

# Blended Learning pedagogical practices for improving students' learning autonomy and academic results in learning

Prácticas pedagógicas de aprendizaje mixto para mejorar la autonomía de aprendizaje de los alumnos y los resultados académicos en el aprendizaje

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## ABSTRACT

This study investigated whether blended learning was more effective in inculcating learner autonomy and improving academic results among students when compared to conventional learning practices. The study used a quasi-experimental design. The participants of the study consisted of 78 lower secondary students. The study carried out two different teaching methods; a blended learning classroom for the treatment group, meanwhile a conventional learning classroom for the control group. There were 40 pupils in the treatment group and 38 pupils in the control group. Post-test analysis was carried out to understand the effectiveness of blended learning towards students' academic achievement. A set of questionnaire was developed to identify learner autonomy after the treatment. The results indicated that there was a significant increase in academic achievement based on the pre and post-test analyses. The study also found that blended learning pedagogical practices could improve students' learning autonomy in learning.

**Keywords:** Blended learning; teaching English as a Second Language; Short Story; learner autonomy.

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## RESUMEN

Este estudio investigó si el aprendizaje combinado era más efectivo para inculcar la autonomía del alumno y mejorar los resultados académicos entre los estudiantes en comparación con las prácticas de aprendizaje convencionales. El estudio utilizó un diseño cuasi-experimental. Los participantes del estudio fueron 78 estudiantes de secundaria inferior. El estudio llevó a cabo dos métodos de enseñanza diferentes; un aula de aprendizaje mixto para el grupo de tratamiento, mientras que un aula de aprendizaje convencional para el grupo de control. Había 40 alumnos en el grupo de tratamiento y 38 alumnos en el grupo de control. Se llevó a cabo un análisis posterior a la prueba para comprender la efectividad del aprendizaje combinado hacia el logro académico de los estudiantes. Se desarrolló un conjunto de cuestionarios para identificar la autonomía del alumno después del tratamiento. Los resultados indicaron que hubo un aumento significativo en el rendimiento académico basado en los análisis pre y post-test. El estudio también encontró que las prácticas pedagógicas de aprendizaje mixto podrían mejorar la autonomía de aprendizaje de los estudiantes en el aprendizaje.

**Palabras clave:** Aprendizaje mixto; enseñanza de inglés como segundo idioma; Cuento; autonomía del alumno.

## INTRODUCTION

Nowadays, teaching and learning process have been made simpler than ever before, enabling technologies to take place between teachers and students at schools in a very advanced way without difficulties (Barriogarcía, Arquero & Romero-frías, 2015; Wang, Han & Yang, 2015). The implementation and usage of Blended Learning (BL) pedagogical practices in education aiming to shift from teacher-centered to student-centered paradigm (Almasaeid, 2014), which to enhance higher constructive and collaborative learning styles and thereafter improve students' learning autonomy. The term BL refers to language learning that combines face-to-face (F2F) classroom with appropriate use of technology. The use of ICT in education nowadays is impermissible than ever before since its powerful capacity to influence change within learning environments subsists in education (Azli, Wong & Goh, 2016; Rodriguez, 2012; Wai & Seng, 2014). The most essential elements offered by ICT are; a powerful learning environment besides transforming teaching and learning process, allowing students to deal with knowledge in an active, self-directed and in a more constructive way (Volman & Van Eck, 2001; Vaughan, 2014; Wang et al., 2015) making it relevant to be considered. There are many advantages of BL in teaching and learning in education based on available studies such as; the possibility of implementing different teaching strategies which able to cater to different types of students, the widespread of information to countless learners and institutions in global context, the optimization of meaningful learning with the use of authentic and updated contents, as well as opening up opportunity to cooperative learning milieu (Azli, Wong & Noraini, 2016; Noraini et al., 2016; Wong, Goh & Siti, 2017).

## THE STUDY AND RESEARCH STRUCTURE

Despite the fact that blended learning is still at its infancy stage in Malaysia, the use of technology in teaching and learning process has been widely practised by almost all teachers in the country without having the consciousness of its existence. With more research verifying the usefulness of BL, and encourage the implementation of it in schools, Malaysian government has taken imperative measures in ensuring the expansion of ICT in education as mentioned in the preliminary Education Blueprint 2013 into a stern position. This blueprint is developed specifically directing the Malaysian education system towards the understanding of current performance and challenges in the education system with a focus on improving access to education, raising standards (quality), and in closing achievement gaps (equity) as stated in the blueprint (Noraini et al., 2016).

As Carr (2011) highlighted, technology has its own “potential detrimental effects on cognition, diminishing the capacity for concentration and contemplation”. This means learners will have a very short attention span in focusing on a topic after some period of time as they easily get switched off. Nevertheless, it is believed that everything that exists has its own advantages and disadvantages; strength and weaknesses (Azli, et al., 2016; Barrio-garcía et al., 2015; Nasser, Cherif & Romanowski, 2011). The same cycle goes to food, if it is not taken in moderation, it can eventually lead to health problems. Vice versa with technology, if it is not used in a proper way without proper planning and measures to handle problems that might arise; it can either be harmful to learners, or just a surplus of time, effort and money invested (Azli et al., 2016; Wong et al., 2017).

Instead of focusing too much on the disadvantages of using technology in education, it is worth focusing on more specific type of technologies could do in improving learning process as well as to how to overcome problems that might occur, especially related to the use of BL, which many advocates of the nation notes that BL could improve students’ achievements (Almasaeid, 2014; Barker, 2015; Wai & Seng, 2014; Wang, Han & Yang, 2015; Azli, Wong & Noraini, 2017). Alongside, there is a paucity of research that describes how BL on learner autonomy. Indeed to acculturate learner autonomy among the students it is highly recommended to craft a more active and challenging learning environment involving the 21st century learning skills that will equip and prepare the students for a more demanding future (Azli, Wong & Goh, 2016). However, Kruk and Pawlak (2014) contends that online learning can improve and develop learner autonomy and learner autonomy is very vital in learning (Hu & Du, 2013). To response to the aforesaid gap in the past studies and needs of understand contribution of BL in teaching and learning for increasing levels of autonomy and academic results among students, the current study was intended to propose and test a new pedagogical prentices in teaching and learning with regards to the use of BL in of vocabulary to the second language learners.

The research structure of this study is to examine the effectiveness of BL in teaching and learning. The purposes of this study are;

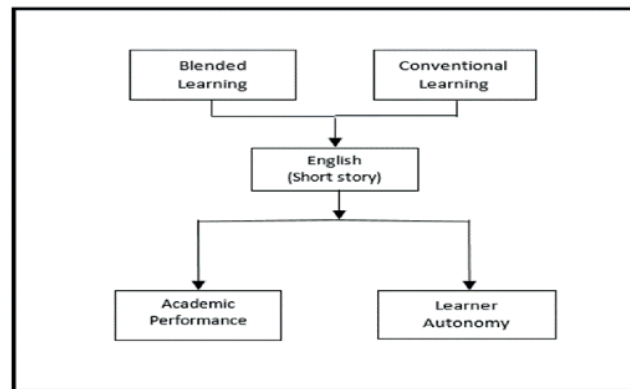
- a) To identify the effectiveness of Blended Learning towards improving academic achievement among students learning English as compared to conventional instructional methods.
- b) To identify the effectiveness of Blended Learning towards inculcating learner autonomy among students learning English as compared to conventional instructional methods.

## METHODOLOGY

This study conducted a quasi-experimental research design since random assignment to groups was restricted to the decision made by the administration. All these constraints had eventually influenced the decision made where only the two classes were allowed to be involved in the study namely control group and treatment group. Thus, control over extraneous variables that may exist is somewhat inevitable. Such design is only to be used when it is not feasible to use experimental design (Fraenkel & Wallen, 2008; Gay, Mills, & Airasian, 2009; Wang, Han & Yang, 2015). The study carried out two different teaching methods; a blended learning classroom for the treatment groups, meanwhile conventional learning classroom for the control groups. There were 40 pupils in the treatment group and 38 pupils in the control group. Based on the pre-test results, both groups have not significant different of students’ proficiency level in English subject ( $p < 0.05$ ).

Post-test analysis was carried out to understand the effectiveness of blended learning towards students’ academic achievement. The post-test is based on the curriculum specifications as provided by the

Ministry of Education Malaysia. A set of questionnaire was developed to identify learner autonomy after the treatment.



Both treatment and control groups would be learning the similar topic revolves around English language learning which is focused on the teaching of a short story, with a specific objective in vocabulary learning. Since only the researcher would conduct blended learning with the treatment groups involved, lessons would be conducted within the class hour scheduled by the administration while some lessons would be conducted by another two English teachers in their respective classes. In view of the fact that conventional learning would be taught by the respective English class teachers appointed by the administration, time and place to conduct the lesson was not subjected to any alteration. The teachers would be trained on how to conduct conventional learning. Before conducting the lesson, the researcher would check the lesson plans to ensure it was according to the requirements of the study.

Apart from complying, planning and tailoring the lessons based on the scheme of work provided by the management, the next stage to be considered was the media selection for the intended lessons. Since Moodle is a ready-made Learning Management System which comes together with built-in templates, not much of requirement needed for designing the layout nor graphical interfaces needed. Users only need to decide on the contents, activities and other features that need to be incorporated in the lessons. Below figures showed are the examples of the Moodle interface of this study.

Since this was a blended learning classroom, face-to-face interactions were embedded in the lessons and most instructions were given by the teachers verbally unless if it was stated on the screen so the teacher would still have control over the lessons (Wong, Goh & Siti, 2017).

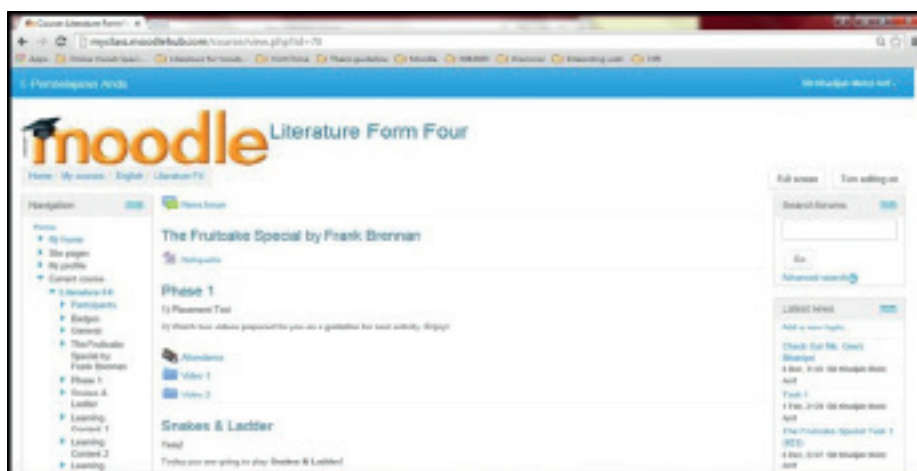


Figure 3.1 Moodle Interface

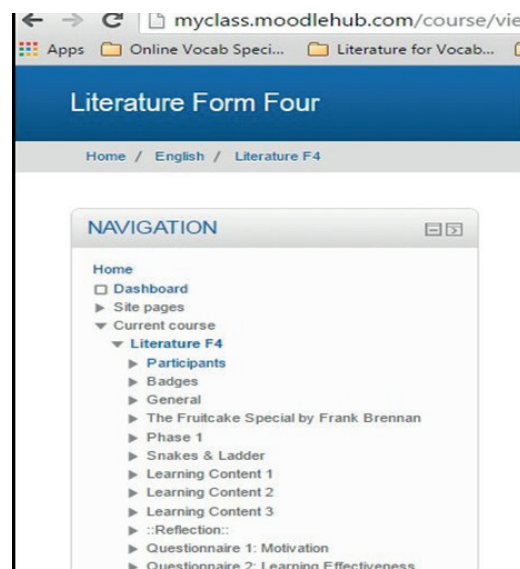
Most of the content of the lessons was taught and explained by the teacher verbally in the classrooms occasionally with the help of PowerPoint slides and question and answer sessions followed by the use of web links and other web tools for activities like creating comic strips, animated Pictionary and online quizzes. Interactions in the classrooms were still very crucial as students kept seeking clarification and assistance from the teacher. The interactivity and active participation in the classroom made the lessons more lively than usual as teacher was able to witness students' engagement in the activities.



Figure 3.2 Comic Strip

Apart from the activities mentioned, other features like instant feedbacks and responses from students as well as the teachers were also made possible through Moodle's Message Box. It was also feasible as students were able to access to current news or notices through Latest News panel located on the right side of the screen to keep track of any missing details or information. Additionally, students were also able to reread, revisit and even revise previous learning contents as notes were made visible to users on Moodle platform. The teacher was also able to keep track of previous or even future lessons as the contents had been arranged in an organised manner making teaching and learning process more structured and controlled. This feature is made available through Moodle's Navigation panel on the left side of the screen (refer Figure 3.3).

Figure 3.3 Navigation Panel





## FINDINGS AND DISCUSSIONS

### Students' Academic Achievement

The post-test item was conducted to investigate the effectiveness of BL in improving students' academic achievement in learning English through short story compared to the conventional instruction method. Based on an independent *t*-Test analysis on the post tests conducted, the results obtained are; there was no significant difference in the scores for blended learning ( $M = 4.67$ ,  $SD = 0.87$ ) and conventional learning ( $M = 4.15$ ,  $SD = 0.69$ );  $p > 0.05$ . Thus, the results showed that the pedagogy (blended learning) used in this study did not statistically influence the academic achievement of the samples. The finding of this study is, however, contradict to the findings of Barker (2015), Barrio-garcía et al. (2015), Nasser, et al. (2011), Wang, Han & Yang (2015) and Azli, Wong and Noraini (2017) others.

Note to be taken that it was also impossible to remove biasness in its entirety as the use of technology in the classroom will definitely be an advantage compared to conventional classroom where animation, audio and visual presentation are less offered. Alongside, considering the limitation of this study where it was only conducted within a month of twelve teaching periods, the number of recycling vocabulary list learned was only met for five times thus restricting the recurring exposure of words from happening. This later explained the probability of the results attained for learners' academic achievement where both pedagogies did not successfully improve learning among the sample involved.

### Learner Autonomy

This section presents data obtained using a set of questionnaire designed by Ustunluoglu (2009). This questionnaire was employed to investigate the effectiveness of BL in inculcating learner autonomy among students. The questionnaire was conducted to investigate the students' responsibilities related to autonomous learning and the autonomous activities which students were engaged in within the lessons in the classroom. A *t*-Test was conducted and the results for learner autonomy for the experimental group is ( $M = 3.64$ ,  $SD = 0.81$ ) while for the control group ( $M = 2.55$ ,  $SD = 0.74$ ) conditions;  $p < 0.05$ . The results depict that there was a significant difference in the scores for learner autonomy with  $p = 0.02$ . The results are congruent with the results of earlier studies on autonomous learning (Kruk and Pawlak, 2014).

Besides that, based on the observation conducted by the researcher proved that BL pedagogical practices have changed within students' behaviour, it could be seen that students would start the activity through Moodle interaction even without the teacher's instruction. It was observed that, samples involved in the study knew what to be done even before the teacher started to give any instruction or directions to the students.

This change in students' behaviour could be particularly influenced by the availability of contents and access to activity through blended learning in the classroom (Wong, Goh & Siti, 2017). Students would stop at a point of uncertainty, seeking for clarification from the teacher as a guidance. These are the most apparent examples of autonomy within learners portrayed in the blended learning classroom.

Unlike conventional learning, students had no access to content and resources, therefore restricting independent learning from happening. This shows that despite data was statistically insignificant from learner autonomy to happen, observation contradicted that the level of learner autonomy was expressively portrayed through the learners' actions Learner autonomy was eventually plausible to occur within a blended learning if not at large, in a very small scale. These unconscious actions by attending to classes on time, not wanting to leave any exciting activities behind, eager to start the activities without teacher's instruction and started asking questions for clarity when in doubt, have represented the degree of learner autonomy in the study.

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## CONCLUSION

Technology in education is seen as a powerful medium to thrive one of the nation's aspirations in achieving a system in maximising students' outcomes as expected. Among the aforementioned efforts are to leverage ICT to scale up quality learning across the nation constituting internet accessibility, providing a virtual learning environment, augmenting online best practices content on a video library, and maximum use of ICT for distance and self-paced learning for a more customised learning experience. Even though blended learning in this study may not be significant in learners' academic achievement, both teacher and students agreed that blended learning with the help of learning management system (Moodle) was superior to conventional learning method in terms of learning efficiency from accessibility to content and information, content management, communication and feedbacks, flexible pace of learning, time and cost effective apart from motivation factor and learner autonomy.

**BIBLIOGRAPHIC REFERENCES**

- Almasaeid, T. F. (2014). The effect of using blended learning strategy on achievement and 9th grade students. *European Scientific Journal*, 10(31), 133–145.
- Barker, J. (2015). Benefits of hybrid classes in community colleges. *Contemporary Issues In Education Research*, 8(3), 143–146.
- Barrio-garcía, S., Arquero, J. L., & Romero-frías, E. (2015). Personal learning environments acceptance model: The role of need for cognition , e-learning satisfaction and students ' perceptions. *Educational Technology & Society*, 18(3), 129–141.
- Carr, N. (2011). *The shallows: What the Internet is doing to our brains*. WW Norton & Company.
- Cohen, L., Lawrence, M., & Keith, M. (2007). *Research methods in education* (6th ed.). New York: Routledge.
- Creswell, J. W. (2012). *Educational research: planning, conducting and evaluating quantitative and qualitative research* (4th. ed.). Boston: Pearson.
- Hu, H., & Du, Z. (2013). Web-based Inquiry of Autonomy in Foreign Language Learning as an English Major in Higher Vocational College. In *Advanced Technology in Teaching*, 163, 45-48.
- Kruk M., Pawlak M. (2014) The Use of Internet Resources in Developing Autonomy in Learning English Pronunciation: A Qualitative Study. In: Pawlak M., Bielak J., Mystkowska-Wiertelak A. (eds) *Classroom-oriented Research. Second Language Learning and Teaching*. Springer, Heidelberg
- Mohd Azli Yeop, Wong, K.T, Noraini Mohamed Noh. (2016). Blended Learning: Literature review on the acceptance factors of the teachers based on acceptance models. *Journal Of Research, Policy & Practice of Teachers & Teacher Education*, 6(1), 67-85.
- Mohd Azli Yeop, Wong, K.T, Noraini Mohamed Noh. (2017). The construct of factors acceptance and use of blended learning for teachers in Malaysia. *International Journal of Instructional Technology and Distance Learning*, 2017, 14(9), 3-13.
- Mohd Azli Yeop, Wong, K.T, Pauline, S.C.G. (2016). Blended learning: Pedagogy, learning styles, and assessment activities in the classroom. *International Journal of Advanced and Applied Sciences*. 3(11), 365-369.
- Nasser, R., Cherif, M., & Romanowski, M. (2011). Factors that impact student usage of the learning management system in Qatari schools. *The International Review of Research in Open and Distance Learning*, 12(6), 39-62.
- Noraini Mohamed Noh, Wong, K.T, Mohd Azli Yeop, Norazilawati Abdullah. (2016) Blended Learning: Its implementation and promote continuing e-learning environment among student-teachers. *International Journal of Advanced and Applied Sciences*. 3(11), 11-15.
- Rodriguez, C. O. (2012). MOOCs and the AI-Stanford like courses: Two successful and distinct course formats for massive open online courses. *European Journal of Open, Distance and E-Learning*. Retrieved August 14, 2017, from: <http://www.irrodl.org/index.php/irrodl/article/view/1455/2602>
- Sekaran, U. (2016). *Research Methods for Business: A Skill Building Approach*, (6<sup>th</sup> ed.). Hoboken, NJ: John Wiley & Sons.
- Vaughan, N. (2014). Student engagement and blended learning: making the assessment connection. *Education Sciences*, 4(4), 247–264.
- Volman, M., & Van Eck, E. (2001). Gender equity and information technology in education: The second decade. *Review of Educational Research*, 71(4), 613-634.
- Wai, C. C., & Seng, E. L. K. (2014). Exploring the effectiveness and efficiency of blended learning tools in a school of business. *Procedia - Social and Behavioral Sciences*, 123(2002), 470–476.
- Wang, Y., Han, X., & Yang, J. (2015). Revisiting the blended learning literature: using a Complex Adaptive Systems Framework. *Educational Technology & Society*, 18(2), 380–393.
- Wong, K.T., Goh, P.S.C., , & Siti Khatijah (2017). Exploring the affordances and obstacles of blended e-learning pedagogical practices: perspective of Malaysian teachers. *International Journal of Instructional Technology and Distance Learning*. 5(14), 49-57.