance, time, employment and family responsibility). It is also suggested that the promoting the online interaction and discussion can boost the eLearning effectiveness. The general conclusion of the two major eLearning drawbacks found are the low student learning motivation and the high dropout rate.

This study attempts to seek some motivation strategies based on the ARCS model [1] that might be able to stimulate the pro-active learning behavior by students and to ultimately overcome some of the two major drawbacks in the isolated eLearning environment. The ARCS model with four elements as attention (A), relevance (R), confidence (C) and satisfaction (S) has been proposed to promote the student's learning motivation for every learning environment. The attention focuses on "the motivation of putting in enough time and effort to acquire the knowledge". The relevance centers on "the motivation of viewing knowledge presentation as an important value for the learning outcome". The confidence emphasizes "the motivation of fabricating the affection to complete the learning process". The satisfaction stresses "the motivation of reaching the desired learning outcome". The student's value assessment of a given motivation strategy most likely governs the student's learning effort. Based on the concepts defined in the ARCS model, the measurement of the student's reaction to a motivation

strategy can be interpreted as "how does it help the student to receive a passing or better grade in addition to learn the skill or knowledge"

Generally, studying the lesson and taking the practice exam are the two main approaches to understand a subject and/or to pass the class exam. It is reasonable to assume that most students would view "getting some extra points via finishing the lesson and the practice exam" as a valuable mean to prepare for the exam. Therefore, students will be more willingly to spend time and effort to do so for not only acquiring the knowledge but also obtaining a satisfactory class grade. On the other side, it is also logical for an instructor to implement ARCS model via a set of 10 extra points rewarding systems by completing the lesson and/or practice exam as the motivation strategies for students. These notions prompt the center of this research to investigate the stimulation impacts of these extra points rewarding system as the motivation strategies on the students' studying behaviors and the learning outcomes.

The research covered two years of four consecutive semesters with a total of research subjects close to six thousand students (fifteen hundred students per semester) who were enrolled in a business undergraduate eLearning computer literacy class. In the first semester, there was no rewarding system so its data could be used as the base to assess the value of the other three learning motivation strategies perceived by the student. The following semester, the rewarding system was '10 extra points if a student punctually completed the entire online lesson'. The third semester, the rewarding system changed to '5 extra points for completing the entire online lesson and another 5 extra points for getting 70% correction rate of the practice exam'. Last, the rewarding system of '10 extra points for getting 70% correction rate of the practice exam' was employed. The data collected to measure the student's learning behaviors under different rewarding system were average lesson completion rate and average practice exam correction rate. The average final exam score, passing rate, retention rate and drop rate were calculated to evaluate the learning outcomes of corresponding rewarding system.

A descriptive discussion and/or statistical hypothesis testing are conducted for the learning outcome and effectiveness of each independent implementation to assess (1) the learning effectiveness and outcome generated by various learning motivation strategy; (2) the most useful learning motivation strategy to facilitate the learning participation (online lesson completion rate and/or the online practice exam correction rate) perceived by students; and (3) the most promising learning motivation strategy to boost the final exam score, to increase the retention rate and decrease the drop rate for the instructor. Finally, the educator and administrator can review and utilize these findings to form some appropriate educational curriculum for teaching and improving those less self-motivated and self-disciplined students to achieve their learning goal in the eLearning environment.

REFERENCE

[1] Keller, J. Development and use of the arcs model of instruction design. *Journal of Instructional Development*, 1987, 10 (3), 2-10.