

The effectiveness of video-based learning media and skills practicum module in diploma nursing students during the COVID-19 pandemic at the Faculty of Nursing, Universitas Nahdlatul Ulama Surabaya



Sulistiyorini^{1*}, Iis Noventi¹, Priyo Mukti Pribadi Winoto¹,
Siti Nur Hasina¹, Faridah Umamah¹

ABSTRACT

Background: Educational science is a reciprocal adjustment process between humans and humans and nature as a regular development and improvement of all moral, intellectual, and physical potentials. In the learning process in the clinical laboratory, lecturers only use textbooks or observation sheets and do not get videos and modules as media in the learning process in the clinical laboratory about nursing skills. Students can choose learning styles through video media and modules to understand nursing materials and skills. This study aims to identify the effectiveness of implementing the clinical skills learning process in the laboratory for nursing students during the COVID-19 pandemic with video media and modules at Universitas Nahdlatul Ulama Surabaya (UNUSA).

Methods: This research is a descriptive quantitative study. The selected population is laboratory practicum educators of UNUSA diploma nursing students during the year 2021. The sample was randomly selected, and 60 diploma Nursing students who had used learning media with videos and skill modules made by teaching lecturers during the COVID-19 pandemic were selected. The instrument is designed as a questionnaire regarding various student opinions on online learning with video media and clinical skills modules during the COVID-19 pandemic. Data were collected using a questionnaire and analyzed by t-test and multiple linear regression.

Results: The results showed that there was an effect of video learning media on the learning outcomes of skills in the laboratory for diploma nursing students ($b=6.64$; $p=0.023$), and there was no effect of learning styles on the learning outcomes of infusion skills ($b=6.38$; $p=0.111$) from the results of multiple linear regression analysis, there is an effect of using video learning media and student learning styles on nursing skills learning outcomes in the laboratory, the effect is statistically significant ($b=6.64$; $p=0.041$).

Conclusion: This research concludes that using video learning media and modules is very effective in the learning process in clinical laboratories' nursing skills. Therefore, it is recommended that all lecturers make video media and modules about nursing skills per the Standard Operating Procedures from Persatuan Perawat Nasional Indonesia (PPNI) to facilitate the learning process in the laboratory and clinic.

Keywords: effectiveness, video learning media and modules, skills practicum.

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¹Department of Nursing, Faculty of Nursing and Midwifery, Universitas Nahdlatul Ulama Surabaya, Surabaya, Indonesia.

*Corresponding author:

Sulistiyorini;
Department of Nursing, Faculty of Nursing and Midwifery, Universitas Nahdlatul Ulama Surabaya, Surabaya, Indonesia;

sulistiyorini@unusa.ac.id

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INTRODUCTION

Education has an important role in people's lives today.^{1,2} Science process skills are one of the important skills in the 21st century. Science process skills are sophisticated competencies frequently used by scientists in research on various learning processes.³ Science process skills are actions that support knowledge acquisition abilities. A learning strategy or paradigm known as "laboratory practice" is used to

develop information (cognitive), attitudes (affective), and skills (psychomotor) while utilizing laboratory resources.⁴ According to the main goal of nursing students who are indeed professions of application in health service clinics, the percentage of clinical skills is more in the learning curriculum.

The number of COVID-19 cases worldwide keeps rising; as of July 2020, there were 13,224,909 cases found in 215

countries, with a mortality toll of 574,903.⁵ In Indonesia, the number of cases reached 76,981, with a death rate of 2,535 on July 14, 2020. The COVID-19 virus will never be finished from the face of this earth, even though the government has made various efforts to prevent its transmission. This event forces universities to quickly change the face-to-face learning system into distance learning using online technology. Meanwhile, the world of education must

continue to advance for the future of the nation's generation. The COVID-19 pandemic has affected all education systems at all levels of primary education to tertiary institutions, including the Universitas Nahdhatul Ulama Surabaya. Online learning is an activity that involves learning while interacting with the internet and local area networks, such as through receiving material.⁶⁻⁸

Even the results of research around the world prove that online learning is effective as a medium in conveying knowledge and skills according to the expected competencies. Technological barriers include poor application knowledge, a sluggish or inconsistent internet connection, out-of-date communication tools, and incompatible browsers.⁹

Based on the background described, we tried to use video media that students could see anywhere and anytime. They can use Wi-Fi in public facilities that provide Wi-Fi services without worrying about internet network disturbances. With videos made by teaching lecturers, students are expected to save the video on their cellphones or laptops, which can be studied whenever they have time. While the second alternative used by researchers for learning skills of nursing students through modules containing material and pictures of skills that students must master without using the internet network. This study aims to identify the effectiveness of implementing the clinical skills learning process in the laboratory for nursing students during the COVID-19 pandemic with video media and modules at Universitas Nahdhatul Ulama Surabaya.

MATERIALS AND METHODS

The methodology used in this research is descriptive quantitative. The population

chosen was the laboratory practicum educator of Universitas Nahdhatul Ulama Surabaya diploma nursing students in 2021. The sample was randomly selected, and 60 diploma nursing students who had used learning media with videos and skill modules made by teaching lecturers during the COVID-19 pandemic were selected. The instrument is designed as a questionnaire regarding various student opinions on online learning with video media and clinical skills modules during the COVID-19 pandemic. The questionnaire was distributed through a Whatsapp group of 3rd-semester and 5th-semester diploma students who did receive skill material in the laboratory. The instrument consisted of three parts:

1. Student responses regarding using clinical skills learning media with videos and modules.
2. Student responses regarding the effectiveness of using video media and modules
3. Students benefit from online learning with video and module media during the pandemic.

Sampling was done by using a total sampling technique where the researcher took all the source population. Subjects were then divided into two groups: group A as an experimental group using Basic Life Support (BLS) video learning media and Group B as a comparison using the BLS practicum module media. The inclusion criteria in this study are students who entered college, and the percentage of lecture attendance was at least 80%, so the

number of research samples became 55 people, namely 28 people as the treatment group and 27 people as the treatment group people as a control group. The exclusion criteria were subjects who did not fulfill the minimum percentage of lecture attendance.

RESULTS

Based on Table 1, it can be illustrated that according to gender, the majority of respondents were female, namely 33 respondents (60%), consisting of 17 respondents (60.71%) as the treatment group and 16 respondents (59.26%) as a control group.

There is an effect of using video on improving BLS skills. On average, students who received video learning media had 6.64 units of BLS skills higher than the module group, and the difference was statistically significant ($b=6.64$; 95% CI=0.93 to 12.35; Table 2). There is no effect of learning style on improving BLS skills. On average, students with auditory learning styles had BLS skills 6.38 units higher than visual ones, and the difference was not statistically significant ($b=6.38$; 95% CI= 1.51 to 14.29), and students with kinesthetic learning styles had average skills. BLS 49 0.90 units lower than visual, and the difference was not statistically significant ($b= 0.90$; 95% CI= 8.21 to 6.41). The effect of using video learning media and module media on BLS skills is statistically significant ($b=6.64$; $p=0.041$; $R^2 = 9.84\%$).

Table 1. Sex distribution between study groups

Sex	Treatment group		Control group		Total
	n	%	n	%	
Male	11	39.29	11	40.74	22
Female	17	60.71	16	59.26	33
Total	28	100	27	100	55

Table 2. Effects of learning media and learning style between study groups

Variable	b	t	p	95% confidence interval		R ²	p-value
				Lower	Upper		
Learning media							
- Module	0	-	-	-	-		
- Video	6.64	2.34	0.023	0.93	12.35	9.84%	0.041
Learning style							
- Visual	0	-	-	-	-		
- Auditorial	6.38	1.62	0.11	-1.51	14.29		
- Kinesthetic	-0.90	-0.25	0.81	-8.21	6.41		
Constant	70.70	30.70	0.00	66.08	75.32		

DISCUSSION

The effectiveness of learning lab skills with online learning video media in the skills lab practicum module has advantages and disadvantages.¹⁰ The skill lab allows students to practice clinical and laboratory abilities or skills. Laboratory skills/lab skills have a major impact in increasing the achievement of clinical skills for students to achieve competency standards according to their educational level.¹¹ In preparing students' clinical abilities, there are many ways that supervisors provide practical learning in the laboratory, either in the form of simulations, demonstrations, practicum modules or online learning videos. BLS skills are very suitable for making videos and learning modules. According to the analysis's findings, there was a statistically significant ($p=0.023$) effect of using video to improve BLS skills, with students receiving video learning media having an average BLS skill level of 6.64 units higher than that of the module. With video learning, students can repeat movements they do not understand and get a clearer understanding of the information being presented.

Research often suggests that lecturers use new video technology sources such as YouTube. YouTube videos are considered an effective channel and a valuable instrument for health education.¹² According to research conducted by Ebner, 2020, "videos can save learning time as much as 43% of the time provided to achieve the learning objectives set".¹³ It can be concluded that videos can help students achieve learning goals. The more concrete the videos, the more experience provided will ensure that the learning process occurs efficiently.

Meanwhile, on average, the auditory learning style had 6.38 units of BLS skills higher than visual, and the difference was not statistically significant ($p=0.111$), and students with kinesthetic learning styles averaged BLS skills 0.90 units lower than visual ones. The difference was not statistically significant ($p=0.81$), probably due to each individual having their own way of receiving information. Some students like visual learning, some prefer listening, and some prefer collaborating or discussing with friends. Learning videos provided in accordance with the

material can increase student motivation and retention of knowledge of online materials presented.¹⁴ This learning style should also be considered early by the lecturer or teacher in determining the teaching method because a good method is a teaching method that is suitable for each student's learning style in terms of understanding.

Based on the analysis results, it was found that there was an effect of using video learning media and student learning styles on the learning outcomes of BLS skills; the effect was statistically significant ($p = 0.041$; $R2 = 9.84\%$). Video media is an educational medium that has audio and visual elements. Sound and visual elements are also more dominant to provide a clearer picture of the information conveyed. The advantages of using video media include re-showing movements by using certain effects that can affect the student's learning process. In accordance with the theory expressed by Sadiman (2002) that the advantage of video is that it can attract the attention of the audience, difficult demonstrations can be prepared and recorded beforehand so that the presentation saves time, and the recording can be played over and over again.¹⁵

Characteristics of learners and the quality of learning have a close relationship in the learning process to achieve learning objectives and acquire learning outcomes. Thus, learning media (including textbooks and instructional videos on infusion) can make the learning process active, and students are more motivated to learn according to their interests and abilities.¹⁶ This will make the learning process more effective and positively affect learning outcomes.

The study's weakness is that it only examines the effect of learning media on the nursing diploma population, so that the effects can only be known in a specific population. Further research with more diverse levels of education and education majors is needed to determine instructional media's broader effects.

CONCLUSION

There is a significant effect of using video learning media on the learning outcomes of installing BLS skills in diploma nursing students, and there is no effect of learning

style on learning outcomes of BLS skills. There is an effect of using video learning media and student learning styles on learning outcomes.

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AUTHOR CONTRIBUTION

All authors contributed equally to this study's preparation, execution, and manuscript writing.

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None.

CONFLICT OF INTEREST

All authors declare no conflict of interest regarding this study publication.

ETHICAL CLEARANCE

This study has been approved by the Ethical Committee of Universitas Nahdlatul Ulama Surabaya with letter No.115/EC/KEPK/UNUSA/2022.

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