

## Learning Outcomes in Blended Learning Implementation

Rina Nur Hidayati<sup>1</sup>, Binarti Dwi Wahyuningsih<sup>1</sup>, Rudi Hariyono<sup>1</sup>, Ahmad Musadek<sup>4</sup>

<sup>1</sup>Universitas Bina Sehat PPNI Mojokerto

<sup>4</sup>Politeknik Penerbangan Surabaya

Correspondent Email: rinahaqqyraff@gmail.com

### ABSTRACT

**Introduction:** The increasingly massive spread of the Covid 19 pandemic in the community and the existence of physical distancing rules, urged teachers to develop an effective learning model. Blended learning is the mixing of conventional (face-to-face) learning models with online learning. The purpose of this study was to determine the effectiveness of the implementation of the blended learning on the learning outcomes of community nursing practice. **Method:** The research design used the Pre-Experiment One Group Pretest-Post test. The sampling technique was purposive sampling, with respondents as many as 50 nursing students who met the inclusion criteria of the study. The learning outcomes research instrument used a knowledge questionnaire and practical skills observation. Data processing includes univariate analysis with percentages, and bivariate analysis using the Wilcoxon Signed Ranks Test. **Results:** Learning outcomes before participating in community nursing practice were 40% very good and 40% good, while the learning outcomes after participating in community nursing practice were 60% very good. There was a significant increase in learning outcomes between before and after the application of blended learning, namely being very good as much as 50%. Blended learning is proven to be effective in improving the learning outcomes (Pv 0,000, CI 95%). **Conclusions:** This study supports feasibility blended learning strategies based on are able to produce an increase in the learning outcomes of nursing students. The blended learning approach is an effective alternative to conventional approaches in nursing education, especially at the Ners professional stage during the Covid 19 pandemic.

**Keywords:** *Learning Outcomes, Implementation, Blended Learning*

## INTRODUCTION

Covid-19 is a new type of disease and is very contagious. The prevalence of Covid-19 reached 2,883,603 people with the death rate reaching 198,824. In Indonesia, the number of Covid-19 sufferers reached 9,069 people with a death rate of 1,151 people. The high incidence and risk of death have made many parties try to break the chain of Covid-19 transmission in various ways, such as the application of large-scale social restrictions and changes to the school and lecture system into an online system (WHO, 2020a); (Kemenkes, 2020)

The Covid 19 pandemic is attacking almost every country. The massive spread of Covid-19 in various countries has caused changes in the world of education (WHO, 2020b); (Widiyani, 2020). The impact of the spread of the covid-19 virus has forced all physical distancing policies to be carried out in an effort to minimize and prevent the spread of the covid-19 virus (Kemendikbud, 2020). The Covid-19 pandemic has changed the world of education starting from the learning process, which is usually done in the classroom face-to-face, but since the pandemic took place, it has turned into learning online (Pangaribuan, 2021).

The current condition where all activities are carried out online including lectures makes everyone have to adapt well. Of course, lectures conducted online have a different atmosphere from lectures conducted offline (Iman, 2020). Argaheni (2020) states that online learning has several impacts on students, namely confusing students, students becoming passive, less creative, and students experiencing stress.

Mosa, Yoo and Sheets (2011), Shahaimi (2016), Hussin *et al.*, (2013), suggest that blended learning is a mixed learning pattern consisting of two main elements, namely face-to-face learning with online learning. Online learning is carried out through various applications that can support the learning process starting from face-to-face applications such as zoom, google meet, and other online media platforms such as google classroom, whatsapp group, youtube. Owston, York and Murtha, (2013) blended learning is more comfortable, more interesting, and they feel that learning concepts is better than face-to-face learning. Yossy *et al.*, (2018) stated that students are more satisfied with learning using blended learning compared to learning using full e-learning and also only face-to-face in class without e-learning.

Blended learning can improve student learning outcomes. Learning outcomes are an expression of educational goals, which is a statement of what is expected to be known, understood, and can be done by students after completing a learning period. Learning outcomes are abilities obtained through the internalization of knowledge, attitudes, skills, competencies, and accumulated work experience (Kemenristekdikti, 2015). Nurse education is a bachelor's level which aims to produce professional nurses. The aim of the Nurse Professional education is to prepare students through professional adjustments in the form of comprehensive clinical and field learning experiences, so that they have professional abilities (AIPNI, 2015). Therefore, it is very important in choosing blended learning strategies for professional student learning during the Covid 19 pandemic so that learning outcomes are achieved.

Research results Kang and Kim (2021) shows that the blended learning method improves learning outcomes in students' knowledge, problem-solving abilities, and learning satisfaction. Wai and Seng (2014) confirmed that blended learning tools actually improve student learning experiences and learning outcomes. Soler *et al.*, (2017) suggest one of the reasons why the combination of face-to-face and virtual, stems from the need to motivate students to carry out various tasks in personal contact with other students and teachers, and thus enable them to learn to live side by side with others in their campus environment and academic culture.

Based on the description above, the researcher intends to conduct research on learning outcomes in blended learning implementation. The purpose of this study was to determine the effectiveness of implementing blended learning with learning outcomes.

## **METHOD**

The research design used the Pre-Experiment One Group Pretest-Post test. The population of this study were all nursing students who took part in community nursing practice in X village, totaling 53 students. The research sampling used purposive sampling. The sample of this research is some students who follow community nursing practice in X village who meet the inclusion criteria, amounting to 50 students. In this study, the inclusion criteria were nursing students who were actively registered in the academic section, willing to become research respondents. Meanwhile, the exclusion criteria were the attendance rate of students in practice less than 75%.

### *Instruments:*

The learning outcomes research instrument used a knowledge questionnaire and practical skills observation. The questionnaire consisted of 20 questions about community nursing care knowledge developed from assessment indicators, nursing diagnoses, implementation and evaluation. The questionnaire uses multiple choice answers, if the correct answer is given a value of 1 and if incorrect it is given a value of 0. The questionnaire trial was given to 10 students as a pilot project, all questions were valid ( $r$  count the lowest 0.692 to the highest 0.910 >  $r$  table 0.632). Reliability test results show that the results of Cronbach's Alpha 0.870 are considered reliable because the calculated value of Cronbach's Alpha is more significant than 0.7. Observation is used to measure students' practical skills which are developed based on indicators of preparation, implementation and termination. Learning outcomes are a combination of assessments of knowledge and practical skills which are divided into two. Measurement of learning achievement is categorized as: A: very good (score 80-100), B: good (score 70-79), C: enough, score 60-69), D: poor (score 50-59), and E: very less (value <50).

### *Procedure*

Research begins with submitting a research application and after receiving a research reply regarding research approval / permit, the research begins. The researcher explains the research objectives to the respondents and asks the respondent's approval for the research. Respondents were given a pre-test about learning outcomes. The intervention was provided through community nursing practice assistance with blended learning (face-to-face and online) for 4 weeks. Furthermore, the measurement of learning outcomes posttest was carried out. The organizing in the implementation of blended learning is as follows:

1. The activity begins with a face-to-face pre-test of learning outcomes (knowledge and practical performance abilities).
2. The intervention was carried out for 4 weeks with a combination of mentoring 50% face-to-face practice and 50% virtual activities, which are described as follows:

- a. Week I: face-to-face guidance is carried out 2 hours for 2 times a week related to the assessment of community nursing care.
- b. Week II: Face-to-face tutoring is 2 hours and virtual 2 hours a week related to community nursing planning.
- c. Week III: 2 hours virtual tutoring for 2 times a week related to nursing interventions and tutoring activities in virtual communities.
- d. Week IV: Face-to-face tutoring is done 2 hours and virtual 2 hours a week related to community nursing evaluations.

Virtual platform using google classroom, videoconferencing, chats, messaging. In addition, they use free access: ebook, ejournal, google drive, blog, web. Guidance techniques are carried out through tutorials, discussions, case studies, bedside teaching, pre and post conference.

3. Post face-to-face learning outcomes test.

*Data Analysis*

Data processing includes univariate analysis with percentages, and bivariate analysis using the Wilcoxon Signed Ranks Test. Univariate analysis was used to assess learning achievement both pre-test and post-test. Bivariate analysis was carried out to analyze the effect of the application of blended learning on learning outcomes. If Pvalue <α (0.05), then there is an effect of the application of blended learning on learning outcomes.

*Ethical Clearance*

Researchers used research principles during the study which included anonymity, confidentiality, informed concentration, and fairness. The research has been carried out by an ethical test RK.013/KEPK/STIK/III/2021 from STIKes Husada Maluku.

**FINDING AND DISCUSSION**

**Table 1. Characteristics of Respondent in Blended Learning**

<b>Characteristics</b>	<b>n</b>	<b>%</b>
<b>Age:</b>		
16-20 years	4	8
21-25 years	46	92
<b>Gender:</b>		
Female	32	64
Male	18	36
<b>Profession:</b>		
Does not work	41	82
Works	9	18
<b>Reason for Studying:</b>		
Parents' wishes	10	20
Own desire	40	80

<b>Parental support:</b>		
Not good	2	4
Good	48	96
<b>Facilities support:</b>		
Less support	17	34
Supports	33	66
<b>Availability of Funds:</b>		
Less	12	24
Sufficient	38	76
<b>Jumlah</b>	<b>50</b>	<b>100</b>

Based on table 1, it is found that most of the respondents are 21-25 years old (92%) with female gender (64%). Most of respondents did not work (82%), and the reason for studying from own desire (80%). Almost one hundred percent of them received the good parental support (96%), good practical facilities support (66%), and sufficient funds (76%).

**Table 2. Effectiveness of Blended Learning Implementation on Learning Outcomes**

Learning Outcomes	PreTest		PostTest		Pvalue	CI
	f	%	f	%		
<b>Very Good (A)</b>	20	40	30	60	0,000	95%
<b>Good (B)</b>	20	40	20	40		
<b>Enough (C)</b>	10	20	0	0		
<b>Total</b>	50	100	50	100		

Based on table 2, most of the learning outcomes before participating in blended learning were 40% very good and 40% good, while the learning outcomes after participating in blended learning were 60% very good. There was a significant increase in learning outcomes between before and after the application of blended learning, namely being very good as much as 50%. In the table the value of Pvalue 0.000. Because the sig. value of 0.000 < 0.05, then H0 is rejected and H1 is accepted, meaning that there is an effect of the application of blended learning with learning outcomes.

## DISCUSSION

Nurse education is a bachelor's level which aims to produce professional nurses. The aim of the Nurse Professional education is to prepare students through professional

adjustments in the form of comprehensive clinical and field learning experiences, so that they have professional abilities (AIPNI, 2015). Therefore, it is very important in choosing effective learning strategies for professional student learning during the Covid 19 pandemic so that learning outcomes are achieved.

Based on table 2, most of the learning outcomes before participating in community nursing practice were 40% very good and 40% good, while the learning outcomes after participating in community nursing practice were 60% very good. There was a significant increase in learning outcomes between before and after the application of blended learning, namely being very good as much as 50%. In the table the value of Pvalue 0.000. Because the sig value of  $0.000 < 0.05$ , then  $H_0$  is rejected and  $H_1$  is accepted, meaning that there is an effect of the application of blended learning with learning outcomes.

Blended learning can improve student learning outcomes. Learning outcomes are an expression of educational goals, which is a statement of what is expected to be known, understood, and can be done by students after completing a learning period. Learning outcomes are abilities obtained through the internalization of knowledge, attitudes, skills, competencies, and accumulated work experience (Kemenristekdikti, 2015).

Research results Kang and Kim (2021) shows that the blended learning method improves learning outcomes in students' knowledge, problem-solving abilities, and learning satisfaction. Wai and Seng (2014) confirmed that blended learning tools actually improve student learning experiences and learning outcomes. Klentien and Wannasawade (2016) argues that this learning model can be used to improve analytical thinking skills and evaluate abilities in carrying out science projects. Ellis and FeifeiHan (2016) stated that students have different experiences when participating in blended learning and are more successful. Hubackova and Semradova (2016) stated success of blended learning depends not only on the quality of the course and the virtual environment but also on the grade to which the students are prepared to work in their virtual study environment.

Through face-to-face and online learning in guiding nursing students at the professional stage, nurses can improve learning outcomes. The intervention was provided through community nursing practice with blended learning (face-to-face and online) for 4 weeks. The intervention was carried out for 4 weeks with a combination of mentoring 50% face-to-face practice and 50% virtual activities. Virtual platform using google classroom, videoconferencing, chats, messaging. In addition, they use free access: ebook, ejournal, google drive, blog, web. Guidance techniques are carried out through tutorials, discussions, case studies, bedside teaching, pre and post conference.

## **CONCLUSION**

Blended learning is proven to be effective in improving the learning outcomes (Pv 0,000, CI 95%). This study supports feasibility blended learning strategies based on are able to produce an increase in the learning outcomes of nursing students. The blended learning approach is an effective alternative to conventional approaches in nursing education, especially at the Ners professional stage during the Covid 19 pandemic.

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