A Study of Blended Problem-based Instruction for Korean University Students

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Abstract

Problem-based instruction is for learners to acquire knowledge and critical thinking skills from problem solving within a cooperative environment. This study aims to study how blended problem-based instruction influences on academic achievement of an on and off-line blended English course for Korean university students. The subjects were 150 university students taking blended English classes. Problem-based instructions were given and students' academic achievement and their problem solving abilities were evaluated. The data were analyzed by SPSSWIN(ver10). It showed the means of general academic achievement of problem-based instruction classes including on-line class, cooperative activities, and correlation among those three factors. The results show that students are generally satisfied with the classes with problem-based instruction. It is noted that blended problem-based instruction stimulates students to judge and solve the given unstructured problems and is effective for students' positive learning attitude and academic achievement.

Keywords

Blended problem-based instruction, academic achievement, positive learning attitude

1   Introduction

This paper is to examine positive effects of problem solving with cooperative learning on group activities which happens in a blended problem-based instruction circumstance complied with the learning principles of constructivism. The founder of problem-based instruction, Barrow's model is a grounded theory for the study. There were 4 steps based on Barrow's model: introduction, the stage of posing problems, the stage of post-problems and finally, generalization of knowledge they learned, making graphs, lists, decision, principles, and peer correction and feedback. To see whether it has the intended effects on students, they study answers the following questions: 1) Do the students get any academic achievement in blended PBL-based instruction studying in general? 2) Do the students get any academic achievement in on-line PBL-based instruction studying compared with off-line one? 3) Is there any specific correlation between on- and off-line blended PBL-based instruction studying?

2   Data Analysis and Study-method

The process of blended problem-based instruction involves identifying the problem, gathering data, developing and implementing plan, monitoring and evaluating the plan and determining next steps. The study is framed by Barrow's model.

The subjects were 150 students taking 3-hour-course of blended English course as an elective in 2013. A student questionnaire was administered to survey their ideas and notions using standardized questionnaire. The research design included three factors: 1) the academic achievement of problem-based instruction in general, 2) the academic achievement of on-line problem-based instruction, 3) the correlation between on- and off-line problem-based instruction. SPSSWIN(ver10) was used for data analysis. It showed the mean of satisfactory levels of problem based instruction in general, on-line problem based instruction, and the correlation analysis was done to find out the relevance of the independence variation.

3   Results

The results of the academic achievement of PBL-based instruction in general shows all items of 13 were significant after the course. They included satisfaction in general, motivation, learning a lot, academic achievement, participation, peer participation, using maximum

abilities, enough feedback, satisfactory of response, clear guideline, understandable activities, effectiveness, and successful results.

The results show that students used their maximum abilities revealing the highest mean of 4.52 with overall positive feedback.

The effectiveness in general shows the highest mean, 4.0 and the effectiveness of on-line

4   Conclusion

The study's objectives were to show students' satisfaction of on- and off-line blended PBL-based instruction. The results show that the satisfaction of on-line and its problem solving ability is also very effective with off-line and its problem solving ability in blended PBL-based instruction studying classes. The problems which students solved were mainly in the form of their cooperative group work and as a result, it made students more systematic to organize their thoughts and ideas whether the class is on-line or off-line. However, students should follow the planned process of activities, roles and group work (Barrow, 2000). To do the group work properly, they should cooperate such as choosing the title, gathering ideas, organizing the ideas, and exploring to solve problems. As Oliver(2009) stated, e-learning is truly effective but it should be careful to achieve overall success of the class design. Specific class design is also requirement needed for the blended problem-based learning instruction. Moreover, there should be the key factors which are the teacher's guideline, the creative teaching methods, teamwork, and online resources can affect learner's performance and effects. The blended problem-based instruction not only can make up the shortcomings of the traditional face-to-face instruction, but also enhance the learner's skills in dependent learning, problem solving and communication.

The current study is limited in its generalization as the sample of 150 subjects was collected in only one institution. However, its outcomes give some insight into the implications to increase the methodology in effective English teaching.

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References

Albion, P., & Gibson, I., (1998). *Designing Multimedia Using Problem Based Learning:* http://usq.edu.au/users/albion/papers/asc ilite98.html.

Barrow, H. (1994). *Practice-based Learning II*. Southern Illinois University School of Medicine.

_____. (2000). *Problem Based Learning Applied to Medical Education*, IL: Board of Trustees of Southern Illinois University.

Bridges, *E.M. Problem-based learning for administrators*. Oregon: ERIC.

Bonk, C.J., Wisher, R.A., & Lee, J., (2004). Moderating learner centered e-learning: Problems and solution, benefits and implication. In TS Robert(Ed.), *Online collaborative learning: Theory and practice* (pp. 54-85). Hershey P.A.: Information Science Publishing.

Brooks, J.G., & Brooks, M.G., (1993*). The Case of Constructivism Classrooms*. Alexandria, V.A.:Association for Supervision &Curriculum Development.

Chang, Kyung Won, (2006). An Analysis of the Characteristics of Learners' Activities in Online PBL, *Education Information Media,* vol. 12, no.3.

Hua-Yun Hsieh, (2013). Applying Blended Learning with Creative Project-based Learning, Turkish Online Journal of Science & Technology, vol.3, no.2.

Kang, In Ae, (1998). *Problem-based learning – One More Constructivism Teaching and Learning Model*, Seoul Science Press.

Kwon, Byung Soo, (2010). *Effects of Blended Learning-based PBL Solving Performance and Satisfaction*. Daegu Education University.

Oliver, L., (2009). Developing an International Blended Learning Program: Cultural Lessons Learned. *Association for the Advancement of Computing in Education,* vol.1.

Park, Jong Hwa, (2012). A Study on the Influencing Factors of Learners' Satisfaction in Cyber Home Problem-based Learning is Study System 2.0. *Journal of the Korean Association of Information Education*, vol.16, no.4.

Vygotsky, L.S., (1978). *Mind in Society: The development of higher psychological processes,* Cambridge, M.A.: Harvard University Press.