

Online Student Team Achievement Division (STAD) Learning Model on Nursing Competency Test Ability

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Abstrak

Pandemi COVID-19 turut berdampak pada transisi pendidikan konvensional menuju pendidikan digital. Pembelajaran digital membutuhkan perangkat lunak sebagai media saat proses pembelajaran. Saat ini media yang paling banyak digunakan dalam pengajaran praktik keperawatan adalah media sosial berupa WhatsApp dan Telegram. Efektivitas penerapan pembelajaran kooperatif salah satunya model STAD dalam meningkatkan kualitas pembelajaran. Tujuan melakukan penelitian tentang peningkatan kemampuan mahasiswa keperawatan dalam menjawab berbagai soal Uji Kompetensi melalui pendekatan model STAD dengan memanfaatkan media sosial WhatsApp. Penelitian ini merupakan penelitian eksperimen semu (quasi eksperimen) dengan desain penelitian berupa rancangan pra-posttest dengan kelompok kontrol (pretest-posttest control design) yang melibatkan dua kelompok yaitu kelompok perlakuan dan kelompok kontrol. Keduanya diberikan pretest, dan posttest tentang pembelajaran metode STAD dengan media WhatsApp serta diberikan intervensi. Penelitian dilaksanakan pada tanggal 14 Juli sampai dengan 27 September 2021 sebanyak 60 orang. Hasil penelitian menyatakan bahwa terdapat perbedaan yang signifikan kemampuan menjawab soal subjek penelitian kelompok intervensi dan kontrol dalam pembelajaran melalui media daring WhatsApp ($p < 0,05$). Peningkatan rata-rata delta kemampuan menjawab soal uji kompetensi dengan metode STAD lebih baik dibandingkan tanpa melalui metode STAD, dengan nilai d sebesar 56,95.

Kata Kunci: STAD; WhatsApp; uji kompetensi; keperawatan; pembelajaran digital

Abstract

The COVID-19 pandemic also has an impact on the transition from conventional education to digital education. Digital learning requires software as a medium during the learning process. Currently, the most widely used media in teaching nursing practice is social media in the form of WhatsApp and Telegram. The effectiveness of the implementation of cooperative learning, one of which is the STAD model in improving the quality of learning. The purpose of conducting research on improving the ability of nursing students in answering various Competency Test questions through the STAD model approach by utilizing social media WhatsApp. This study was a quasi-experimental study (quasi-experimental) with a research design in the form of a pre-posttest design with a control group (pretest-posttest control design) involving two groups, namely the treatment group and the control group. Both were given a pretest, and a posttest about learning the STAD method with WhatsApp media and was given an intervention. The study was conducted on July 14 to September 27, 2021 as many as 60 people. The results of the study stated that there was a significant difference in the ability to answer questions about the research subjects of the intervention and control groups in learning through WhatsApp online media ($p < 0.05$). The increase in the average delta ability to answer competency test questions with the STAD method is better than without going through the STAD method, with a d value of 56.95.

Keywords: STAD, WhatsApp, Competency Test, Nursing.

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INTRODUCTION

The COVID-19 pandemic is a health crisis that is currently occurring in almost all parts of the world. As an effort to prevent the spread of Covid-19, WHO as a world health organization recommends temporarily stopping activities that have the potential to cause crowds. This was done to reduce the spread of COVID-19, which as of August 4, 2020, had reached 113,134 confirmed positive in Indonesia (Firman & Rahayu, 2020; Gugus Tugas Percepatan Penanganan Covid-19, 2020; Purwanto et al., 2020).

The COVID-19 pandemic has also had an impact on the education system in the world, including in Indonesia. The education system in Indonesia is forced to make a transition from conventional education to digital education. As an effort to maintain the education process in the midst of a pandemic, the Ministry of Education and Culture has instructed to apply online learning (on the network) in preventing the spread of COVID-19. Learning must be carried out with scenarios that are able to minimize physical contact between students and other students, or between students and lecturers (Dhawan, 2020; Lestiyawati & Widyantoro, 2020).

One area of education that requires students to learn virtually from home is education in the field of nursing. Not only nursing theory learning, but also laboratory practice to nursing clinical practice must also be done virtually. So that nursing students and lecturers are required to be able to use digital technology. The use of digital technology allows students and lecturers to be in different places during the learning process (BCCNP, 2020; Firman & Rahayu, 2020).

Improving student abilities in preparation for the nursing competency test must also be considered during or after the COVID-19 pandemic. Distance learning through digital learning during the pandemic and post-pandemic period will always be an alternative as an effort to prevent the spread of the virus and the demands of the times. So that the preparation of students in facing the competency test also needs to be considered with digital learning (Abidah, Hidaayatullaah, Simamora, Fehabutar, & Mutakinati, 2020).

Digital learning requires software as a medium during the learning process. Media in the form of a Learning Management System (LMS) or other media such as video is one of the factors that determine the achievement of the learning process. The difficulty of using LMS and direct video communication (Synchronous Learning) which requires a lot of internet quota is an obstacle for online learning. So that not a few teachers and students use social media platforms as learning media (Agarwal & Kaushik, 2020; Alharbi, Kuhn, & Morphet, 2020).

Nowadays, social media has become a necessity for people to interact with each other. The use of social media is not impossible to apply in the world of education. Currently, the most widely used media in nursing laboratory practice learning is social media in the form of WhatsApp and Telegram (AIPNI Regional 3, 2020; Syaiful Romadhon, Rahmah, & Wirani, 2019).

The learning model is also an important element in achieving learning objectives other than the media. One form of learning model is cooperative learning model. According to Johnson, the main objective of cooperative learning is to maximize student learning to increase academic achievement and understanding both individually and in groups (Trianto, 2009)

The Student Team Achievement Division (STAD) learning model is a cooperative learning model developed by R. Slavin, which is one of the simplest cooperative learning methods, and is the best model for beginners for teachers who are new to the cooperative approach. The STAD learning model also aims to increase student activity in independent learning in groups. So it is very good to be applied in digital distance learning in groups (Karimah, 2013).

The effectiveness of the implementation of cooperative learning, one of which is the STAD model in improving the quality of learning, has also been tested empirically by various previous studies. Some researchers conclude that cooperative learning can increase students' motivation and learning outcomes. The teachers gave a positive response to the cooperative learning they were doing. The teachers also noted that students responded well to their small group experiences and it helped them to better organize and structure their lessons (Karimah, 2013).

STAD learning model by utilizing social media is very possible to be applied in digital learning. This is done with the aim of improving students' abilities and understanding, such as ability to answer various kinds of nursing competency test questions. And WhatsApp is the most widely used social media in Indonesia with total users of more than 83% of total internet users. Therefore, this study aims to improve the ability of nursing students in answering various Competency Test questions through the STAD model approach by utilizing social media WhatsApp.

METHODS

The design of this study was a quasi-experimental study with a pre-post approach with a control group design, namely providing intervention in the treatment group and the control group. This research plan begins with a pre-test, then the STAD learning model intervention is given to the treatment group. While the control group was given ordinary learning. Then a post test was carried out on both groups.

The population in this study were all students of 6th Semester Diploma III Ambon Nursing Study Program at Poltekkes, Maluku. The sampling technique used is a total sampling of 78 students. The distribution of the treatment group and control group was done by simple random sampling, so that each group would have the same number, total amount 39. The sample size in each group exceeded the minimum sample size for the two groups, total amount 15 (Supratno, 2000). On the research trip, only 60 people survived and carried out all sessions to completion.

The analysis used in this research is bivariate analysis. Data with normal distribution were tested by independent t test and paired t test, while those not normally distributed were tested by Mann Whitney and Wilcoxon Sign Rank tests. The test was conducted to determine the difference in the test scores of the Nursing Competency Test in the treatment and control groups with a significance value of < 0.05 .

This research has received a letter of ethics from the ethics committee of the Poltekkes of the Ministry of Health of Maluku, with the number LB.02.01/6.2/3540/2021.

RESULTS

The characteristics of the research subjects, namely age and gender, were obtained from the google form data before the subject received treatment.

Table 1. Characteristics of Research Subjects

Characteristics	Intervention Group (n=30)	Control Group(n=30)
Age		
Mean ± SD	21.0 ± 1,34	21.0 ± 1,14
Min-Max	19 – 24	19 - 23
Gender		
Male	4 (14%)	7 (23%)
Female	26 (86%)	23 (73%)

From the table, it is known that the age of respondents in both the control group and the intervention group has the same average age at 21 years old, with a minimum age of 19 years and a maximum age of 24 years. Most of the research subjects were female in both groups (>50%).

The ability to answer the research subject competency test questions was measured before and at the end of the intervention period.

Table 2. Ability to Answer Competency Test Questions

Ability to Answer	Intervention Group (n=30)	Control Group (n=30)	<i>p-value</i> ^a
Pre			
Mean ± SD	45,73 ± 14,15	41,67 ± 11,62	<0,001*
Min-Max	26 – 90	23 – 71	
Post			
Mean ± SD	55,77 ± 14,10	46,13 ± 11,93	<0,001*
Min-Max	37 – 100	27 – 77	

^apaired *t test*

**p-value* significant

Before the intervention, the ability to answer questions from the treatment group was significantly different from the control group. The ability to answer respondents after the intervention of the intervention group also showed significant differences with the control group. This indicates that there is a difference between the ability to answer questions in the treatment and control groups ($p < 0.05$).

Table 3. Changes in the ability to answer the competency test

Variable	Intervention Group (n=30)	Control Group (n=30)	<i>p-value</i> ^a
Δ Ability to Answer Competency Test Questions¹	10,03 ± 7,88	4,46 ± 6,88	<0,001**
	56,95		

^d

Δ change

data are presented in mean ± SD

^a Independent t test
*significant p-value

Based on Table 3, the results of the unpaired t test are known that the results of changes in the ability to answer the competency test before and after the intervention in the intervention group showed significant differences as well as in the control group. This indicates that there are differences before and after the intervention in the two groups ($p < 0.05$). However, the increase in the mean delta ability of the treatment group was better than the control group with a d value of 56.95.

DISCUSSION

The online learning STAD method intervention in this study was intended to determine the ability of respondents to answer competency test questions. Respondents' ability to answer was measured before and after the end of the intervention period. Before the intervention took place the average ability to answer questions in the intervention group was 45.7 while after the intervention it was 55.7. Furthermore, it is known that before the intervention took place, the average ability to answer questions in the control group was 41.6 while after the intervention it was 46.1. In addition, before the intervention took place the ability to answer questions in the intervention group was significantly different from the control group. The ability to answer questions after the intervention between groups also showed a significant difference. This shows that learning through WhatsApp online media causes a significant difference in the ability to answer questions about the research subjects in the intervention and control groups ($p < 0.05$). However, the increase in the average delta ability to answer competency test questions with the STAD method was better than without going through the STAD method, with a d value of 56.95.

Respondents in this study are first-time workers who will just take the competency test and adjust to research and education policies related to the exit exam. As a candidate for competency test, students' perceptions of competency tests are considered important because they are a benchmark for students' understanding of competency tests. The absence of debriefing regarding competency tests and not participating in competency test tryouts will cause different perceptions of potential competency test participants (Nugroho, Harjanto, & Purwanta, 2016)

The increase in the ability of students in this study after participating in online learning using the STAD method was 10.0. These results are in line with research conducted by Febriani & Fevria, 2019; Hanafi & Basuki, 2018 to measure student competence using the STAD method where there is an increase in the average minimum competence of students in completing competency analysis.

STAD type cooperative learning is one type of cooperative learning model by using small groups with heterogeneous number of members every four to five students. In the beginning, we presented the learning objectives, materials, group activities, quizzes, and group awards. STAD was developed by Robert Slavin et al from the University of Johns Hopkins. This method is the simplest cooperative

learning method. Educators use cooperative learning as a method of teaching at all grade levels, in all areas of the curriculum, and for many different purposes, but all uses are goal-centred for students to understand and learn the material presented. Interest in cooperative learning (Ishtiaq, Ali, & Salem, 2015).

The increase in the ability to answer competency test questions with the STAD learning approach is also determined by the advantages and disadvantages of this method. One of the advantages of this method is that participants can help and motivate each other to achieve learning goals. The STAD learning model provides opportunities for students to work in groups (discussion) in solving a problem together. In this case, learning problems related to nursing through the STAD method increases critical thinking attitudes and helps in social behavior. The cooperative learning model in the form of STAD will also train students to listen to the opinions of others and summarize opinions or findings in written form so as to enrich participants' insight and knowledge (Nugroho et al., 2016).

CONSLUSION

There was a significant difference in the ability to answer questions about the research subjects of the intervention and control groups in learning through online media WhatsApp ($p < 0.05$). The increase in the average delta ability to answer competency test questions with the STAD method is better than without going through the STAD method, with a d value of 56.95. It is necessary to strengthen competency test questions to students on an ongoing basis with cooperative learning methods so that interactions and discussions can improve students' understanding in dealing with competency tests.

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