

Unleash Students' Motivation with Blended Knowledge Transfer Instructional Model

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Abstract. *The effect of instructional model on student motivation has been examined with variety of studies. This pre experimental research aim to determine the influence of Blended Knowledge Transfer instructional model on students' motivation. This research conducted in cell biology courses in the academic year 2015/2016 with 31 students as participants. Data was collected by questionnaire about students' motivation which is divided into four indicators: attention, relevance, confidence, and satisfaction. Collected data was analyzed with descriptive and inferential statistic. The result shows that there is influence of Blended Knowledge Transfer instructional model on students' motivation.*

Keywords: *Students' motivation, blended knowledge transfer, instructional model*

INTRODUCTION

Blended Knowledge Transfer was an instructional model as the result of research and development conducted by Adnan (2015). The instructional model developed was instructional model rests on seven pillars constructivist paradigm. The basic idea is to maximize the students' learning environment by combining the various components. The pattern of incorporation developed was doing the learning conventional by utilizing the devices of ICT in the form of PowerPoint, animation, video, and problems of interactive learning are supported by student worksheet is designed based on the paradigm of constructivist and worked offline and supported by students' books and books teacher offline. While online learning conducted by utilizing the learning management system (LMS) through the Moodle application with a number of interactive tasks such as quizzes, tasks, wiki, forum, glossary and chat. In this way, will create a conducive learning environment which is expected to impact student learning motivation.

Stages of Blended Knowledge Transfer consists of six phases, namely: (1) Build a learning community, (2) Exploration, (3) Elaboration, (4) Confirmation, (5) Synthesis (6) Evaluation. Each phase is a sequence of activities performed by lecturer and students during the learning process. The six phases are as macro syntax because it provides the learning stages for several meetings were conducted with a blended learning approach, namely the incorporation into face to face with the online learning system implemented with a block of time.

Education is essentially the process of inheritance and transmission of knowledge or knowledge transfer. Therefore, Blended Knowledge Transfer can be an option for educators and learners in learning activities. In this process, the delivery of science is not only a direct face to face activity but expanded into activities in cyberspace. This has an impact on the learning process is not only limited in space and time so that education can take place becomes more leverage.

The use of technology in Blended Knowledge Transfer become a factor that is an added value to improve the effectiveness of learning activities. "Effective managing and sharing of knowledge has the power to improve individual's lives and society" (Noor and Salim, 2011). Result of research from Perez-Araos, et al. (2007) the development of virtual knowledge sharing networks (KSNs) can be a means to share knowledge for the individual in

the group and can even improve the ability and knowledge of each individual. Various results of this research support for the integration of online learning in the educational process.

Blended Knowledge Transfer can be a viable alternative in the learning process in educational institutions. The learning process can be done offline and online integrated and mutually support each other. Offline activities through learning in the classroom will provide an opportunity for learners to interact directly with other learners or educators. This activity can also be a means of exchanging ideas or application of the knowledge they have. Online activity serves as enrichment, exercises, and advanced application of the knowledge gained from face-to-face learning in the classroom. This study aims to determine the effect of the application of Blended Knowledge Transfer on the motivation of the students participating in the course of Cell Biology 2015/2016 academic year.

METHOD

This research is a quasi-experimental with pre experimental design types of One - group pretest-posttest design. Subjects were students participating in the course of Cell Biology 2015/2016 academic year consisting of one class student population of 31 people. Learning to do as much as 8 weeks following the syntax of Blended Knowledge Transfer of six phases, namely: (1) Build a learning community, (2) exploration, (3) elaboration, (4) confirmation, (5) synthesis (6) evaluation. Each phase is a sequence of activities performed by lecturer and students during the learning process. For several meetings conducted with a blended learning approach, means merging the offline learning with online learning system conducted with a block of time.

Data collection techniques using non-test. Non-test technique using a questionnaire aimed to know the motivation of the students before and after learning the Blended Knowledge Transfer models. The questionnaire consists of 52 statements that cover the four indicators of motivation is attention, relevance, confidence and satisfaction. The scale used is a five-point Likert scale. Data were analyzed using descriptive and inferential analysis. Before conducting inferential analysis, then tested the prerequisite that normality and homogeneity test. If the data obtained otherwise normal and homogeneous then followed by paired t test. Conversely, if after testing the obtained distribution data is not normal or/and not homogeneous then continued with non-parametric statistical that is rank tests marked Wilcoxon.

RESULTS AND DISCUSSION

The results of the different learning process that is applied to both classes turned out to show different data. This can be observed in Table 1.

Table 1. Descriptive Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
Before BKT	31	2.66	3.70	3.13	.28250
AfterBKT	31	3.18	4.64	4.02	.35061
Valid N (listwise)	31				

Based on Table 1, shown average scores before and after the learning model Blended Knowledge Transfer increased by 0.89 points. This means that before the study, the average student scoring 3 on a questionnaire given motivation and after the implementation of the Blended Knowledge Transfer, the average student scoring 4.

Before conducting inferential test to examine the hypothesis of the study, then tested the prerequisite that normality test homogeneity test. The results obtained showed that the data were normally distributed and homogeneous. The next test inferential statistical parametric paired t test. The test results can be observed in Table 2.

Table 2. Test Results inferential

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Before_BKT - After_BKT	-.89677	.38193	.06860	-1.03687	-.75668	-13.073	30	.000

Inferential test results obtained from the data that is the significance of 0.000 which is less than the standard is 0.05. These results indicate that there are differences in the motivation of students before and after application of Knowledge Transfer Blended models or in other words there are significant Blended Knowledge Transfer models to motivate student learning.

The success of the Blended Knowledge Transfer learning model to improve student learning motivation caused by the syntax of this model is able to develop the students' wishes. The first phase of Blended Knowledge Transfer is to build a learning community. This phase is done with face to face (Week I lecture), consists of giving an explanation of the learning process to be carried out, delivery logistics of learning, the formation of discussion groups on learning face to face and online, and delivery of the topics of learning to one block of time. It also conducted the delivery of lectures and student registration purposes in the e-learning portal that has been prepared.

Usher, et al. (2012) revealed that there are four dimensions of motivation, namely competence, control/autonomy, interest/value, and relatedness. The dimensions are emphasized *seterkaitan* with phase build learning communities are interest/value. "The student has some interest in the task or sees the value of completing it". One of the components of the first phase of Blended Knowledge Transfer is an explanation of the learning process to be carried out. It will provide an overview to the students about the material they will learn in the course of Cell Biology along with a wide range of activities which they will carry during the learning process. This factor which will eventually be able to motivate them to learn.

The formation of learning communities is also in accordance with the results of research Yahaya, et al. (2010) that *"there was a high percentage (58.6%) of students agreed that they understood the mathematic content easily when studied together with their peer-group. Therefore, study group and peers collaboration should be encouraged in class to motivate students in learning mathematic"*. These results can be attributed to the activities of the formation of study groups in the offline or online Blended Knowledge Transfer will be able to enhance student motivation in learning.

The second stage of Blended Knowledge Transfer is an exploration. This phase is done by online (Weeks 1 and 2). Consisting of: (1) involve students seeking comprehensive information and within about a topic/theme of the material to be studied by applying the principles of constructivist learning; (2) using a variety of learning approaches, instructional media, and other learning resources; (3) to facilitate the interaction between students and between students and lecturers, the environment, and other learning resources; and (4) engage students actively in any learning activities.

One of the factors that influence the motivation of learners are the flexibility and interactive learning. *"It is important to focus on the material to be learned and on how the students interact with it"* (Williams dan Williams, 2011). Awarding students freedom to explore the material in accordance with the instructions given will make them the ways and types of resources accordingly. It will be able to increase the motivation for every student will feel flexible about the task.

The next phase in the Blended Knowledge Transfer is an elaboration. This phase is done by online (Week 3) Consisting of: (1) familiarize students read and write a variety of specific tasks through meaningful; (2) to facilitate students through giving tasks, discussions, and others to come up with new ideas both orally and in writing; (3) provide an opportunity to think, analyze, solve problems, and act without fear; (4) to facilitate students in a cooperative and collaborative learning; (5) to facilitate students in a healthy competition to improve learning achievement; (6) to facilitate students to make a report balk exploration conducted verbally and in writing, individually or in groups; (7) to facilitate students to present variations; individual and group work; (8) to facilitate students do exhibitions, tournaments, festivals, as well as products produced; and (9) to facilitate students engage in activities that foster pride and self-confidence of students.

"An interactive classroom and effective management practices were most cherishing to 92% of the interviewees" (Sogunro, 2015). Blended elaboration activities in Blended Knowledge Transfer will make the grade to be interactive because besides working individually, students will also have the opportunity to work in groups and spread the ideas they have. Various variations of these activities could ultimately lead to their motivation to learn more.

The fourth phase of the Knowledge Transfer Blended is a confirmatory phase. This phase is done by face to face: (Week 4, 5 and 6). Consisting of: (1) To facilitate the students to make presentations; (2) provide positive feedback and reinforcement in the form of oral, written, signed, and gifts to the success of learners; (3) confirm the results of exploration and elaboration of students through a variety of sources; (4) to facilitate students to gain experience to reflect what they have learned; (5) to facilitate students to gain meaningful experience in achieving the basic competencies; (6) serves as a resource and facilitator in answering questions from the students who face difficulties, by using standardized language and correct; (7) to help solve the problem; (8) provides a reference so that learners

can check provide information for further exploration; (9) to motivate students who are less or not participated actively.

According to Sogunro (2015) that the provision of follow-up (feedback) will motivate adult learners. Something similar is disclosed by Wright (2012) which states that the award and verbal responses to the tasks and activities of students will increase their motivation. This is consistent with the activities in the confirmatory phase. The activities at this stage emphasizes on providing feedback and reflection on student activities that have been done in the previous phases. On this confirmation phase equate student opinions with friends and with the lecturer of the course Biology Sel.

The fifth step in Blended Knowledge Transfer is a synthesis phase (Week 6). The activities in this phase consists of: (1) facilitating the confirmation results reflect student learning (improvement of the presentations); and (2) to facilitate students to produce more complex scientific work by utilizing a variety of learning resources (wiki, forum). Giving the task which have difficulty level increased and more complex that will boost student motivation (Margolis and McCabe, 2006; Adams, 1998; in Rehman and Haider, 2013). The existence of more complex tasks will make students read and prepare more material and spacious. The combination of award given by lecturers and challenges through the heavier duty will make students become more motivated.

The last activity in Blended Knowledge Transfer is an evaluation (weeks 7 and 8). This phase is done online. Consisting of: (1) Working on assignments and quizzes; (2) Evaluation (posttest) online; and (3) awarding. “*the use of external evaluation in the classroom may impact students’ motivation*” (Lai, 2011). Work assignments and evaluations related to the determination of final grades and ratings will make the students excited and will further increase their motivation, both in tasks and evaluation or in learning.

CONCLUSION

Application of Blended Knowledge Transfer learning model in the course of Cell Biology 2015/2016 academic year can improve students’ motivation.

REFERENCES

1. Noor, N.M. dan Salim, J. 2011. Factors Influencing Employee Knowledge Sharing Capabilities in Electronic Government Agencies in Malaysia. *International Journal of Computer Science Issues*. Vol. 8, Issue 4, No 2. Hal. 106 – 114.
2. Perez-Araos, A., Barber, K.D., Munive-Hernandez, J.E., dan Eldridge, S. 2007. Designing a Knowledge Management Tool to Support Knowledge Sharing Networks. *Journal of Manufacturing Technology Management*. Vol. 18. No. 2. Hal. 153 – 168.
3. Sogunro, O.A. 2015. Motivating Factors for Adult Learners in Higher Education. *International Journal of Higher Education*. Vol. 4, No. 1, Hal. 22-37.
4. Usher, A., Kober, N., Jennings, J., Rentner, D.S. 2012. *Student Motivation-An Overlooked Piece of School Reform*. Washington D.C: Center on Education Policy The George Washington University.
5. Williams, K.C dan Williams, C.C. 2011. *Five Key Ingredients for Improving Student Motivation*. Online. <http://www.aabri.com/manuscripts/11834.pdf>, diakses 22 Agustus 2016.
6. Wright, J. 2012. *Teacher Praise: An Efficient Tool to Motivate Students*. Online. <http://www.interventioncentral.org/behavioral-interventions/motivation/teacher-praise-efficient-tool-motivate-students>, diakses 22 Agustus 2018.
7. Yahaya, N., Yahaya, A., Ramli, J., Hashim, S., Zakariya, Z. 2010. The Effects of Extrinsic Motivational Factors in Learning among Students in Secondary School in Negeri Sembilan. *International Journal of Psychological Studies*. Vol. 2, No. 1, Hal. 128-136.