

mean score was Item 9 ( $M = 4.81$ ,  $SD = .472$ ), suggesting that most undergraduates prefer interactive quizzes that deepen their understanding of the case. The modality is considered a useful instrument to improve their learning, according to the second-highest preference ( $M = 4.81$ ;  $SD = .492$ ). The students also expressed a preference for revisiting the case at their convenience to enhance their clinical skills, which was the third most popular response ( $M = 4.78$ ;  $SD = .587$ ).

#### Discussion:

Student PRP is a novel modality of virtual teaching that can be an effective educational method providing a positive learning experience. It empowers students and allows them to develop confidence in their ability to handle difficult clinical situations, make decisions, and communicate with patients. It also provides positive learning for peers observing the recorded video at the IMU e-portal.

#### Conclusion:

Peer role-play is a novel modality of virtual teaching that engages students and provides them insight into case-based learning. It empowers students by allowing them to actively participate in the learning process, develop confidence in their ability to handle difficult clinical situations, make decisions, and communicate with patients and their families

#### Take Home Message:

Student Peer role-play is an engaging and effective tool for virtual learning that provides opportunities for reflection and self-evaluation. It enhances collaboration and problemsolving skills among students.

#### ABSTRACT ID:

### RHIME003-TAL

## Engaging Students as Partners to Designing a New Cardiovascular Physiology Practical - Innovative Repurposing of An Open-Source Simulation

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#### Background:

Computer simulations of physiological experiments have long been available and are often delivered in computer labs. However, monitoring and sustaining students' engagement in such setting remain challenging. Moreover, some traditional basic science practicals are perceived by students to be irrelevant to clinical practice (Goyal et al., 2017; Lata & Walia, 2010), which is detrimental to their motivation to learn (Kember et al., 2008). As such, it is imperative to ensure that physiology practicals are fit for purpose for health professionals students.

#### Description of the Innovation:

This 3-hour practical adopted an open-source simulation of rat cardiovascular system (RatCVS) developed by John Dempster, Department of Physiology and Pharmacology, University of Strathclyde. The simulation was deployed in several 50-inch touchscreen computers, each shared by a group of 10 to 11 students. The practical class started with a briefing and demonstration by the teacher. Then the students' performing pre-set experiments with a step-to-step protocol and questions that guide their data interpretation. Afterwards, the teacher introduced general ways to design pharmacological experiments, and then asked the students investigate how to control blood pressure for a patient with pheochromocytoma. The students designed their own experiments and submitted their

findings online, and the teacher gave feedback accordingly.

#### Method:

During summer 2022, I (the teacher) partnered with three first-year medical students to design the practical class. We first identified key concepts to cover and drafted the practical manual, and then recruited additional students for a test run. Feedback were collected from the student testers to refine the design. This practical class was formally taught to first-year medical students in February 2023. It was evaluated using an online survey adapted from validated instruments for evaluating situational motivation (Guay et al., 2000) and perceived usefulness of the learning activity (Herbert et al., 2017).

#### Results of Evaluation:

A total of 317 surveys was disseminated, and 57 valid responses were received (response rate=17.98%). For situational motivation (7-point Likert scale), the mean scores ( $\pm$  SD) for intrinsic motivation (IM), identified regulation (IR), external regulation (ER) and amotivation (AM) were 5.1 ( $\pm$ 1.1), 5.5 ( $\pm$ 0.9), 4.5 ( $\pm$ 1.1) and 2.8 ( $\pm$ 1.1), respectively.

When asked to self-rate their understanding of the topic before and after the activity in a score out of 10, the mean score ( $\pm$  SD) before the activity was 4.9 ( $\pm$ 1.6), and after the activity was 7.0 ( $\pm$ 1.5). The increment was statistically significant ( $p < 0.001$ ).

This practical class was observed by an experienced pharmacology teacher, who felt using large touchscreens made it easier for teachers to observe students' progress compared to the traditional computer lab setting.

#### Discussion:

The evaluation results shows good self-motivation amongst the survey respondents, indicated by high mean scores in IM and IR, and low mean score in AM. The activity also improved students' perceived understanding

of the topic. Moreover, there was also no additional cost involved in repurposing an open-source simulation package already owned by the Faculty. Therefore, similar student-teacher partnership has great potential for learning enhancement. "

#### Take Home Message:

Involving students as partners from the first stage of learning design is helpful for ensuring an activity is fit for purpose. Experience of using old simulation packages can be greatly enhanced by using new hardware.

#### ABSTRACT ID:

### RHIME004-TAL

## A Trial of the Patient Problem-based Interprofessional Interaction Model as An Interprofessional Learning Method in the Community

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#### Background:

During the implementation of interprofessional learning (IPL), students and facilitators express question upon realising that not all health problems influencing patients and the community are related to the profession's competence. This is occasionally the cause of the emergence of a conflict. The purpose of this study is to evaluate the model of "patient problem-based interprofessional interaction" as an interprofessional learning strategy for situations requiring profession-specific competencies to address patient and community problems.

#### Methods:

This is a mixed-methods investigation into the model's application. In September 2022, 240 students at the Palu Health Polytechnic were divided into four profession-specific