Virtual national workshop: preparation of multimedia modules for physical education teachers in accordance with COVID-19 prevention procedures

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Abstract

The COVID-19 pandemic has caused changes in the school learning system. Face-to-face learning shifted to remote learning using multimedia approaches. Online learning created particular difficulties for Physical Education (PE) teachers. Previously, they had to be role models in the teaching of physical activity. A national virtual workshop was conducted to support those teachers as they shift to remote learning. The purpose of the workshop was to provide PE instruction through social media and develop online learning modules. The 3 days of activities consisted of 4 lectures and 6 workshops provided to 177 PE teachers from 32 provinces in Indonesia. Participants were informed about the COVID-19 pandemic, its impact on children, and healthy life during the pandemic. Online applications that were free of charge, easy to use, highly rated, and widely downloaded were also introduced to them. These multimedia applications could help teachers develop and deliver remote learning modules to their students. The workshop supported the teachers as they adapted to interactive distance learning. The workshop also successfully illustrates an innovative distance learning module delivered through multimedia.

distance learning; multimedia; pandemic; PE teachers; virtual workshop

INTRODUCTION

The COVID-19 pandemic spread rapidly to various countries including Indonesia during 2020. Many countries have attempted to control the pandemics by lockdown systems. The government of Indonesia implemented Large-Scale Social Restrictions. All crowd activities including office and school activities were restricted, causing changes in the learning system in schools. Face-to-face interaction immediately shifted to remote learning. Teachers and students must participate in learning from their homes through social media (1).

Physical Education (PE) teaching is traditionally done in the form of physical activities that are monitored directly by the teacher. Online learning creates difficulties for PE teachers. Teachers cannot be as effective as role models in demonstrating good and correct physical exercise programs. Therefore, the Indonesian Physiology Association (IPA) conducted a workshop to support PE teachers in the transition to online instruction. The purpose of the workshop was to provide examples of how these teachers can continue to serve as mentors and role models as they implement PE instruction through social media. One of the targets of this workshop was developing the ability to build online learning modules. The workshop also was an important opportunity for interactive experiences and reflections on teaching practice and created contact networks that can support teachers. The events of the workshop can help to improve teaching, encourage teachers, and share successful teaching strategies to solve difficulties and frustrations (2).

The Virtual National Workshop was titled “Preparation of Multimedia Modules for PE following COVID-19 Prevention Procedures.” This workshop was held virtually by the IPA collaborated with Universitas Sriwijaya. The workshop control was located in the Physiology Department, Faculty of Medicine, Universitas Sriwijaya. E-pamphlets invitations were distributed openly through the Zoom Conference, WhatsApp (WA), Facebook, and Instagram applications. Participants signed up for the workshop via a Google form. The trainees were selected as teachers of PE subjects from Elementary to Senior High School. Participants were accepted when they include recommendations from their principals. The workshop was provided free of charge.

This workshop was held for 3 days. The workshop was organized through the collaboration of educators and researchers from several institutions. This activity was supported by a grant from the Faculty of Medicine, Universitas Sriwijaya. Workshop topics were designed by authors and co-authors and approved by all trainers. The series of events
were systematically scheduled. This report describes the implementation of a virtual workshop and feedback from participants. The report also outlines the evaluation of the tasks as a follow-up to the workshop.

**ACTIVITIES**

This workshop was part of the community service role of the Indonesian Physiological Association. The workshop was held on October 29–31, 2020. All activities can be accessed at https://www.youtube.com/channel/UCePbGPxKMAraU4yhAAaHsQQ. The number of participants who initially signed up was 196, with 177 applicants eligible for acceptance. Some applicants were not accepted because they had no recommendations from school officials. Participants consisted of 64 elementary school teachers, 53 junior high school teachers, and 60 high school teachers from 32 provinces in Indonesia (see Fig. 1).

The activities included four lectures, six workshops, and three independent tasks. Topics of activities centered around the COVID-19 pandemic, sports and health, distance learning, the use of technology in learning, competencies and the role of teachers, and the development of teacher creativity. The provision of materials was carried out interactively. Each participant was invited to a two-way discussion. They were also allowed to ask questions and express opinions via chat. In between giving materials, participants were invited to share their experiences on the topic. In addition to being speakers, presenters also often acted as moderators of discussions.

This activity was organized by members of the Indonesian Physiological Association who are mostly lecturers in the Department of Physiology, Faculty of Medicine, Universitas Sriwijaya. The core team consisted of Muhammad Irfannuddin (chair), Arwan Bin Laeto (co-chair), Budi Santoso, Eka Febri Zulissetiana, and Ardesy Melizah Kurniati. Experts invited as speakers or facilitators were as follows: Fifi Sofiah, Maskun...
Alaya, Tyas Hestiningsih, and Indra Frana Jaya. The committee members were assisted by supporting of officers in charge of e-registration, publication, reporting, maintaining internet networks, and providing certificates. Supporting officers consisted of Suwito Ngadenan and Dessy Astuti (see Fig. 2).

Participants had to sign up and attach a letter of recommendation from their school. Afterward, they were invited to join the WA group. Through the group, participants obtained some information related to the workshop: meeting identity (ID), password, material link, and certificate delivery confirmation.

The first day of the workshop was held on October 29, 2020. The workshop started at 0730. Participants joined Zoom meetings and filled out the attendance list via a Google form. The form link was given via chat after participants had joined. The

Table 1. Schedule of virtual national workshop

| Schedule       | October 29, 2020 (Day 1) | October 30, 2020 (Day 2) | October 31, 2020 (Day 3) |
|----------------|---------------------------|--------------------------|--------------------------|
| 0800–0830      | Opening ceremony          |                          |                          |
| 0830–0915      | Lecture 1: The COVID-19 on children | Workshop 3: Making educational video | Lecture 4: Nutrition and immunity |
| 0915–1000      | Lecture 2: Healthy lifestyle | Workshop 4: How to Become a YouTuber | Workshop 6: Remote learning module |
| 1000–1030      | Short break               | Short break              | Short break              |
| 1015–1100      | Lecture 3: Exercise and immunity. | Task: educational video | Task: arrange learning module |
| 1100–1230      | Workshop 1: Nutrition Analysis. | Task: upload video on YouTube | Presentation and discussion |
| 1230–1330      | Lunch break               | Lunch break              | Lunch break              |
| 1330–1500      | Workshop 2: Google Form Plus Timer | Workshop 5: Physical activity monitoring. | Presentations and discussions (continued) |
| 1500–1600      | Task: making questionnaire | Task: Pacer Health App   | Posttest and closing remarks |

Activities: Speaker Description

- **Lecture 1: The COVID-19 pandemic and its impact on children**
  - Fili Sofiah M.D. (Pediatrician)
  - The COVID-19 pandemic has a significant impact on children. The source of transmission is school activities, which can be transmitted to families (5). Therefore, learning must be done virtually. Study at home will increase the risk of sedentary life and screen time exposure. Teachers as role models are expected to give examples of the application of health protocols. Teachers should also actively provide education to implement a healthy lifestyle.

- **Lecture 2: Healthy lifestyle alongside corona.**
  - Muhammad Irfannuddin, M.D., Ph.D. (Sports Medicine)
  - Efforts to prevent exposure to the COVID-19 are the most effective. Immunity is a mainstay for human survival. Exercising while exposed to sunlight with physical distancing is effective to maintain immunity. The appropriate right exercise is with moderate intensity (6). Aerobic exercise has a positive effect on immunity and cognitive ability (7). Immunity can also be maintained by the good nutrients, rest, and reduce stress levels (8).

- **Lecture 3: Nutrition and Immunity.**
  - Speaker: Ardesy Melizah Kurniati, M.D. (Nutritionist)
  - Nutrient is important in the formulation of immunity. Optimal immunity is achieved through the fulfillment of balanced nutrition, especially protein. Also, micronutrients are needed to help produce important components of immunity. Various vitamins and minerals are very important as cofactors of the immune system. Meat, chicken liver, soy ingredients, vegetables, and fish oil are foods that contain needed vitamins and minerals (9).

- **Workshop 1: Application of nutrition intake analysis**
  - Facilitators: Eka Febri Zulissetiana, M.D., Ardesy Melizah Kurniati, M.D.
  - Teachers had introduced applications that can be used to analyze nutritional intake. The applications presented to participants were www.ahligizi.id and Fat Secret calorie counter (10, 11). The results of the analysis can be used to improve dietary patterns. Teachers can discuss with parents the balance of the child’s diet. These applications can help them to design and choose foods to meet balanced nutritional needs. (12).

- **Workshop 2: Google form plus timer for remote assessment**
  - Facilitators: Budi Santoso, M.D., Eka Febri Zulissetiana, M.D.
  - Assessment is part of evaluating learning outcomes. During the pandemic, assessments must be carried out remotely. Teachers were presented to use Google Forms linked to the timer feature from Quilgo (13, 14). Teachers were asked to make examples of formative assessments. Google Forms can be used to improve students’ participation and engage their learning. Moreover, it helps teachers save paper and time grading assignments (15).

- **Workshop 3: Utilization of Pacer Health application for monitoring physical activity.**
  - Facilitators: Tyas Hestiningsih, D.D., Indra Frana Jaya, Ns.
  - The purpose of this workshop was to increase creativity and to develop distance learning modules with multimedia. Teachers were required to modify the PE module that can be used by students at home. Teachers were advised to adopt an independent learning approach developed by Cambridge (18). The format referred to the guidelines of the Indonesian Ministry of Education and Culture (1, 19). The example of the module can be accessed on http://fk.unsri.ac.id/images/data/jurnal/Contoh_E-Modul_Kemdikbud.pdf
and collecting tasks. Participants received a workshop certificate when attending at least 80% of all activities, and submitting all of the tasks, and 152 participants of the 177 enrolled were eligible to receive certificates. The second evaluation was a questionnaire using Google Forms. Each questionnaire item used a Likert scale of 1 (very poor) to 5 (very good). The questionnaire was answered as soon as the participant received the certificate. The questionnaire was completed by 147 teachers. Table 3 shows that participants were satisfied with the implementation of all aspects of the workshop. The best-rated items were the interactive presentations, attention of the committee before and after the event, discussion session, and provision of the certificate. Meanwhile, the items with the lowest value were the time of activities, quality of visual, and quality of audio.

Evaluation of the workshop also came from free comments in the feedback. The committee highlighted five of the most common comments. Most comments related to participants’ expectations to develop their competencies, the organizing of workshops, and comments about time and internet signal (Table 4).

The committee also evaluated the participant implementation of workshop recommendations to their students. The committee requested reports from the participants 1 mo after the workshop. Eighty-seven teachers provided reports of evidence that they had implemented distance learning modules and included links from both modules and educational videos. Here are examples of a Google Form link and an educational video link that were provided to the committee that can be accessed by everyone.

1) https://youtu.be/N6rWKAldSv4
2) https://www.youtube.com/watch?v=ulLI4PWpBmc&feature=youtu.be
3) https://quilgo.com/form/zjoSpNfuySMKZTJb (please note that the link can only be accessed once on the same e-mail account)

## CONCLUSIONS

The PE teachers in Indonesia were impacted by the COVID-19 pandemic, increasing their motivation to implement new learning methods. The workshop encouraged this change by increasing their comfort with multimedia technology. After

### PROGRAM EVALUATION

Evaluation of the workshop was carried out in several manners. The first evaluation was the participation at each event and the attention of the organizing committee (after the event) 4.70 ± 0.48. The best-rated items were the interactive presentations, attention, and providing the certificate. Meanwhile, the items with the lowest value were the time of activities, quality of visual, and quality of audio.

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### CONCLUSIONS

The PE teachers in Indonesia were impacted by the COVID-19 pandemic, increasing their motivation to implement new learning methods. The workshop encouraged this change by increasing their comfort with multimedia technology. After
the workshop, teachers found it helpful to adapt to interactive distance learning methods. This workshop also made teachers develop various distance learning modules. In addition, teachers become influencers in learning development and innovation. These results improved the quality of distance learning in Indonesian schools. This workshop is also expected to have a positive impact on students as students can implement independent learning and healthy living during the pandemic.

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**DISCLOSURES**

No conflicts of interest, financial or otherwise, are declared by the authors.

**AUTHOR CONTRIBUTIONS**

M.I. and A.B.L. conceived and designed research; M.I., A.B.L., E.F.Z., B.S., A.M.K. and T.H. analyzed data; A.B.L. prepared manuscript; M.I. approved final version of manuscript.

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