

Submitted: 2 June 2021
Accepted: 21 June 2021
Published online: 4 January, TAPS 2022, 7(1), 115-116
<https://doi.org/10.29060/TAPS.2022-7-1/LE2546>

LOTTE Transdisciplinary medical education promotes interprofessional collaboration and independent learning in medical undergraduates

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Dear Editor,

Khoo Teck Puat Hospital held its first LOTTE (Learning Oriented Teaching in Transdisciplinary Education) elective program for Yong Loo Lin School of Medicine students in April 2021. The four-week program focuses on undergraduate medical education in an inter-professional collaborative setting through observation and presentation of complex clinical cases. Its teaching-learning activities are underpinned by the Learning Oriented Teaching (LOT) theory (ten Cate et al., 2004) to improve learning at the cognitive, affective and metacognitive levels with shared guidance between students and faculty.

At the cognitive level, students were encouraged to take ownership of learning, do literature review and present cases. Faculty critiqued and helped students to refine learning objectives and identify pertinent clinical aspects for elaboration and learning.

At the affective level, students were motivated to present cases on Zoom videoconferencing to classmates as they learned through active doing and attained peer recognition of their good effort. The teacher highlighted the importance of peer learning through discussing

authentic, complex cases that required transdisciplinary holistic patient care.

At an interactive self and peer learning level, students used tools such as the Kahoot! game-based app for peer teaching to optimise learning and increase participation.

With a greying population, there is a need for transdisciplinary education to improve patient outcomes in the geriatric population (Chia et al., 2016). LOTTE provided an introduction to transdisciplinary education and highlighted importance of integrating competencies from various disciplines in preparation for future practice.

The first run of LOTTE consisted of seven transdisciplinary themes. An example of a transdisciplinary theme would be “Palliative Surgery” offered by both a palliative physician and an oncology surgeon. LOTTE differed from traditional “single discipline” electives as it emphasised inter-professional collaboration and collective learning involving the surgeon, physician and students. Students divided their time equally in both subspecialties, attending ward rounds, clinics, operating theatres and home visits. They

encapsulated their learnings by presenting real-life complex cases via Zoom in the last week to their peers and faculty. Learning opportunities in two subspecialties were maximised with the student following through the patient journey from ‘Start to Finish’ (Chia et al., 2016).

Medical graduates face an increasingly complex healthcare landscape where management of co-morbidities may be beyond one’s expertise. LOTTE may be helpful to promote transdisciplinary collaboration for holistic management of complex geriatric patients and nurture the development of independent learning in medical undergraduates.

Notes on Contributors

Dr Clement Chia conceptualised and designed LOTTE framework, was a faculty in LOTTE and wrote the manuscript and approved the final version.

Dr Shaun Chan conceptualised and designed LOTTE framework, helped coordinate students, was a faculty in LOTTE and revised and approved the manuscript.

Dr Priscilla Ng conceptualised and designed LOTTE framework, was a faculty in LOTTE, revised and approved the manuscript.

A/Prof Yip Chee Chew conceptualised and designed LOTTE, revised and approved the manuscript.

Acknowledgement

We would like to thank all the transdisciplinary educators who made this inaugural run of LOTTE possible. They include A/Prof Tan Kok Yang, A/Prof Toh Hong Chuen, A/Prof Tavintharan Subramaniam, Dr Desmond Ooi, Dr Tan Mingyuan, Dr Tan Bo Chuan, Dr Ruth Chua, Dr Benjamin Lam, Dr Visnja Baksa Reynolds and Dr Gabriel Cher.

Funding

There is no funding for this study.

Declaration of Interest

Authors declare no conflict of interest.

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