Hasil Plagiasi Evaluation of Medical Students' Satisfaction for Total Online Learning During Pandemic COVID-19 in Indonesia

by Perpustakaan UM Surabaya

Evaluation of Medical Students' Satisfaction for Total Online Learning During Pandemic COVID-19 in Indonesia

Evaluación de la satisfacción de los estudiantes de medicina con el aprendizaje en línea total durante la pandemia COVID-19 en Indonesia

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SUMMARY

Background: *The Coronavirus Disease 2019 (COVID-19) pandemic that has hit the whole world has caused changes in various aspects of life, including medical education. This study evaluated online learning activities in the auditory and olfactory medical education system blocks in 3rd-year medical students at, the University of Muhammadiyah, Surabaya, Indonesia.*
Methods: *This was a descriptive observational study using a digital survey. The research instrument used was a questionnaire on student satisfaction with the online learning process in the auditory and olfactory medical education system block.*
Results: *Fifty 3rd-year medical students participated in this study. Students gave a satisfaction level score of 4.2 out of 5 for the manufacture of teaching materials and a satisfaction level score of 4.56 out of 5 for learning objectives. The average level of satisfaction in teaching materials ranks the lowest (4.38), while the average level of satisfaction with the role of educators in skills lab activities ranks the highest (4.69).*
Conclusion: *Technological facilities, teaching materials, and lecturer assistance play an essential role in successful online learning. Further evaluation is undoubtedly needed to improve the quality of fully online learning in medical, and educational institutions.*

Keywords: *Medical education, fully online learning, COVID-19, Indonesia.*

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RESUMEN

Antecedentes: *La pandemia de la Enfermedad del Coronavirus 2019 (COVID-19) que ha afectado a todo el mundo ha provocado cambios en varios aspectos de la vida, incluida la educación médica. Este estudio evaluó las actividades de aprendizaje en línea en los*

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bloques del sistema de educación médica auditiva y olfativa en estudiantes de medicina de tercer año de la Universidad de Muhammadiyah, Surabaya, Indonesia. **Métodos:** *Estudio observacional descriptivo mediante encuesta digital. El instrumento de investigación utilizado fue un cuestionario sobre la satisfacción del estudiante con el proceso de aprendizaje en línea en el bloque del sistema de educación médica auditiva y olfativa.* **Resultados:** *Participaron 50 estudiantes de medicina de tercer año. Los estudiantes dieron una puntuación de nivel de satisfacción de 4,2 sobre 5 para la fabricación de materiales didácticos y una puntuación de nivel de satisfacción de 4,56 sobre 5 para los objetivos de aprendizaje. El nivel medio de satisfacción en los materiales didácticos es el más bajo (4,38), mientras que el nivel medio de satisfacción con el papel de los educadores en las actividades del laboratorio de habilidades es el más alto (4,69).* **Conclusión:** *Las instalaciones tecnológicas, los materiales didácticos y la asistencia de los profesores juegan un papel esencial en el éxito del aprendizaje en línea. Sin duda, se necesitan más evaluaciones para mejorar la calidad del aprendizaje totalmente en línea en las instituciones médicas y educativas.*

Palabras clave: *Educación médica, aprendizaje completo en línea, COVID-19, Indonesia.*

INTRODUCTION

COVID-19 (Coronavirus Disease 2019) is a respiratory tract infection that can cause various complications such as pneumonia. COVID-19 is caused by a new type of coronavirus, namely SARS-CoV-2, discovered in Wuhan, China, at the end of 2019 (1,2)

The SARS-CoV-2 virus can be transmitted airborne and quickly spread worldwide (3). Therefore, the World Health Organization (WHO) has designated COVID-19 as an emerging global health problem (4). WHO and the Indonesian Ministry of Health have acted quickly to suppress the spread of COVID-19, namely by socializing prevention and control measures through the discipline of health protocols. One of the steps of the recommended health protocol is avoiding crowds and implementing social distancing (5). Implementing this health protocol directly impacts activities in many institutions, including medical education institutions (6). The change of learning from offline to online in educational institutions is one way that is expected to reduce the rate

of virus spread (7). This form of total distance education in the context of medical education has its advantages and disadvantages. Student engagement in the learning process is significant to getting the best learning outcomes (8). Student perceptions can be an indicator of the evaluation of the educational process and a description of the accountability of program managers (9).

The auditory and olfactory medical education system block is one of those blocks that have many management challenges. In addition to particular and specialist topics, tutors of learning topics at the forefront of service in the COVID-19 pandemic era require a lot of adaptation and more effort to carry out educational activities. Therefore, it is important to know students' perceptions of the fully online learning experiences they have gone through in the context of hearing and smell system education in the COVID-19 pandemic era. Therefore, this study evaluated online learning activities in the auditory and olfactory medical education system in 3rd-year students of the Faculty of Medicine, University of Muhammadiyah, Surabaya.

METHODS

The auditory and olfactory medical education system block is part of the medical education program in the 3rd year at the Muhammadiyah University of Surabaya, Surabaya, Indonesia. This block is an integrated medical science of the entire education system. This block contains knowledge related to anatomy, histology, physiology, biochemistry, microbiology, pharmacology, clinical pathology, anatomical pathology, Islamic medicine from diseases and problems associated with the auditory and olfactory system. The auditory and olfactory system block had four credit points with learning activities: expert lectures, tutorials, and skills lab (medical skills). During this pandemic, the auditory and olfactory system blocks are carried out entirely online using synchronous and asynchronous methods.

This study is a descriptive observational study conducted by distributing digital surveys. The population of this study is all 3rd-year medical students, at the Muhammadiyah University of

Surabaya, who had passed the online auditory and olfactory system block. The sampling technique in this study used total sampling so that the respondents obtained were 50 students. The research instrument used was a questionnaire on student satisfaction with the online learning process in the auditory and olfactory medical education system block. Each question has a satisfaction interval from 1 to 5, where 1 means very dissatisfied, and 5 means very satisfied.

RESULTS

From the questionnaire data given to students, it was found that the evaluation results regarding online learning media, the level of student satisfaction with teaching materials, the level of student satisfaction with tutorial activities, and skills lab. Online learning media in the auditory

and olfactory medical education system blocks used Zoom and WhatsApp Group applications. Most of the lecturers who teach in the auditory and olfactory system block used Zoom (90 %) for media in conducting online lecture activities.

Table 1 shows the level of student satisfaction with aspects of learning media and the role of lecturers in tutorials and skills lab. Teaching materials play an essential role in online learning activities. The teaching materials made by the lecturers in this block are in the form of audio power points or teaching videos. Students gave a satisfaction level score of 4.2 out of 5 for the manufacture of teaching materials and a satisfaction level score of 4.56 out of 5 for learning objectives. The tutorial is an independent group discussion activity to discuss a case. Usually, each group has one lecturer as a facilitator in the discussion activities. In online tutorial activities, students have a satisfaction level above 4 with

Table 1

The level of student satisfaction with aspects of learning media, the role of lecturers in tutorials and skills lab

Aspects of online learning	Averages of satisfaction
Indicators of teaching materials	
Making teaching materials by lecturers (audio/video teaching PPT)	4.2
The benefits of teaching materials in achieving learning objectives	4.56
The role of educators in tutorial activities	
Lecturers help and encourage more active discussions	4.74
Lecturers are easy to communicate with students	4.36
Lecturers provide good feedback in discussions	4.78
The role of educators in medical skills lab activities	
Lecturers provide feedback on your medical skills in lab video	4.69
Lecturers are easy to communicate with students	4.68
Lecturers help to understand the topic of medical skills lab	4.72

PPT: PowerPoint Presentation

the role of lecturers to facilitate these activities. Skills lab is a group activity to learn a topic of medical skills. Students should make video recordings of these medical skills in a pandemic condition using makeshift tools/materials. In online skills lab activities, students have a level of satisfaction above 4 with the role of lecturers to facilitate these activities.

The average level of satisfaction with aspects of learning media, the role of lecturers in tutorials and skills lab

Figure 1 shows the average satisfaction level of all the parameters asked in online learning activities. The average level of satisfaction in teaching materials ranks the lowest. In contrast,

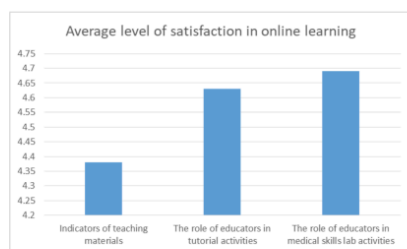the average level of satisfaction with the role of educators in skills lab activities ranks the highest.

Figure 1. The average level of satisfaction in online learning.

The performance of students in Olfactory and Auditory Medical Education System Block

Table 2 shows the performance of students in the olfactory and Auditory Medical Education System Block. In line with the student's satisfaction results during online learning, most of the students got excellent scores during skills lab activities. In the final exam, most students got good scores.

Table 2

The student's performance in Olfactory and Auditory Medical Education System Block

Scores	Tutorial activities	Skills Lab activities	Final Exam
90 -100 (Excellent)	58 %	64 %	2 %
80 - 90 (Very Good)	42 %	34 %	2 %
70 - 80 (Good)	0 %	2 %	88 %
60 -70 (Average)	0 %	0 %	8 %
< 60 (Poor)	0 %	0 %	0 %

DISCUSSION

This study evaluated online learning activities during the pandemic. Online learning accomplished by using e-learning facilities to make it easier for students to access materials, assignments, and attendance. Online learning was carried out in the auditory and olfactory medical education block using synchronous and asynchronous methods. The success and quality of online learning in medical education are influenced by technological facilitation, teaching materials, lecturer assistance play, and skills lab. The replacement of face-to-face classes with online-based is an essential requirement for continuing medical education in this pandemic era (10). During the SARS pandemic in Hongkong, online problem-based learning techniques were implemented to complete the curricula of medical school; they were also applied in subsequent years (11). Teaching materials are essential instruments in supporting online learning activities. Suitable and easy-to-understand teaching materials can help improve student understanding even though they were not directly facing to face (12). Teaching materials made by lecturers in the auditory and olfactory medical education system blocks are in the form of PowerPoint with the audio or studying teaching video recordings uploaded on e-learning or other online media such as YouTube before synchronous online activities. By adding the asynchronous method, sending information from lecturers to students would be flexible because students can study the material anytime and anywhere (13). Based on the results of this study, the level of student satisfaction with the provision of teaching materials for lecturers was good. In addition, the performance of students during final exam was also good. This shows that, the delivery of online learning material from lecturers to student has been already adequate, although there is a room to be improved. Medical education institutions are advised to train lecturers on making exciting and easy-to-understand teaching materials using various multimedia.

There are various challenges in online learning experienced by students. Technology plays a vital role in online learning (14). According to a study conducted, medical students prefer using multimedia as a teaching medium to just be reading PowerPoint slides. The use of teaching videos was considered quite helpful in providing a detailed explanation. The selection of online learning media is also an essential factor in determining the success of the learning process and cost, signal, and internet speed factors

(15). Some areas in Indonesia still have internet network problems, so students do not fully understand the explanations from lecturers (16).

In addition to technology, online methods also require students to be more independent in preparing for learning and maintaining learning motivation (17). A factor to consider in students during a pandemic is their capacity to read material independently using various media. It is established that reading levels increased in Indonesia during the pandemic (18). Additionally, online learning promotes students' independent learning space and time, accessibility to learning materials, and extensive communication with lecturers (16). This online-based learning requires students to use laptops for hours. This condition can cause health problems both physically and mentally (19). Increased intensity in viewing the screen can cause visual disturbances such as eye fatigue, besides sitting for hours in the same position can cause back pain. Lack of outdoor activity can make students feel tired and bored and decrease their concentration level (20). Excessive internet use can also increase the risk of internet addiction which can endanger mental health and social interaction (21). The biggest challenge in online learning for medical school students is practical work and medical skills. With online learning, students lose the opportunity to do hands-on activities with real tools. Therefore, students are expected to develop independent and creative learning skills, one of which is by using improvised materials to support practical learning and medical skills (22). In the auditory and olfactory medical education system block, students were assigned to make a video of medical skills with makeshift equipment to be given feedback by the lecturer.

In online learning, giving feedback from lecturers to students or vice versa cannot be done optimally. A previous study in India showed that nearly 50 % of the students still believed that the physical classroom was better than the e-classroom (23). They probably had difficulty understanding a material that was not given face to face, especially those related to practical activities or medical skills. The level of student satisfaction with lecturer assistance, both in tutorial activities and skills lab on the auditory and olfactory medical education system blocks, was good. Surprisingly, the performance of

the student for tutorial and skills lab activities was excellent. This shows that the efforts of the assistant lecturers have been maximized in assisting students' online learning activities amid all the existing limitations. In addition, the additional time to discuss with lecturers outside of online learning hours is considered to be helpful. Further research is needed to evaluate the long-term impact of online learning activities in the faculty of medicine.

CONCLUSION

Evaluation learning during a pandemic is needed to improve the quality of fully online learning in medical education institutions. Technological facilities, teaching materials, and lecturer assistance play an essential role in online medical education success.

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