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FACILITATING CLINICAL SKILL TRAINING DURING AND FOLLOWING THE COVID-19 PANDEMIC

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ABSTRACT

Background: Student skill learning requires a lecturer as a learning facilitator. Lecturers play an important role in facilitating student learning as good observers and listeners, motivators, providing constructive feedback and facilitating reflection.
Gaps: The COVID-19 pandemic is a new challenge in medical education. Learning that was previously delivered face-to-face was forced to turn into a full online. What are the facilitation techniques for learning clinical skills and providing feedback during and following the COVID-19 pandemic?
Recommendation: During the COVID-19 Pandemic, clinical skill learning can use video conferencing software, augmented reality and virtual reality. Modification of Peyton's facilitation technique can be used in the context of the COVID-19 pandemic. A hybrid method (online and offline) is recommended by considering the government policies. It is necessary to pay attention to the principle of providing constructive feedback to help the student learning process. These new adaptations of the teaching and learning process may be continued following the pandemic.

Keywords: clinical skills, COVID-19, feedback, hybrid, peyton

ABSTRAK

Latar belakang: *Pembelajaran keterampilan klinis mahasiswa membutuhkan seorang dosen sebagai fasilitator pembelajaran. Dosen berperan penting dalam fasilitasi pembelajaran mahasiswa sebagai pengamat dan pendengar yang baik, motivator, memberikan umpan balik yang membangun dan memfasilitasi refleksi.*
Gaps: *Pandemi COVID-19 merupakan tantangan baru dalam dunia pendidikan dokter. Pembelajaran yang semula tatap muka dipaksa berubah menjadi dalam jaringan penuh. Bagaimana teknik fasilitasi pembelajaran keterampilan klinis dan pemberian umpan balik pada masa dan setelah pandemi COVID-19?*
Rekomendasi: *Pada masa pandemi COVID-19, pembelajaran keterampilan klinis dapat menggunakan perangkat lunak konferensi video (video conference software), augmented reality dan virtual reality. Modifikasi teknik fasilitasi Peyton dapat digunakan sesuai context pandemi COVID-19. Metode Hybrid (daring dan luring) direkomendasikan dalam pemberian materi dengan memperhatikan kebijakan pemerintah yang berlaku. Perlu diperhatikan prinsip pemberian umpan balik yang membangun agar membantu proses belajar mahasiswa. Adaptasi baru dalam pengajaran selama pandemi dapat dilanjutkan pada era setelah pandemi berakhir.*

Kata kunci: *keterampilan klinis, COVID-19, umpan balik, hybrid, peyton*

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PRACTICE POINTS

- Video conferencing software can be used for learning communication, history taking, education and counseling skills.
- The use of simulated patients in online learning is still possible applied in clinical skills learning.
- The "Peyton" facilitation technique can be modified and used in the context of the COVID-19 Pandemic.
- A hybrid method is required in the facilitation of skills learning based on government policies.
- The new adaptation of teaching and learning process may be continued following the pandemic.

INTRODUCTION

The main objective of the medical education study program is to facilitate every student to become competent at the end of education. Competence is the ability of graduates, which consists of three areas of competence, namely, being able to cognitively/ knowledge, skills, and good professional behavior.1 The minimum competencies that must be achieved by Indonesian doctor graduates are stated in the Indonesian Doctor Competency Standards (SKDI), which consists of 7 competency areas which are embodied in a list of problems, a list of diseases and a list of clinical skills as a minimum list that must be mastered by each graduate.[2]

In clinical skill learning, students need a facilitator, which can be a teacher or peers who will guide them step by step to achieve certain clinical procedures. The facilitators teach students based on a list of problems and a list of existing diseases which are stated in SKDI.[2] Many things are learned in clinical skill learning, including communication skills, counselling and history taking skills, physical examination skills, procedural skills, diagnostic skills, and professional behavior.[3] Students will start learning from the simple skills to more complex ones based on the level of semester. The earlier semester students will study the skills separately. For instance, one day they learn communication skills only, and on other days they learn physical examination or other skills. However, in the later semester, students will study a combination of several skills in one training session.

In learning clinical skills, students do not automatically become skilled in a short period of time, instead it takes several stages and takes longer time. There are several clinical skills learning stages which consist of: cognitive stage, integration stage and automation stage. At the cognitive stage, students learn scientific cognitive concepts from verbal skills, it can be said that students learn something from the skills (learning what). At the integration stage, students learn how to do these skills (learning how) and begin to practice the skills many times to avoid inefficient steps to become skilful. And at the automation stage, students learn to integrate the two previous stages by performing skills so they will reach the stage of performing skills automatically without realizing it.[4]

There are several characteristics in clinical skills learning that students go through to become skilled. Learning clinical skills is a trial & error phase and full of struggle for students. It takes a long time, needs repeated practice, to reach the competent stage. According to Violato, some of the principles of learning clinical skills including: require practice, require phasing and repetition, require sufficient time, require guidance, examples, feedback and reflection and require continuous assessment.[5]

Facilitators of student clinical skills learning are expected to understand this learning stage. By understanding it, facilitators will find it easier to know if students are facing difficulties in learning and practicing clinical skills. In addition, facilitators are expected to be a good observers and listeners, motivators and learning facilitators so they are able to provide constructive feedback based on observation toward students clinical skills, good motivator when students feel nearly give up as well as become students learning reflection facilitator.[5,6]

There are several ways to facilitate the learning of clinical skills that can be done by facilitators. Peyton's four steps which are consist of: demonstration, discussion, comprehension and execution[7] and five steps introduced by George and Doto which are consist of: overview, demonstration, demonstration and explanation, students talk through the skills and students perform the skills[8] can become the technique of choice in facilitating students clinical skills learning.

Of the various clinical skills learning facilitation techniques, there is an important step that cannot be abandoned, namely providing constructive feedback on student skill achievement. Feedback is a reflection and formative assessment toward students' skills performance to find out what certain steps of skills which are already performed in a good way and what is not. Feedback is needed for improvement of clinical skills performance so the students become competent. Constructive feedback becomes a benchmark whether or not a competency has been achieved. It also increases student awareness regarding the performance they have done, motivates and increases student curiosity to take part actively in learning activities, provides opportunities for students to improve themselves to achieve the abilities and increases awareness as a doctor later.[9,10]

This recommendation is aimed to describe the problem found in Indonesia regarding teaching and learning clinical skills as well as giving alternative teaching techniques to facilitate student learning during and following the pandemic COVID-19.

GAPS BETWEEN GUIDES AND PRACTICES IN INDONESIAN CONTEXT

The COVID-19 pandemic has changed the face of medical education around the world. Face-to-face learning, as the main way of transferring knowledge from lecturers to students before the pandemic, was forced to change completely and quickly into online learning using various available applications. At the beginning of the pandemic adaptation era, educational institutions had to think hard to find effective ways to transfer knowledge to their students. Interpersonal contact between lecturers and students is very limited due to government policies which limit the activities of people outside the home. Physical distancing policy brought consequences for lecturers and students. They should work and learn from their own home.[11]

The consequences, educational institutions inevitably have to find the effective ways to facilitate student learning in this difficult situation. They must find the strategy of teaching knowledge, skills and professional behavior to students. To facilitate learning of knowledge and move from face-to-face learning toward full-online learning is an easier step to do compared to facilitating the learning of clinical skills and professional behavior.[12,13] Thus facilitating the learning of clinical skills in the era of the COVID-19 pandemic is a new challenge faced by all medical education institutions around the world.

Not all clinical skills learning can be delivered through online methods. Communication skills learning may still be conducted by online learning using video conference software, either by role playing with peers or simulated patients.[12,13] However, facilitating the learning of clinical skills that require medical equipment and mannequins is a challenge itself. Not all students have medical equipment and mannequins to study and train from home. The limitations of these learning facilities have the consequence of decreasing clinical skills of medical students during the COVID-19 pandemic.

The limitations of learning clinical skills during the pandemic brought the consequence toward the lack of opportunities for facilitators to provide feedback to students. This adds to the problem of providing feedback that has not been fully implemented optimally since before the COVID-19 pandemic. The problems of providing feedback that still often occur include: giving feedback does not describe a specific description of the clinical skills practiced by students. Other problems of providing feedback include: lack of clarity in identifying the purpose of feedback, lack of time and place in providing feedback, lack of confidence in providing feedback, lack of delivering feedback into specific, non-judgmental, and constructive ones. Those problem could be due to a lack of facilitator training on providing constructive feedback.[10]

However, currently the pandemic condition is improving in Indonesia. This is good news for all sectors including medical education. Learning limitations due to physical restrictions are being relaxed day by day. Teaching and learning are allowed to be given face-to-face step by step. Clinical skills learning has already been allowed to be delivered on campus directly. After the end of the pandemic, what are the strategies used in teaching clinical skills? Will the teaching strategy return completely to the condition before pandemic? Or can online learning still be used? This question has consequences to explore the good learning strategies following the covid-19 era

I AM HPE RECOMMENDATION

Government policies to reduce the risk of exposure to COVID-19 have an impact on learning, including the learning of clinical skills in medical education. During the COVID-19 pandemic, face-to-face learning was abolished, and was replaced with full online learning.[14] Regarding various limitations in the implementation of clinical skills learning during the COVID-19 pandemic, an educational innovation is needed to ensure the learning can still achieve the learning objectives. Lecturers as learning designers need to consider that learning clinical skills in a full-online approach will add an additional burden to students. Besides, students are also faced with other burdens like unstable internet signal, quota availability and online learning saturation, causing burnout in learning.[11] Lecturers have to prepare a back-up strategy to reduce this additional burden, for example by providing e-materials, recorded online lectures, etc. In addition, lecturers also need to modify learning facilitation techniques to keep students remain motivated, feel happy and participated actively in learning.[15]

The COVID-19 pandemic is forcing innovation in facilitating skills learning by leveraging technology. In addition to using the available software to facilitate synchronously with video conferencing software (zoom, google meet, etc.) or asynchronously (mailing lists, learning management systems, social media platforms, and Free Open Access Medical education tools, etc.)[11], there are other innovations in the teaching of clinical skills. Augmented Reality (AR) and Virtual Reality (VR) innovations that were developed before, now during the COVID-19 are increasingly needed and the benefits are felt. In terms of facilitation of skills learning, Virtual Reality can be used to train clinical reasoning, teamwork, decision making, communication and critical thinking in addition to practical skills (hands on) which are still not widely used.[14] However, AR and VR technology has not been implemented in every medical education institution

Clinical skills learning facilitation techniques can be modified from face-to-face learning to online learning. Delivery of Peyton's four steps which consist of: demonstration, discussion, comprehension and execution,[7] can be modified and adapted to pandemic situations. Demonstration step of Peyton modified from demonstration of clinical skills in front of students to demonstration clinical skills through video recordings. The discussion, comprehension and execution steps of Peyton are still there by modifying the face-to-face demonstration and discussion directly into demonstrations and discussions through online learning.[15] Modification of learning techniques is needed so clinical skills learning can continue amid physical distancing rules due to the COVID-19 pandemic.

Modification of clinical skills learning during the pandemic should notice the risk of transmission in certain areas based on government policy. Thus, clinical skills learning can be started back to face-to-face meetings based on the security level of the area. In areas with a low – medium risk incidence of COVID-19 transmission or levels 1 – 3 PPKM (*Pemberlakukan Pembatasan Kegiatan Masyarakat*) the government allows limited face-to-face learning while still implementing the existing health protocols.[16] In this condition clinical skills learning can be started limitedly while maintaining the 5 steps: washing hands, wearing a mask, keeping a distance, limiting mobility, and staying away from crowds.

During the COVID-19 pandemic, there are several clinical skills that can be taught online through existing software, including communication skills, history taking, education and counseling, including the use of simulated patients online.[12,13] Some of the

clinical skills of physical and procedural examinations can be replaced by watching the demonstration video and then students are asked to demonstrate their clinical skills to family members or friends as simulated patients. However, not all clinical and procedural examination skills can be easily trained online.[11] Teaching clinical skills by online approach has its own difficulties. Besides, not all students have mannequins and medical devices for independent practice in their respective homes. Physical examination and procedural techniques still need to be held offline including both full offline or hybrid. Hybrid learning can be defined as a learning approach combining both remote learning and in-person learning to improve student experience and ensure learning continuity. This type of learning can be used in particular relevance as partial reopening school or in preparation for potential virus resurgence.[17]

Regardless of the COVID-19 pandemic, a clinical skill learning facilitation technique that should not be forgotten is how to provide constructive feedback to students. There are several techniques for providing feedback that can be applied by facilitators, including: establish a respectful learning environment, communicate feedback's goals and objectives, based on direct observation, timely and begin the session with the learner's self-assessment. In addition, feedback should reinforce and correct the observed behaviors, use specific, neutral language to focus on performance, confirm the learner's understanding and facilitate acceptance, conclude with an action plan, reflect on your feedback skills, create staff-development opportunities, make feedback part of institutional culture.[10]

Following the pandemic situation, the implementation of hybrid approach still can be maintained. Learning of cognitive areas may be continued by online learning. The student does not need to meet the facilitator directly. Whereas learning of skill and professional behavior area may be delivered by face to face training. Regardless, learning of skill and professional behavior may not be changed to online learning, because it needs to practice directly with the mannequins or simulated patients using particular equipment which not all students have. AR and VR technologies are increasingly relevant to be used after a pandemic. This technology is very promising to be used in this area. Development of VR technology that can train students' skills is very much hoped so the students are able to train completely in virtual situations. Besides, the use of mixed reality (MR) can be tried in this area. This is the future face of medical education.[18]

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COMPETING INTERESTS

Authors declare that there are no competing interests related to the study.

AUTHORS' CONTRIBUTION

Ide Pustaka Setiawan – contribute to the writing of the initial draft of manuscript, revise the draft from the feedback obtained

Lukas Daniel Leatemia – contribute to writing the main points of content, as well as developing the initial draft

Fundhy Sinar Ikrar Prihatanto – contribute to writing the main points of content, as well as developing the initial draft

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