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The Exploration of Improving Efficiency of Synchronous Discussion: e-Case Live Show

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Abstract: In traditional discussion style, the presentation and discussion of the case is usually led by the team leader, but there are still some members who do not actively participate in the discussion, causing the atmosphere of participation to become disjointed. In order to encourage students actively interactive with instructor and peers, the purpose of the study is to propose an advanced synchronous learning style, e-Case Live Show, which integrates live webcast technique with hosting by turns to support learners' case-based learning. 58 college students participated in this study. From the research results, we found that students from EG showed significantly higher average scores on Perceived Learning Autonomy and Perceived Interactivity than CG. The e-Case Live Show developed by this study to support case-based learning is indeed better than the traditional TV talk show discussion format for giving learners more autonomy and interactive learning.

Keywords: Case-based learning, synchronous discussion, learning autonomy, learning interactivity

1. Introduction

In the past ten years, Information and Communication Technology (ICT) has developed rapidly, reducing the distance of communication around the world. Learning no longer has to be fixed in time and place, but rather can be flexible. With the age of Web 2.0, social networking services, such as Facebook and YouTube make social interaction and sharing more and more frequent (Hughes, Rowe, Batey, & Lee, 2012). In Taiwan, many professors in business schools conduct the case-based learning in parts of their management courses in order to let students experience the conditions described in cases. Real business operating conditions can be even simulated through various software. One such program, for example, involves students taking a course on production management, in which they can discuss problems faced by enterprises within the context of a simulated supply chain system through case studies, and go through business operations, such as purchase of materials, sale of products, and inventory (Liu & Young, 2006). This software simulation practice will improve students' learning efficiency. The objective is to go beyond traditional teaching methods of teachers giving their courses to students from a podium.

According to Tian & Hong's (2003) research, students in Taiwan are less active in asking questions than those in United States and Europe. They also observe the following phenomena in Taiwan's college students in class of case-base discussion: (1) In traditional teaching method, teachers stand on the podiums to impart knowledge and students sit down to accept it. The problem is that students usually just sit there and do not ask questions or speak up; (2) In traditional discussion style, the presentation and discussion of the case is usually led by the team leader, but there are still some members who do not actively participate in the discussion, causing the atmosphere of participation to become disjointed; (3) Unless in group discussion, students prefer not to interact very often. They usually learn related knowledge

individually and tend to become lone learners; (4) Students can learn and finish their works through group discussion and increase their interaction. However, it is likely that each student only cares about his or her work, integrating with the knowledge from others is difficult. In order to encourage students actively interactive with instructor and peers, the purpose of the study is to propose an advanced synchronous learning style, e-Case Live Show, which integrates live webcast technique with hosting by turns to support learners' case-based learning. Therefore, we also want to explore whether the efficiency of synchronous discussion style like e-Case Live Show had better than traditional discussion style.

2. The Call-in programs and learning

The TV talk shows originated in the United States in the 1930s from political talk shows and it also known as political call-in programs. The reason why the political call-in program is broadly popular to this day is mainly because it offers citizens and participants in the program with opportunity to engage in two-way communication and express personal opinions (McLeod, Dietram, & Moy, 1999). The call-in programs can raise the participation of discussions, leading to higher ratings. It is a kind of learning when people observe others' behavior or thought (Horowitz, 1993). Bandura (1986) has proposed observed learning and imitation in a social learning theory. That is, observed learning indicates that an individual, as an onlooker, observes others' behavior in a process of obtaining learning. Imitation, on the other hand, is the process of learning other individuals' or groups' behavior in observed learning (Chang, 1996). Bandura (1986) argues that the most important concept of social learning theory is vicarious learning, which means people learning and understanding what behaviors are shown in certain conditions by observing others' behaviors and outcomes.

3. The Case-based Learning Method

The case-based learning method originated from Harvard University in 1890, and has been practiced in the business courses at the Harvard Business School for a long time (Barnes, Christensen, & Hansen, 1994). This method is a unique type of teaching method, in which, as Shulman (1992) points out, educators use cases to familiarize students with the conditions under which cases happen. Through simulating the conditions and discussing possible decisions, students try to develop their capability to solve problems.

The case-based method, considered an effective way to combine theory and practice in business education (Harrington, 1995; Knirk, 1991), focuses on the interaction among peers and the solution from brainstorming (Levin, 1995). There are generally two arrangements in the case-based method, prearranged groups and *ad hoc* groups (Wassermann, 1994). The former involves a teacher gathering students with different characters in a group, such as talkers and non-talkers. The latter involves students grouping to work with others they are familiar with. Although the case-based method is a self-learning one in which students actively participate in discussion, learners still have to interact and cooperate with others in order to achieve better learning effects (Blumenthal, 1991).

4. e-Case Live Show

The synchronous discussion of *e-Case Live Show* is based on live webcast technique to conduct a videoconferencing. We adopt *i-Share* technique, a synchronous teaching module based on

multimedia collaboration system developed by SUNNET Corporation (http://www.sun.net.tw). This module provides multi-player audio and video instant communication like a well-known synchronous discussion tool JoinNet (Chen, Ko, Kinshuk, & Lin, 2005; Chen & Ko, 2010) to offer online face-to-face teaching and learning for instructors and learners (as Figure 1).

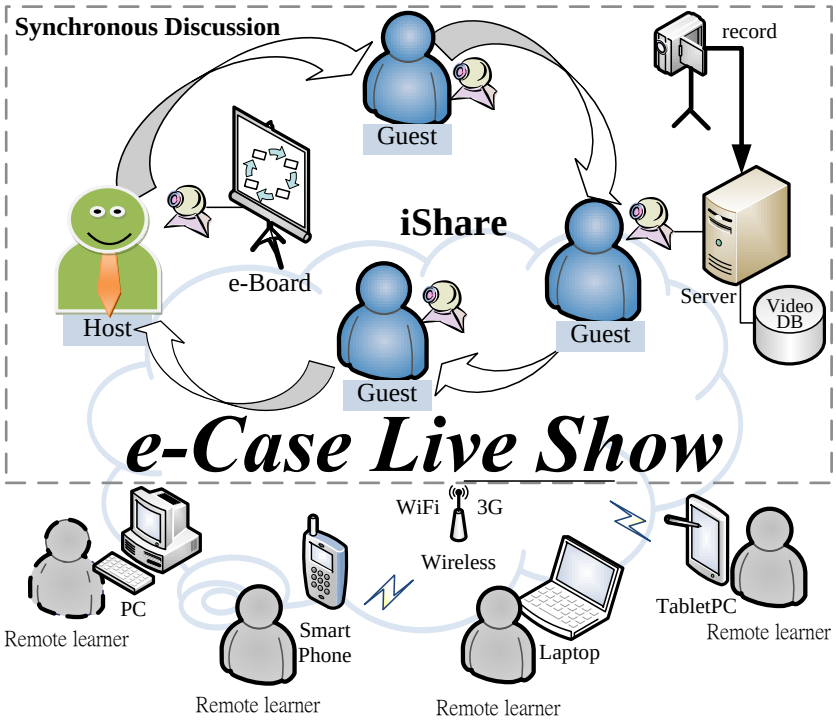

Figure 1. e-Case Live Show synchronous learning environment

5. Methodology

In order to evaluate students' interactive learning efficiency for the e-Case Live Show, the five-point Likert scale and independent sample *t-test* was adopted in this quasi-experiment. The participants were divided into an experiment group (EG) and a control group (CG). Thirty-six students volunteered to enter the EG group; 22 students were in the CG group. For the EG group, each team member had to play the role of leader by turns to host and discuss the content of the case study he/she was responsible for. For the CG group, the format was like a traditional TV talk show in which one leader hosted and discussed the content of the case study with guests. For both EG or CG groups, all of the students enrolled in the class called "Theory of Management and Case Study", and the professor carried out a blended form of instruction in the course for one semester. The section on management theory (2/3) was taught face-to-face by the professor; the case study (1/3) was carried out through the e-Case Live Show. This was a learner-centered and discussion-based course. Students had to look for partners, and each group consisted of 3 to 4 members. One group was responsible for one case study from the textbook. To prevent the situation where few team members speak or participate, each EG member took turns to be the host during the course of the one-hour online discussion; students in remote areas could also call in to participate in interactive discussions with the host.

6. Findings

From the research results, we found that students from the EG group showed significantly higher average scores on Perceived Learning Autonomy ($M_{EG} = 4.22 > M_{CG} = 3.64$, $t = 2.41$, $Sig = .019$ *) and Perceived Interactivity ($M_{EG} = 4.42 > M_{CG} = 3.86$, $t = 2.73$, $Sig = .008$ **) than the CG group. This suggests that the students from the EG group experienced much more autonomous and interactive learning in the whole process of case-based learning as compared to the CG group. In terms of Perceived Coordination ($M_{EG} = 3.69 < M_{CG} = 4.23$, $t = -2.01$, $Sig = .049$ *), we found that the EG students showed significantly lower average scores than CG ones. This indicates that because students from the EG group had to play a host role by turns, their coordination performance was not as efficient as the CG host. On the other hand, there was no significant difference on Ease of Use ($M_{EG} = 4.53 > M_{CG} = 4.18$, $t = 2.73$, $Sig = .147$) between the two groups.

7. Conclusions

The e-Case Live Show described in this study to support case-based learning clearly outperforms the traditional TV talk show discussion format for giving learners more autonomy and opportunities for interactive learning. Studies in the future could be focused on how to provide support for the students with poor oral communication skills when they are hosting the discussion of a case study, such as by encouraging assistance from their peers to increase their perceived coordination, so that these students can better express themselves.

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