

Design of an Interactive Online Learning Environment

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KEY IMPLICATIONS

- An interactive online learning environment (IOLE) must be designed from pedagogical, social, and technical perspectives.
- A blended synchronous learning approach will enable online students to simultaneously participate in class activities together with classroom students.
- The instructor, online students, and classroom students may face certain challenges when they are in such an environment.

BACKGROUND

Classroom instruction has unique features such as rich social cues, immediate feedback and socialization. However, adult learners may have to be absent from regular classes because of social or family commitments (White, Ramirez, Smith, & Plonowski, 2010). To allow the absent students to continue attending classes like the others, institutions often simply upload learning materials to learning management systems and let the students download and learn asynchronously by themselves. This method may work well for a short period but tends to be less effective if the situation persists. Particularly if the learning management systems or the learning materials are not interactive, students often feel bored and less engaged. It could be meaningful if students can find a way to enjoy the convenience of asynchronous online learning while they are away and enjoy the benefits of synchronous classroom instruction at the same time.

FOCUS OF STUDY

This study aimed to create an IOLE which includes an asynchronous online learning platform (a course website) and a real-time course delivery space (via video conferencing) for online students to join classroom learning activities at remote sites. This study investigates the design and implementation of the learning environment and students' learning experiences and perceptions.

KEY FINDINGS

1. Online students could follow and concentrate on the presentation when they took part in the blended learning sessions. Also, participating in the blended learning sessions was an exciting learning experience for them and they learned how to implement a lesson in a similar way in the future.
2. The online students felt that they could communicate with the instructor and with the classmates though they encountered certain difficulties occasionally. They could also collaborate with the members during group activities. Encouragingly, the online students did not feel detached from the class. Also, IOLE was easy to use and the students did not meet critical technical problems.
3. The students also had a strong preference for taking lessons online. They expected to have more blended learning sessions and would like to attend the sessions from homes. Also, they hoped more courses to be conducted in this approach.

SIGNIFICANCE OF FINDINGS

This study has implications for practice. The instructor needed to update the course website regularly, and had to intentionally remind himself of inviting online students to participate. On the other hand, spending too much time solving technical problems caused a waste of significant time for the classroom students and resulted in students feeling neglected. The instructor had to adapt to this new environment (Wang, Quek, & Hu, 2017).

This study also has implications for policy. To ensure educational continuity in certain unexpected situations, schools may consider using the blended synchronous learning approach supported by real-time video conferencing.

POPULATION

In each semester, a class of Master's students, who are full-time school teachers taking the course of Technologies as Cognitive Tools, would use the IOLE. The number of participants is about 20 for each semester.

RESEARCH DESIGN

This study followed the educational design research approach and progressed through three rounds of prototyping. Each round focused on design, implementation, and evaluation.

REFERENCES

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