

Enhancing EFL Students' Soft and Hard Skills through Blended Learning Activities

Hadiyanto*, Rd. M. Ali, Mariza Juwita

English Education Department, FKIP, Universitas Jambi, Jambi, Indonesia

*Corresponding author. Email: hadiyanto@unja.ac.id

ABSTRACT

Many researches had proved that Blended learning is able to improve students' academic performance. Various teaching and learning methods are included in blended learning for instance, online group discussion, online presentation, online submission, etc. Many resources reveal that learning methods and strategies that embed with blended learning allow students to practice soft skills and hard skills during learning activities. This study aims to seek on the effect of blended learning activities to enhance students' soft skills and hard skills through learning and instruction of research methodology subject. Quasi experimental design is applied in the study. Two groups of students are divided as control class (conventional learning) and experiment class (blended learning). Each of the class consists of 25 students. Students' self and pair assessment is used to measure students' soft skills and hard skills performance at pre- and post-treatment. The result of students' self and pair evaluation revealed that blended learning approach has significant impact on improving their soft skills and hard skill. Students in experiment class perform better in aspect of communication, IT, numeracy, and learning, problem solving and working with other skills than students in control class. Students in experiment class also obtain both specific knowledge and skills of research methodology higher than students in control class. It is suggested that teacher should be more creative and innovative.

Keywords: 21st century skills, online learning, English teaching, learning and instruction

1. INTRODUCTION

The students are not able to optimize their practices of soft skills such as communication, IT, numeracy, learning, problem solving, and team work to gain their hard skills through learning process. Blended learning is considered as an appropriate approach to develop both students' soft skills and hard skills. This is due to one of the principles of blended learnings which is giving students a wide change to interact, work, discuss, share, and explore through classroom learning and online learning. Blended learning is students-centred learning activities that implement through learning methods such as group discussion, group work, individual presentation, group presentation, exploring, simulation, video presentation, ideas sharing, etc. (Bryan & Volchenkova, 2016). The methods can be applied both in classroom and online learning. The process of learning through various methods of learning promote students, practicing of soft skills and hard skills. The practicing of soft skills and hard skills through learning process can be observed by using its' indicators as developed by

Hadiyanto, Syahrial, Fajaryani, Masbirorotni, and Juwita (2018).

Many studies reported that blended learning engages students to be more active in learning rather than conventional learning. Students are enthusiast in learning activities such as share, search, presentation, exploring, searching online, commenting videos and working in group to obtain learning goal (Hadiyanto, 2019a). The students do not only obtain higher academic performance but also become more motivated and active to participate in learning activities. Referring the related studies, theories, and researchers' experience can be concluded that the process of blended learning can develop students' indicators of soft skills and hard skills (Schober, Wagner, Reimann, & Spiel, 2008; Hadiyanto, 2019b; Sulisworo, Agustin, & Sudarmiyati, 2016). By that, the researcher hypothesized that the applying of blended learning, the combination of face-to-face class and online learning, will impact positively on students soft and hard skills performance as well. However, an initial

experimental research is should be conducted to search on an evidence of the hypothesis.

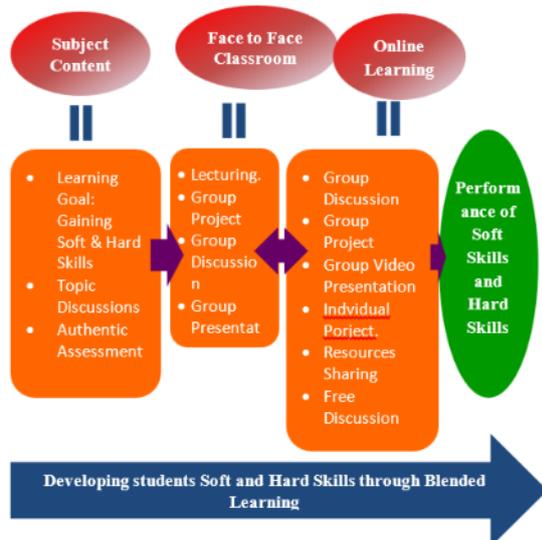


Figure 1 Conceptual framework of blended learning.

The present experimental research has been conducted by applying a blended learning approach to find evidence and answer issues above. This study attempted to seek on effectiveness and impact of blended learning activities in developing students’ soft and hard skills in the context of research methodology subject. This paper reports the findings of the effectiveness and impact of blended learning integrating upon students’ soft skills and hard skills. It is expected that wide number of teachers will be interested and able to apply blended learning with emphasizing not only on academic performance but also on soft skills and hard skills.

2. LITERATURE REVIEW

2.1. Developing Students’ Soft Skills and Hard Skills through Blended Learning Activities

Soft skills are defined as the generating communication skills, IT Skills, numeracy skills, learning how to learning skills, problem-solving skills and team works in learning activities as well as in working (Hadiyanto, 2011; Hadiyanto et al., 2017a; Hadiyanto, Noferdiman, Moehamin, & Yuliusman, 2017b; Ristekdikti, 2015; Laura, Renee, & Carney, 2016; Hadiyanto & Suratno, 2015; Bialik, Bogan, Fadel, & Horvathova, 2015; Hassan, Maharrof, & Abiddin, 2014; Hadiyanto & Ibrahim, 2013; Person, Moiduddin, Hague-Angus, & Malone, 2009; Farkas, 2007). Hard skills are referred to specific knowledge and technical skills toward one’s major (Ristekdikti, 2015). In this study, hard skills relate to the research methodology knowledge and skills that are practiced by

the students through online learning activities. Hard skills are divided into two components: specific knowledge of a subject and specific skills of a subject. Both specific knowledge of a subject and specific skills of a subject are indicated by five indicators for each. Hard skills are embedded with practicing soft skills in online learning activities.

Hadiyanto (2019a) states that learning activities can be managed through online learning to enhance students’ soft skills and hard skills. Students can interact, read, ask question, and discuss from resources given by teacher. Multi resources can be uploaded by a classroom member to share to others class members. All class members can learn, compare, analyse, and extract necessary information from the multi resources. The connection between blended learning and students’ soft skills and hard skills development is clear, rational, and logic. Blended learning is a learning strategy that aims to engage students in learning to acquire knowledge and skills. Teachers’ role as facilitator have to be able to encourage students to be active to gain knowledge and skills through the practices of soft skills and hard skills such as interaction, discussion, presentation, question, answer, comment, and exploration of learning material.

According to Hadiyanto (2019a), Wichadee (2017), and Kara (2016), blended learning in the mean of developing students soft and hard skills is shown in Figure 1. Subject content mainly consists of learning goal for gaining soft and hard skills related to research methodology of subject, topic discussion and authentic assessment instrument. Blended learning activities are designed for face-to-face classroom that consist of group project, group discussion, group presentation, lecturing and individual project. While online learning activities also consist of group project, group discussion, group video presentation, individual project, resources sharing, and free discussion.

3. METHOD

Quasi experimental research design is applied to investigate the effect of blended learning method in enhancing students’ soft and hard skills. Control class consists of 25 students and experimental class consists of 25 students. The two classes are the available classes that systematically had been divided into class A (Control) and B (Experiment) based on the enrolment of research methodology course. Control class is taught through conventional face to face classroom while experimental class is thought through blended learning activities.

3.1. Self and Pair Assessment

Self and pair assessment are applied in this research. Self and pair Assessment instrument are distributed to

students to assess their 21st century skills at pre- and post-assessment. Self and Pair assessment are consisting of statements that describe one’s ability in practicing 21st century skills. Each component of soft skills and hard skills are described by five indicators.

Likert scale interval from 1 (Very poor) to 5 (very good) is applied in judging their own and their pair 21 century skills. Two teachers and one research assistance are involved to manage pre- and post-assessment. Prior to pre-assessment, a pilot study is taken to test and investigate some weaknesses for instrument revision. Furthers step, practices of students’ self and pair assessment are conducted make sure a similarity of judgment between self and pair assessment.

Paired sample t-test and independent t-test analysis are applied in data analysis. Paired sample t-test is used to see the different value of pre- and post-assessment of 21st skills for both control and experimental group. Independent sample t-test usage is to seek a level of differences between control and experimental class toward the performance of soft and hard skills. Independent sample t-test is appropriate to compare two groups with sample size below 30 for each. Significant value at 0.05 to 0.1 is used to judge significant deference two comparative scores.

4. FINDINGS AND DISCUSSION

4.1. Pre-Soft and Hard Skills Assessment Comparison between Control and Experiment Class at Pre-Treatment

Independent sample t-test is conducted to see equality score between control and experiment class toward soft skills and hard skills. The findings in Table 1 show that there is no significant difference between control and experimental group toward overall soft skills at pre-assessment (mean difference=-.07, t = -.084, sig =.934>.05). Looking at each component of soft skills, it is also found that there is no significant difference between control and experimental group toward communication Skills (mean difference=-.070, t = -.568, sig =.572>.05), IT Skills (mean difference=-.051, t = -.416, sig = .679>.05), Numeracy (mean difference =.033, t = .218, sig = .828>.05), Learning Skills (mean difference = .027, t = .190, sig = .850>.05), Problem Solving Skills (mean difference = .043, t =.269, sig =,.789>.05), and Team Work (mean difference = -.088, t = -.669, sig = .507>.05). The findings imply that both of sample groups come from the equal background soft skills score.

The findings of 21st century skills in term of hard skills are displayed in Table 2. The findings reveal that there is no significant difference between control and

experiment group toward overall of pre-hard skills (mean difference = .065, t = .469, sig = .647>.05).

Table 1. T-test conducted to control group and experiment group toward pre-assessment of soft skills

Pre –Soft Skills	Group	N	Mean	Mean Dif	t	Sig ^c
Pre-Communication	C ^a	25	3.34	-.070	-.568	.572
	E ^b	25	3.41			
Pre-IT	C ^a	25	3.36	-.051	-.416	.679
	E ^b	25	3.41			
Pre-Num	C ^a	25	3.34	.033	.218	.828
	E ^b	25	3.31			
Pre-Learning Skills	C ^a	25	3.42	.027	.190	.850
	E ^b	25	3.39			
Pre-Prob Solving	C ^a	25	3.23	.043	.269	.789
	E ^b	25	3.18			
Pre-Teamwork	C ^a	25	3.55	-.088	-.669	.507
	E ^b	25	3.64			
Pre-Soft Skills	C ^a	25	3.37	-.007	-.084	.934
	E ^b	25	3.38			

^aControl, ^bExperiment, ^cSignificant level at 0.05

It is also found that there are no significant differences between control and experimental group toward pre specific knowledge of research methodology (mean difference = .112, t = .748, sig = .458>.05) and pre specific skills of research methodology (mean difference = .019, t = .108, sig = .915>.05). These findings mean that both control and experimental group have equal score of hard skills at pre assessment.

Table 2. T-test conducted to control group and experiment group toward pre- assessment of hard skills

Pre-Hard Skills	Group	N	Mean	Mean Difference	t	Sig.
Pre – Specific Knowledge of Research Methodology	C ^a	26	3.4038	.112	.748	.458
	E ^b	24	3.2917			
Pre – Specific Skills of Research Methodology	C ^a	26	3,2692	.019	.108	.915
	E ^b	24	3,2500			
Hard Skills	C ^a	26	3.3365	.065	.469	.641
	E ^b	24	3.2708			

^aControl, ^bExperiment

4.2. Differences of Post Assessment between Control and Experiment Class at Post Treatment Toward Soft Skills and Hard Skills

Table 3 shows a significant difference between control and experiment group. Overall, post assessment in experiment group is better than post assessment in control group with mean difference of .537, $t = -6.16$, and $sig = .000 < .05$). Each component of soft skills, it is also showing a significant difference between control and experiment group toward communication skills, IT skills, numeracy skills, learning skills, problem solving skills, and teamwork skills. Experiment group obtain higher mean score of soft skills (4.27) than control group (3.73). This implies that blended learning is more effective in developing students' soft skills relate to research methodology subject.

Table 4 reveals that there is a significant difference between control and experiment group toward overall of pre-hard skills (mean difference= -.608, $t = -4.49$, $sig = .000 < .05$). It is also found that there are significant differences between control and experimental group toward pre-specific knowledge of Research Methodology (mean difference= -.596, $t = -3.70$, and $sig = .001 < .05$) and pre specific skills of research Methodology (mean difference= -.608, $t = -4.49$, and $sig = .000 < .05$). Experimental group obtain higher score of hard skills and its components rather than control group. The findings implicate that blended learning usage in teaching and learning process is increase students' hard skills much better than conventional teaching and learning.

This study investigated the impact of blended learning activities toward students' soft skills and hard skills though learning activities. Blended learning has been implemented in experiment class in order to develop the students' soft skills and hard skills through learning activities of research methodology subject. Five learning activities were applied in face-to-face class: lecturing, group project, group discussion, group presentation, and individual project. While in blended learning, there were six online activities applied: group discussions, group project, individual report, online resources sharing, free discussion, and group video. The study yielded additional value on the area of blended learning, online learning, and students' soft skill and hard skills development in English education program. It also contributes to the nature, concept, and method of implementing blended learning for other means of usage and different context of learning. The study reveals that blended learning activities are more effective to enhance students' soft skill and hard skills rather than conventional face to face classroom. This is due to online learning activities giving the students opportunities in flexible time and at any places to interact, communicate, present, and work in group, discuss, and share topic of research methodology.

As the result, soft skills such as communication, IT, numeracy, learning, problem solving and working with others are practiced and promoted by the students intensely. The practices of soft skills intensely bridge the students to acquire understanding, knowledge, and skills of research methodology. It was confirmed by the result of experimental group students' performance on hard skills in research methodology that gave much better than control group students. The findings in line with Wichadee (2017) who revealed that blended learning by using Edmodo had significantly impacted on better oral English proficiency of students. Students who treated with blended learning activities (experiment group) show higher mean score on the soft skill and hard skills than control class.

Table 3. Independent sample t-test conducted to control group and experiment group toward post-assessment of soft skills

Post Soft Skills	Group	N	Mean	Mean Difference	T	Sig.
Post - Communication Skills	C ^a	26	3.90	-.346	-2.2	.031
	E ^b	24	4.25			
Post - IT Skills	C ^a	26	3.98	-.873	-11.4	.000
	E ^b	24	4.85			
Post - Numeracy	C ^a	26	3.75	-.645	-3.76	.000
	E ^b	24	4.39			
Post - Learning Skills	C ^a	26	3.57	-.548	-3.72	.001
	E ^b	24	4.12			
Post - Problem Solving Skills	C ^a	26	3.42	-.347	-2.42	.019
	E ^b	24	3.77			
Post - Team Work	C ^a	26	3.78	-.461	-4.10	.000
	E ^b	24	4.25			
Post - Soft Skills	C ^a	26	3.73	-.537	-6.16	.000
	E ^b	24	4.27			

^aControl, ^bExperiment

Table 4. Independent sample t-test conducted to control group and experiment group toward post-assessment of soft skills and hard skills

Post-Hard Skills	Group	N	Mean	Mean Difference	t	Sig.
Post - Specific Knowledge of Research Methodology	C ^a	26	3.90	-.596	-3.70	.001
	E ^b	24	4.50			
Post - Specific Skills of Research Methodology	C ^a	26	3.69	-.620	-4.48	.000
	E ^b	24	4.31			
Post- Hard Skills of Research Methodology	C ^a	26	3.91	-.490	-4.49	.000
	E ^b	24	4.40			

The findings implicate that the use of blended learning in developing students' soft skills, hard skills, and course content understanding and knowledge is more effective rather than conventional class. Others application to support online activities can be ebbed with the online learning. It depends on how the teachers facilitate the students for learning. Teachers should be more creative and innovative to design and apply both face-to face and online learning activities especially for developing students' soft skill and hard skills. The features of e-learning allow teachers to create some situation and apply varies method of learning for instance making small discussion, posting and playing video resources, and linking to online resources (Sulisworo, Agustin & Sudarmiyati, 2016).

The nature of online learning activities also allows students to develop their capacity of learning and use others useful facilities of online learning. As the result, the practices of students' soft skill and hard skills can become more and more intense through online learning activities. All components of soft skill and hard skills can be optimally promoted through online activities. However, different method of learning dominates one or two components of soft skills to be promoted. The use of varies learning method or activities of blended learning provides mix component of soft skills practices in learning process and encourages students' soft skills and hard skills component in different ways.

In line with concept of SCL, students should be given more opportunities to interact, communicate, and discuss among them to acquire knowledge and skills (Glowa & Goodell, 2016). Online activities in this study have engaged students to develop their own soft skill and hard skills in the context of research methodology subject. The students' soft skill and hard skills performance in components of soft skills; communication, IT, numeracy, learning, problem solving, and teamwork skills became much better at the end of semester. Students also built and enhance their own specific knowledge and skill of research methodology subject through varies blended learning activities.

5. CONCLUSION

Blended learning had been implemented in experiment class in order to develop the students' soft and hard skills in context of research methodology subject. Five learning activities are applied in face-to-face class; lecturing, group project, group discussion, group presentation, and individual project. While in online activities, six online learning activities; group discussions, group project, individual report, e-resources sharing, free discussion, and group video presentation are applied in blended learning class. Implementation of blended learning in teaching and learning in research methodology subject yielded

significant improvement on students' soft and hard skills and understanding and knowledge of specific subject rather than just face to face classroom. It is expected that the conceptual framework and the findings of this study can contribute to scope of blended learning method and inspire other teachers to enhance students soft and hard skills through blended learning. For further research, it is suggested to seek for more practical, creative, efficient, and effective way of using soft and hard skills assessment in a process of teaching and learning. Researcher himself is initiating to conduct a research and development on online portfolio assessment of students' soft and hard skills assessment to be embedded in blended learning. Policy maker should convince and make a policy in order for teachers implementing and innovating blended learning in teaching and learning a subject.

REFERENCES

- Bialik, M., Bogan, M., Fadel, C., & Horvathova, M. (2015). *Character education for the 21st century: What should students learn?.* Boston: Center for Curriculum Redesign. Retrieved from: http://curriculumredesign.org/wp-content/uploads/CCR_CharacterEducation_FINAL_27Feb2015.pdf
- Bryan, A., & Volchenkova, K. N. (2016). Blended learning: Definition, models, implications for higher education. *Bulletin of the South Ural State University Series "Education. Education Sciences"*, 8(2), 24–30. <https://doi.org/10.14529/ped160204>
- Farkas, A. (2007). Competitiveness of graduates on the job market. In *Proceedings of Symposium for Young Researchers. Budapest, Hungary* (pp. 9-18). Retrieved from https://kgk.uni-obuda.hu/sites/default/.../Farkas_Andras-1.pdf.
- Glowa, L., & Goodell, J. (2016). Student-centered learning: functional requirements for integrated systems to optimize learning. *International Association for K-12 Online Learning, Vienna*.
- Hadiyanto & Ibrahim, M. S. B. (2013). Students' generic skills at the National University of Malaysia and The National University Of Indonesia. *Procedia-Social and Behavioral Sciences*, 83, 71-82.
- Hadiyanto, H. (2019a). The EFL students' 21st century skill practices through e-learning activities. *IRJE/ Indonesian Research Journal in Education*, 3(2), 461-473.
- Hadiyanto, H. (2019b). Enhancing students' core competencies by applying blended cooperative e-learning (BCeL) in teaching and learning process.

- In *3rd Asian Education Symposium (AES 2018)*, 169–173. <https://doi.org/10.2991/aes-18.2019.40>
- Hadiyanto, H., & Suratno, S. (2015). The practices of students' generic skills among economics students at National University of Indonesia. *Higher Education Studies (HES)*, 5(2), 52-61. Retrieved from: <http://www.ccsenet.org/journal/index.php/hes/article/view/45364>.
- Hadiyanto, H., Amirul, M., Failasofah, F., Nely, A., Nunung, F., & Habibi, A. (2017a). In search of quality student teachers in a digital era: Reframing the practices of soft skills in teacher education. *The Turkish Online Journal of Educational Technology*, 16(3), 71-78. <http://www.tojet.net/volumes/v16i3.pdf>.
- Hadiyanto, Noferdiman, Moehamin, Yuliusman. (2017b). Assessing students and graduates soft skills, hard skills and competitiveness. *International Journal of Social Sciences*, 3(2). <https://www.grdspublishing.org/index.php/people/article/view/728>.
- Hadiyanto, Syahrial, Fajaryani, N., Masbirorotni, Juwita M. (2018). Constructing the measurement of EFL students' core competencies practices in learning Activities. *Turkish Online Journal of Educational Technology - TOJET*, 17(3), 16–25.
- Hadiyanto. (2011). The development of core competencies among economics students in National University Of Malaysia (UKM) and Indonesia (UI) (Unpublished doctoral's dissertation). National University of Malaysia, Malaysia.
- Hassan, A., Maharoff, M., & Abiddin, N. Z. (2014). The readiness of lecturers in embedding soft skills in the bachelor's degree program in Malaysian Institutes of Teacher Education. *Journal of Education and Training Studies*, 2(3), 138-143. Retrieved from <http://jets.redfame.com>
- Kara, S. E. L. M. A. (2016). How and why? Edmodo as a blended learning tool: A brief overview of usage and research. In *Proceedings of ISERD International Conference* (pp. 10-12).
- Laura, H. L. Renee, R., Carney, R. and Kristin A. (2016). Moore child trend. Workforce connections: Key “soft skills” that foster youth workforce success: Toward a consensus across fields. <https://www.usaid.gov/sites/default/files/documents/1865/KeySoftSkills.pdf>
- Person, A. E., Moiduddin, E., Hague-Angus, M., & Malone, L. M. (2009). Survey of outcomes measurement in research on character education programs (NCEE 2009-006). *National Center for Education Evaluation and Regional Assistance*. Retrieved from <http://ies.ed.gov/ncee/pdf/2009006.pdf>
- Ristekdikti (2015). Standar nasional pendidikan tinggi “Direktorat penjaminan mutu”. Retrieved from <http://bpm.umsida.ac.id/wp-content/uploads/2017/08/3.-Standar-Nasional-Pendidikan-Tinggi-SN-Dikti.pdf>.
- Schober, B., Wagner, P., Reimann, R., & Spiel, C. (2008). Vienna E-lecturing (VEL): Learning how to learn self-regulated in an internet-based blended learning setting. *International Journal on E-learning*, 7(4), 703-723.
- Sulisworo, D., Agustin, S. P., & Sudarmiyati, E. (2016). Cooperative-blended learning using Moodle as an open source learning platform. *International Journal of Technology Enhanced Learning*, 8(2), 187-198.
- Wichadee, S. (2017). A development of the blended learning model using Edmodo for maximizing students' oral proficiency and motivation. *International Journal of Emerging Technologies in Learning (iJET)*, 12(2), 137-154. <https://doi.org/10.3991/ijet.v12i02.6324>