Jurnal Pendidikan dan Konseling
Volume 4 Nomor 4 tahun 2022
E-ISSN: 2685-936X dan P-ISSN: 2685-9351
Universitas Pahlawan Tuanku Tambusai

Effectiveness of Using eLDirU-Based Blended Learning Model to Prevent Post-Pandemic Learning Loss in Basic Swimming Practicum

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Abstract

The Covid-19 pandemic that has occurred in the past two years has changed many sectors, including the education sector. Learning activities that are usually carried out face-to-face have to be carried out online. This of course can trigger learning loss in students. Especially in basic swimming lessons which require practice to ensure students understand and can practice various styles in swimming. Blended learning in this study is a model that combines eLDirU-based online learning and offline learning, which is deemed appropriate to prevent learning loss in students. This research is a pre-experimental with one group pre-test and post-test design. The population in this study were 40 second semester students majoring in Physical Education for the 2021/2022 academic year. The sampling technique used total sampling with a sample of 40 students. The data used in the form of student practice results in basic swimming practicum learning, then analyzed using univariate and bivariate analysis. The results of this study indicate that there is an effect using the eLDirU-based blended learning model to prevent learning loss after the Covid-19 pandemic in basic swimming practicum with an Asymp. Sig (2-tailed) 0,000. It is hoped that learning using a blended learning model based on eLDirU can prevent learning loss for students, not only in basic swimming practicum, but also in other subjects.

Keywords: *Blended Learning, Learning Loss, Swimming, Practice, Eldiru, Learning Achievement*

Abstrak

Pandemi Covid-19 yang terjadi dua tahun belakangan telah banyak mengubah berbagai sektor, tidak terkecuali sektor pendidikan. Kegiatan pembelajaran yang biasanya dilaksanakan dengan tatap muka langsung terpaksa dilaksanakan secara daring. Hal ini tentu dapat memicu terjadinya *learning loss* pada mahasiswa. Terutama pada pembelajaran renang dasar yang membutuhkan adanya praktik untuk memastikan mahasiswa memahami dan dapat mempraktikkan berbagai gaya dalam renang. *Blended learning* dalam penelitian ini merupakan model yang menggabungkan antara pembelajaran daring berbasis eLDirU dan pembelajaran luring, yang dirasa tepat untuk mencegah terjadinya *learning loss* pada mahasiswa. Penelitian ini merupakan *pra eksperimental* dengan *one group pre test and post test design.* Populasi dalam penelitian ini adalah 40 mahasiswa semester 2 jurusan Pendidikan Jasmani tahun ajaran 2021/2022. Teknik pengambilan sampel menggunakan *total sampling* dengan jumlah sampel 40 mahasiswa. Data yang digunakan berupa hasil praktik mahasiswa pada pembelajaran praktikum renang dasar, kemudian dianalisis menggunakan analisis univariat dan bivariat. Hasil penelitian ini menunjukkan bahwa terdapat pengaruh penggunaan model *blended learning* berbasis eLDirU untuk mencegah *learning loss* pasca pandemi Covid-19 pada praktikum renang dasar dengan nilai Asymp. Sig (2-tailed) 0,000. Diharapkan dengan adanya pembelajaran menggunakan model *blended learning* berbasis eLDirU dapat mencegah terjadinya *learning loss* pada mahasiswa, tidak hanya pada praktikum renang dasar, tetapi juga pada mata kuliah lainnya.

Kata Kunci: *Blended Learning, Learning Loss, Renang, Praktik, Eldiru, Prestasi Belajar*

INTRODUCTION

The Covid-19 pandemic that has occured over the past two years has caused many changes in various fields, such as business, tourism, transportation, and of course in education fields (Parsoya & Perwej, 2021). As we know that education is an absolute thing to do, even in the midst of a pandemic like today. On the one hand, education must go on, but on the other hand the education carried out must not exacerbate the spread of the SARS-CoV2 virus as the cause of Covid-19 pandemic. Therefore, the online learning is considered as one of the solutions offered in the education sector to keep it running in the midst of this pandemic with various online

learning technologies, such as the use of laptops and mobile phones to support online learning (Buhari & Sari, 2022; Padmo & Ardiasih, 2020).

Even though it is considered an ideal solution for learning in the midst of a pandemic, in fact, online learning is not easy to do (Saputri & Pradana, 2021). There are many obstacles that arise in the implementation of online learning, such as lack of knowledge about information and communication technology, learning tends to be boring, difficulty understanding learning materials, less supportive learning facilities and infrastructure, and the lack of student willingness to learn independently (Prawanti & Sumarni, 2020). This makes online learning has many implementation challenges that can trigger learning loss in students (Mauldya et al., 2021).

Learning loss is a condition where students lose their knowledge and skills caused by certain conditions, causing a decrease in student competency mastery (Cerelia et al., 2021). This decline in mastery of competencies can be marked by a decreased in student learning achievement which indicates a learning loss during online learning during the Covid-19 pandemic. If it is not addressed immediately, this learning loss can lead to delays in the further learning process which will also have an impact on student achievement in the future.

The condition of the Covid-19 pandemic in Indonesia, which continued to improve in early 2022, made teaching and learning activities in the realm of higher education able to be carried out directly (offline learning). This is a good thing for students to prevent prelonged learning loss. There needs to be a learning model that can support students to improve learning achievement and prevent learning loss due to online learning during the Covid-19 pandemic.

The blended learning model is considered as one of the post-pandemic learning solutions to overcome learning loss in students (Jojor & Sihotang, 2022). This blended learning model is a combination of two learning models, namely face-to-face learning and distance learning using technology media (Rahmani, 2022). By combining online learning with offline learning, it is appropriate for students in the post-Covid-19 pandemic as it is today by not drastically changing the learning process, where some learning is carried out online and some offline.

Online learning at Jenderal Soedirman University is carried out through the e-Learning of Jenderal Soedirman University (eLDirU) media. eLDirU is a virtual class that can be used in teaching and learning activities between lecturers and students that has various features such as sharing lecture material, sharing videos, collecting assignments, filling in attendance lists, discussion forums and many other features. eLDirU is a medium used during online lectures during Covid-19 pandemic.

Students of Jenderal Soedirman University are accustomed to using eLDirU as a means of online lectures. Although at the beginning of 2022, offline learning has been carried out, the use of eLDirU media is still considered quite helpful, especially for students to access lecture materials anytime and anywhere. Therefore when there is a face-to-face learning process in class, students already have the knowledge obtained from the material provided that has been uploaded on the eLDirU page. This is an effective example of applying blended learning in teaching and learning activities.

Teaching and learning activities carried out in the Department of Physical Education, Faculty of Health Sciences, Jenderal Soedirman University, during the Covid-19 pandemic period were carried out online. This raises many problems because the majority of lecture material is practical material, so it is difficult to implement indirectly through online learning. One example of the practical material learned is basic swimming material. In this material, students are expected to be able to practice various swimming styles such as breaststroke and backstroke. However, because the learning activities are carried out online, it is difficult for students to learn directly and receive input from lecturers on their learning achievements. In addition, not all students have access to a swimming pool, therefore it is difficult to practice the material that has been obtained from the eLDirU media. Various obstacles that arise in online learning during the Covid-19 pandemic can refer to the occurrence of student learning losses, especially in basic swimming material. Based on this background, the blended learning model is considered the right model to prevent student learning loss in basic swimming material, because it combines eLDirU-based online learning and offline learning.

This study aims to determine the effectiveness of using eLDirU-based blended learning model to prevent learning loss in basic swimming material for second semester students majoring in Physical Education, Faculty of Health Sciences, Jenderal Soedirman University. This research is important because learning loss can have an adverse impact if it is not addressed immediately. Therefore, the results of this study are expected to contribute to a learning model that is suitable for use in the post-pandemic period as it is today to prevent learning loss in

students which is marked by an increase in student learning achievement.

METHOD

This article is the result of pre-experimental research with one group pre-test and post-test design. The sample was given an initial test (pre test) before being given treatment, and given a final test (post test) after being given treatment. The treatment given in this study is basic swimming learning using an eLDirU-based blended learning model to prevent learning loss in students in the post-pandemic situation. This research was conducted at the Department of Physical Education, Faculty of Health Sciences, Jenderal Soedirman University. The population in this study were second semester students majoring in Physical Education, Faculty of Health Sciences, Jenderal Soedirman University in the even semester of the 2021/2022 academic year who took the basic swimming course as many as 40 students. While the sampling technique uses total sampling, therefore the number of samples is the same as the number of population, namely 40 students.

This study uses a tool in the form of pre-test and post-test assessment results that are filled in based on students' basic swimming practice learning achievements. The analysis used in this article is univariate analysis and bivariate analysis. Univariate analysis was used to see the frequency distribution of students' learning achievement in basic swimming practice in the pre-test and post-test using the SPSS application. Meanwhile, bivariate analysis was used to examine differences in student achievement in basic swimming practice before and after being given learning using the eLDirU-based blended learning model. The statistical test used for the analysis in this article is a non-parametric statistical test using the Wilcoxon test with the SPSS application, where the subject is measured twice, namely before and after learning using the eLDirU-based blended learning model.

RESULT AND DISCUSSION

The following are the result of the frequency distribution of learning achievement in basic swimming practice for Physical Education students before using the eLDirU-based blended learning model to prevent learning loss.

Table 1. Frequency Distribution of Learning Achievement Before Using the eLDirU-Based Blended Learning Model

Basic Swimming Learning Achievement	Frequency (n)	Percentage (%)
Good	4	10%
Enough	11	28%
Less	25	62%
Total	40	100%

(Source: Primary data proceed, 2022)

Table 1 shows the frequency distribution of basic swimming learning achievements before learning using the eLDirU-based blended learning model for second semester students majoring in Physical Education, Faculty of Health Sciences, Jenderal Soedirman University in the even semester of the 2021/2022 academic year. The result of the frequency distribution table shows that the majority of students have less learning achievement in swimming practice as many as 25 students (62%). Meanwhile, there were 11 students (28%) who had sufficient learning achievement scores in swimming practice, and the remaining 4 students (10%) had good swimming practice learning achievements.

Table 2. Frequency Distribution of Learning Achievement
Before Using the eLDirU-Based Blended Learning Model

Basic Swimming Learning Achievement	Frequency (n)	Percentage (%)
Good	29	72%
Enough	11	28%
Less	0	0%
Total	40	100%

(Source: Primary data proceed, 2022)

Table 2 of the frequency distribution of basic swimming learning achievement after using the eLDirU-based blended learning model for students majoring in Physical Education, Faculty of Health Sciences, Jenderal Soedirman University, shows that the majority of students have had good basic swimming learning achievements, namely 29 students (72%) and the rest as many as 11 students (28%) had sufficient basic swimming learning achievement and there were no students who lacked basic swimming learning achievement after being treated using the eLDirU-based blended learning model.

Table 3. Wilcoxon Singed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
Post Test - Pre Test	Negative Ranks	0[a]	,00	,00
	Positive Ranks	40[b]	20,50	820,00
	Ties	0[c]		
	Total	40		

a. Post Test < Pre Test
b. Post Test > Pre Test
c. Post Test = Pre Test
(Source: Primary data proceed, 2022)

Based on the table 3, the result of the Wilcoxon Singed Rank Test show negative ranks or the negative difference between basic swimming learning achievement before using the eLDirU-based blended learning model and after using the eLDirU-based blended learning model is 0, both in the value of n, mean rank, and sum rank. This shows that there is no decrease in student learning achievement from the pre-test to the post-test. Meanwhile, the positive ranks or the positive difference between students' basic swimming learning achievement before using the eLDirU-based blended learning model and after using eLDirU-based blended learning model showed a value of n 40, which means that there were 40 students who experienced an increase in basic swimming learning achievement from the pre-test value to the post-test value. The average increase in students can be seen in the mean rank value of 20,50, and the number of positive ranks or sum of the ranks is 820. Then the ties which are worth 0 indicate that there is no learning achievement that is the same between the scores on the pre-test and the scores on the post-test.

Table 4. Hypothesis Testing Result

Test Statistics[a]

	Post Test - Pre Test
Z	-5,517[b]
Asymp. Sig. (2-tailed)	,000

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.
(Source: Primary data proceed, 2022)

Based on the results of hypothesis testing in table 4, it is known that the value of Asymp. Sig (2-tailed) is worth 0,000. This means that the value of 0,000 < 0,05. Therefore it can be concluded that there is a difference between students' basic swimming practice learning achievement before and after using the eLDirU-based blended learning model to prevent learning loss after the Covid-19 pandemic.

DISCUSSION

The learning process at the Department of Physical Education, Faculty of Health Sciences, Jenderal Soedirman University during the Covid-19 pandemic was carried out online, according to the recommendation of the Minister of Education, Culture and Higher Education of the Republic of Indonesia. Even though the majority of courses in the Physical Education department are practical courses that are difficult to implement through online learning. Therefore, it is feared that there will be learning loss as a result of this pandemic online learning.

To determine the initial ability of students, a pre-test was carried out to determine the level of learning achievement in basic swimming practice for Physical Education students. Based on the result of the pre-test, it showed that the majority of students had poor learning achievement in swimming practice as many as 25 students (62%). Meanwhile, there were 11 students (28%) who had sufficient learning achievement scores in swimming practice, and the remaining 4 students (10%) already had good swimming practice learning achievements. Based on the results of the pre-test shown in table 1 of the frequency distribution of basic swimming learning achievement, it is necessary to make improvements to the learning model used to prevent learning loss.

The use of the eLDirU-based blended learning model to prevent learning loss in basic swimming practice for second semester students majoring in Physical Education, Faculty of Health Sciences, Jenderal Soedirman University, is implemented by combining online and offline learning methods through a blended learning model. Online learning in this blended learning model uses the eLDirU application base as a virtual class owned by Jenderal Soedirman University. In this online learning, the lecturer provides material in the form of a basic swimming tutorial video which is uploaded on the YouTube page and then distributed to the eLDirU virtual class, therefore that student can study it before the face-to-face lectures begin. This is a form of blended learning where students can study lecture material anywhere and anytime, even before face-to-face activities begin. Through this eLDirU-based online learning, it is hoped that students have studied the material distributed before the face-to-face lectures are held. Then learning with the blended learning model is continued with face-to-face activities to learn basic swimming directly and conduct discussions and ask questions if there is material that has not been understood by students.

After the learning process is done using the eLDirU-based blended learning model, it can be seen the results of student learning achievement in basic swimming practice through the post-test scores that have been carried out. The result of the post-test showed that the majority of students had good basic swimming learning achievements, namely 29 students (72%) and the remaining 11 students (28%) had sufficient basic swimming learning achievements and there were no students who lacked basic swimming learning achievements. This indicates that there is an increase in students' learning achievement in basic swimming practice from the pre-test before the implementation of eLDirU-based blended learning model to learning achievement in the post-test after the implementation of eLDirU-based blended learning model was carried out.

Based on the result of the Wilcoxon test to determine the effectiveness of using the eLDirU-based blended learning model to prevent learning loss in Physical Education students, it shows the value of Asymp. Sig (2-tailed) is 0,000 < 0,05. Therefore it can be concluded that there is a difference between students' basic swimming practice learning achievement before and after using eLDirU-based blended learning model to prevent learning loss after the Covid-19 pandemic.

Learning loss as one of the impacts of the Covid-19 pandemic on the education sector is unavoidable. This phenomenon occurs because there is no direct interaction between lecturers and students in the learning process (Pratiwi, 2021), which is caused by abnormal events such as the Covid-19 pandemic (Donnelly & Patrinos, 2021). This learning loss appears as a result of the ineffectiveness of the existing learning process, so that it can have an impact on student learning achievement and the quality of the resulting human resources (Kashyap et al., 2021).

The blended learning model as a learning model is a form of combination learning between face-to-face learning and online learning that utilizes the role of technology (Kurniawati et al., 2019). Through the application of the eLDirU-based blended learning model, it is hoped that the ongoing learning process will be

more effective. Based on the result of hypothesis testing in this article, it shows that the eLDirU-based blended learning model is proven to be effective in improving learning achievement in basic swimming practices for Physical Education students at Jenderal Soedirman University. This is in line with the research conducted by Ramadhan et al., (2022); Hendra et al., (2021); and Atika et al., (2020) which states that the blended learning model has a positive effect on improving student achievement. This means that if learning applies the blended learning model, the student's learning achievement is better than learning that does not apply the blended learning model.

The application of the eLDirU-based blended learning model makes students feel enthusiastic in carrying out online and offline learning. The enthusiasm of students in learning is a good thing for student achievement. Students feel enthusiastic to learn because of the combination of conventional learning face-to-face and also learning using eLDirU-based technology. Students can experience different learning experiences, namely learning from anywhere and anytime through eLDirU, therefore that the knowledge gained by students is not limited to face-to-face meetings. And the advantage of this blended learning model is that students can still carry out face-to-face learning activities directly with lecturers to discuss and learn more about materials that have been studied online previously through eLDirU.

The presence of learning in the post-Covid-19 pandemic era that uses technology media makes students enthusiastic in learning because learning activities can be carried out anywhere and anytime. However, this online learning activity also has a direct impact where students sometimes find it difficult to understand the material with an online learning system like this. Therefore, the application of the blended learning model is considered as one of the post-pandemic learning solutions that can combine conventional learning with online learning which can effectively prevent learning loss which is marked by an increase in student learning achievement in basic swimming practices.

CONCLUSION

Learning after the Covid-19 pandemic as it is today is a unique learning, because it can combine online learning and offline learning, one of which is through the eLDirU-based blended learning model. The application of the eLDirU-based blended learning model has proven to be effective in preventing occurrence of learning loss in students, which is marked by an increase in students' learning achievement in basic swimming practices during pre-test and post-test. This indicates that the eLDirU-based blended learning model is one of the appropriate learning models to use to prevent learning loss due to online learning during the Covid-19 pandemic. It is hoped that with the results of this research, the blended learning model can be implemented not only in the learning of basic swimming practicum courses, but also in learning other subjects from various majors

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