

Canva Application as a Learning Media for Human Anatomy Physiology

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Abstract

Nursing education is one of the educations which was provided through e-learning, during the covid-19 pandemic. The Canva application is an Android-based website that can be used as an online interactive learning medium. The purpose of this study was to analyze the effectiveness of the Canva application as an interactive learning medium for knowledge and practice of the anatomy and physiology of the respiratory and cardiovascular systems. This study is quasi-experimental with a pre-posttest approach with a control group (Microsoft PowerPoint media). The sample in this study was 88 first-semester students of the Department of Nursing who were divided into two groups by simple random sampling. The research instruments used were questionnaires and observation sheets, and the results of this study were analyzed by the Mann-Whitney test, independent t-test, and N-Gain test. This study showed an increase in the average knowledge ($p = 0.04$) and practice ($p = 0.012$) in the group that was given the Canva Application media. However, in this study, the Canva application was ineffective as an interactive medium for learning anatomy and physiology (N-Gain = 30%). It is because learning with Canva can be affected by internet access, the ability of smartphone users, and internet quota.

Keywords: canva, learning media, human anatomy physiology

INTRODUCTION

The education system in Indonesia is one of the sectors affected by the Covid-19 pandemic. So, learning in Indonesia is carried out virtually by maximizing the use of Information Technology (Dhawan, 2020; Lestiyawati & Widyanoro, 2020). It also impacts the learning process in the health sector, one of which is nursing education. Nursing education is one of the educations whose learning process is required through E-Learning during the covid-19 pandemic. E-Learning must be applied to all theoretical and practical learning processes. So that students and lecturers are also required to improve their ability to use digital devices to utilize information technology by utilizing the internet network (BCCNP, 2020; Firman & Rahayu, 2020).

Digital learning requires software and internet quota as media and supporting tools during the learning process. Media in the form of videos and images or other audiovisual media is one factor that determines the achievement of the learning process (Agarwal & Kaushik, 2020; Alharbi, Kuhn, & Morphet, 2020). In addition to media, learning materials are

also necessary during the learning process. Learning materials must be modified to achieve online learning outcomes. Distance learning conducted online requires the delivery of material through interactive learning media. Interactive media can be in the form of audiovisual media. Interactive media and learning materials can improve students' cognitive, affective, and psychomotor abilities (Purwaningtyas & Hariyadi, 2017; Sari & Sundari, 2019).

One of the Android-based and website-based interactive learning media applications is the Canva application. The Canva application provides many facilities that make it easier for teachers to create interactive materials. Interactive material through the Canva application can be in the form of text, images, and videos. The Canva application also has a decent feasibility value (98.18%) as a learning medium in Geography. The results of other studies also state that the Canva application is an effective learning medium for improving students' abilities (Darung, Setyasih, Vita, & Ningrum, 2020; Leryan, Damringtyas, Hutomo, & Printina, 2018; Tanjung & Faiza, 2019).

There has been no research on effective learning by using the Canva application as a practical learning medium. One of the subjects with theoretical and practical learning is the Anatomy Physiology course for nursing students. Learning media for anatomy and physiology courses can be made through the Canva application by including various content. One of the contents can be included in three-dimensional image content that can be seen and controlled by students from the desired angle. It allows students to see organs in three dimensions from various desired angles (Nicolini & Oshkosh, 2019). The purpose of this study was to analyze the effectiveness of the Canva application as a learning media for anatomy and physiology towards learning outcomes in theory and practice of the respiratory and cardiovascular systems.

METHODS

This study is a quasi-experimental study with a pre-posttest approach with a control group, which provides anatomical physiology learning intervention with Canva application media in the treatment group and Microsoft PowerPoint media in the control group. The sample in this study was 88 nursing students of Health Polytechnic of Maluku. Then the respondents were divided into treatment and control groups by simple random sampling. The research instruments used were questionnaires and observation sheets. The questionnaire contains the structure and function of the respiratory and cardiovascular systems, while the observation sheet is in the form of a checklist listing the structure of the organs of the

respiratory and cardiovascular systems. Observations were made by directly observing students' success in showing the structure of the respiratory and cardiovascular system organs on the mannequin correctly. Data analysis used was the Mann-Whitney test and the independent t-test with a significance value of < 0.05 . Then, test the effectiveness of learning media with the Canva application by a normalized gain test (N-Gain).

RESULTS

Table 1. Differences in Knowledge of the Treatment Group (Canva) and Control Group (Mic. Power Point)

	Mean (sd)	CI95%	P value
Knowledge with Canva (n=44)	40,68 (33,97)	0.80 – 30,11	0.04
Knowledge with Mc Power point (n=44)	25,23 (35,17)		

Table 1 shows a statistically different knowledge difference between the two groups. The treatment group that was given the instructional media intervention with the Canva application showed a higher average increase in knowledge than the control group. The control group with an anatomical physiology learning intervention using Microsoft power point media. This difference in average is also one of the reasons that the Canva application practically increases students' knowledge of anatomy and physiology ($p < 0.05$, CI: 0.80 – 30.11).

Table 2. Differences in Skills of the Treatment Group (Canva) and Control Group (Mic. Power Point)

	Median (Minimum-Maximum)	P value
Skills with Canva (n=44)	80,00 (30-100)	0.012
Skills with Mic. Power point (n=44)	70,00 (30-90)	
Mann-Whitney Test. Treatment rank average (Platform Canva) 36,20; control (Ms. Powerpoint) 24,80.		

Table 2 shows statistical differences in practice in the treatment and control groups ($p < 0.05$). The practice is in the form of students' ability to show organs on mannequins. Practically also found differences in practice values in the treatment and control groups (Median Differences > 5).

Table 3. The Effectiveness Of The Canva Application As A Learning Media For Anatomy Physiology

	N-Gain Score	N-Gain %
Treatment (Canva App)	0.3	30 %
Control (Mc. Powerpoint)	0.17	17.45 %

Table 3 shows that learning anatomy and physiology in this study using Canva or Mc PowerPoint application media was not effective in the learning outcomes of respondents. It is indicated by the N-Gain score in the treatment group (30%) and the control group (17.45%) still under 40%.

DISCUSSION

Learning media are tools, methods, and techniques used as communication intermediaries between facilitators and participants to make communication and interaction more effective during the learning process. The criteria for good learning media must follow the learning objectives or competencies. A suitable type of learning media is audiovisual media, namely, media that has sound elements and image elements (Nurmadiyah, 2014). Learning media also has several roles and functions in the learning process, including clarifying the presentation of messages and information so that they can facilitate and improve learning processes and outcomes, as well as increase and direct students' attention so that it can lead to learning motivation (Miftah, 2013)

This study shows that Canva Application as a learning media statistically and practically affects the learning achievement of anatomy and physiology. These results show that the Canva application is one of today's learning media. Previous studies even mention that the Canva application is an innovation in learning media. Canva is a free smartphone app and graphic design website. The Canva app allows users to create professional-quality graphics that are very intuitive and simple. Canva application also provides templates for social media platforms, websites, and printable templates. Plus, Canva lets users access over a million photos, graphics, fonts, and design elements. By combining these features in one program, users can use their creativity to develop professional quality messages. The designs can be distributed through various online channels, social media, or print. Apart from using the website, users can also access Canva via the mobile app for free (Nicolini & Oshkosh, 2019).

There are many effective ways to use Canva to build creativity, reinforce key concepts, elaborate and synthesize complex ideas, or modify presentations. The Canva app is

straightforward to learn and use, so educators can also take advantage of the designs in this app to enhance student creativity. Educators can also strengthen learning materials by presenting audiovisual material that is easy for students to understand (Nicolini & Oshkosh, 2019). The Canva application is also a learning medium with a feasibility value of 98.18% (very feasible) in the learning process. The results of other studies also mention that the Canva application as a learning medium effectively improves students' abilities. In addition, the Canva application can also be used as a visual literacy media because it can present material in audiovisual form (Darung et al., 2020; Leryan et al., 2018; Mila, Naila, Azisah, & Arisah, 2021; Rahmatullah, Inanna, & Ampa, 2020; Tanjung & Faiza, 2019; Zhang, 2019).

The results of this study are not the same as previous studies, which state that the Canva application is effective as a learning medium, although the results of this study indicate an increase in the average learning achievement of respondents with the Canva application compared to respondents who were given Mc Powerpoint media. Several factors could be why the Canva Application is ineffective as a learning medium in this study, although it has not been proven statistically. Some are related to internet access, smartphone users, network availability, and internet quota. The availability of gadgets and the internet is the main factor for the continuity of the distance learning process, namely learning that requires learning application innovations such as the Canva application (Agu, Stewart, McFarlane-Stewart, & Rae, 2021; Sugiarto, 2020; Ulfameytalia Dewi & Devianto, 2020).

The status of underdeveloped areas, borders, and outer regions can also be a factor that the Canva application in this study is ineffective as a learning medium carried out online. Maluku Province is one of the provinces where most regions have the status of underdeveloped areas, borders, and outer regions. An area is still said to be an underdeveloped area, one of which borders and islands are due to the low economic growth of the community. Low economic growth ultimately affects people's ability to provide internet quotas to meet their needs. Such as students who need an internet quota for distance learning by utilizing internet-based applications (Peraturan Presiden RI, 2020; Situmorang & Ayustia, 2019).

CONCLUSION

The results of this study indicate an increase in the average knowledge and practice of students with the Canva Application media. However, in this study, the Canva application was ineffective as an interactive medium for learning anatomy and physiology. It is because

learning with Canva can be affected by the status of underdeveloped areas, borders, and outer regions, internet access, the ability of smartphone users, network availability, and internet quota.

REFERENCES

- Agarwal, S., & Kaushik, J. S. (2020). Student's Perception of Online Learning during COVID Pandemic. *Indian Journal of Pediatrics*, 87(7), 554. <https://doi.org/10.1007/s12098-020-03327-7>
- Agu, C. F., Stewart, J., McFarlane-Stewart, N., & Rae, T. (2021). COVID-19 pandemic effects on nursing education: looking through the lens of a developing country. *International Nursing Review*, 68(2), 153–158. <https://doi.org/10.1111/inr.12663>
- Alharbi, M., Kuhn, L., & Morphet, J. (2020). Undergraduate nursing students' adoption of the professional identity of nursing through social media use: A qualitative descriptive study. *Nurse Education Today*, 92, 104488. <https://doi.org/10.1016/j.nedt.2020.104488>
- BCCNP. (2020). Effect of COVID-19 pandemic on nursing education programs , faculty and students.
- Darung, A., Setyasih, I., Vita, M., & Ningrum, R. (2020). Pengembangan Media Pembelajaran Geografi Menggunakan Poster Infografis (Materi Dinamika Atmosfer) Development of Geography Learning Media Using Infographic Posters (Atmospheric Dynamics Material). *Jurnal Geodusains*, 1(1), 27–41.
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>
- Firman, F., & Rahayu, S. (2020). Pembelajaran Online di Tengah Pandemi Covid-19. *Indonesian Journal of Educational Science (IJES)*, 2(2), 81–89. <https://doi.org/10.31605/ijes.v2i2.659>
- Leryan, L. P. A., Damringtyas, C. P., Hutomo, M. P., & Printina, B. I. (2018). The Use of Canva Application As an Innovative Presentation Media Learning History. In *Prosiding Seminar Nasional FKIP 2018* (pp. 190–203). <https://doi.org/10.24071/snfkip.2018.20>
- Lestiyawati, R., & Widiantoro, A. (2020). Strategies and Problems Faced by Indonesian Teachers in Conducting E- Learning System During COVID-19 Outbreak. *Journal of Culture, Literature, Linguistic and English Teaching*, 2(1), 71–82.
- Miftah, M. (2013). Fungsi, Dan Peran Media Pembelajaran Sebagai Upaya Peningkatan Kemampuan Belajar Siswa. *Jurnal Kwangsan*, 1(2), 95. <https://doi.org/10.31800/jkwangsan-jtp.v1n2.p95--105>
- Mila, N., Naila, A., Azisah, Q., & Arisah, N. (2021). Efektivitas Pemanfaatan Canva Sebagai Media Pembelajaran Daring. In *Penelitian dan Pengabdian Inovatif pada Masa Pandemi Covid-19* (pp. 181–188).

- Nicolini, K. M., & Oshkosh, W. (2019). eTools : Using Canva in the Classroom.
- Nurmadiyah, N. (2014). Media Pendidikan : Peran dan Fungsinya dalam Pembelajaran. *Jurnal Tarbiyah*, 11(1), 131–144. <https://doi.org/10.28944/afkar.v5i1.109>
- Peraturan Presiden RI. (2020). Peraturan Presiden Republik Indonesia Nomor 63 Tahun 2020 Tentang Penetapan Daerah Tertinggal Tahun 2020-2024. Jakarta: Kementerian Sekretariat Negara Republik Indonesia.
- Purwaningtyas, W. D. D., & Hariyadi, I. (2017). Development Of Electronic Module Class Xi Of Jasmani, Sports And Health Education Class Xi Online Based Edmodo Programs. *Jurnal Pendidikan*, 2(1), 123, 121–129. <https://doi.org/http://dx.doi.org/10.17977/jp.v2i1.8471>
- Rahmatullah, R., Inanna, I., & Ampa, A. T. (2020). Media Pembelajaran Audio Visual Berbasis Aplikasi Canva. *Jurnal Pendidikan Ekonomi Undiksha*, 12(2), 317–327.
- Sari, I. P., & Sundari, S. (2019). Penerapan Video Pembelajaran dapat Meningkatkan Keterampilan Klinis dalam Pendidikan Keperawatan: A Literature Review. *Jurnal Pendidikan Keperawatan Indonesia*, 5(1). <https://doi.org/10.17509/jpki.v5i1.15128>
- Situmorang, D. M., & Ayustia, R. (2019). Model Pembangunan Daerah 3T: Studi Kasus Daerah Perbatasan Kabupaten Bengkayang. *MBIA*, 18(1), 49–64. <https://doi.org/10.33557/mbia.v18i1.321>
- Sugiarto, A. (2020). Dampak Positif Pembelajaran Online Dalam Sistem Pendidikan Keperawatan Pasca Pandemi Covid. *Jurnal Perawat Indonesia*, 4(3), 432. <https://doi.org/10.32584/jpi.v4i3.555>
- Tanjung, R. E., & Faiza, D. (2019). Canva Sebagai Media Pembelajaran Pada Mata Pelajaran Dasar Listrik Dan Elektronika. *Jurnal Vokasional Teknik Elektronika Dan Informatika*, 7(2), 79–85.
- Ulfameytalia Dewi, E., & Devianto, A. (2020). Analysis Of Student Perception Of Preceptors On Online Learning Method Stage Of Gerontic Nursing In The Pandemic Of Covid. *Journal of Health (JoH)*, 7(2), 42–50. <https://doi.org/10.30590/joh.v7i2.186>
- Zhang, Y. (2019). The Effect of Metaphorical Competence on Students' Writing Skills. *Creative Education*, 10(01), 151–155. <https://doi.org/10.4236/ce.2019.101011>