

## **Assessment of the effectiveness of online learning during the COVID-19 pandemic in diagnostic radiology curriculum at Lampang hospital.**

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### **Abstract**

#### Background

The COVID-19 pandemic causes rapid shift from traditional onsite learning to online learning in various educational settings, including radiology curriculums. This study aims to assess the effectiveness of online learning, compared to onsite learning in diagnostic radiology curriculum at Lampang hospital during the COVID-19 pandemic.

#### Summary of work

A cross sectional, retrospective study was conducted in 4th-year medical students radiology department rotation. We obtain examination scores and radiology grade of students who participated online learning in 2020-2021, compare with onsite learning in 2022. Statistical analysis by t-test and Chi-squared test. An online survey was administered to gauge students' satisfaction with various aspects of online and onsite learnings.

#### Results

One hundred thirty-three 4th year medical students were included, 84 in online group and 49 in onsite group. The mean examination score of online and onsite groups were  $38.25 \pm 5.59$  (95%CI = 37.03-39.46) and  $32.16 \pm 7.01$  (95%CI = 30.15-34.17) respectively and P-value = 0.000. Radiology grade is not statistically significant between two groups; P-value = 0.076

The students in onsite group reported higher levels of satisfaction in all aspects, including better concentration, easier access to teachers, and better learning environment. Approximately 76.5% of medical students expressed their preference for onsite learning in the future.

#### Discussion

In the event of a significant difference in examination scores may be attributed to divergences in the baseline knowledge among the student groups. However, the online group reported that they had a higher tendency to reread the lessons as they found it hard to maintain concentration in the virtual classroom environment.

When students encounter unfamiliar online learning settings, they might face challenges in adapting which could affect their overall satisfaction with the learning experience.

## Conclusions

The online group achieved better examination scores, but the students expressed higher satisfaction with onsite learning in all aspects.

## References (maximum three)

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