

An Alternative to Problem-Based Learning in a Post-Graduate Healthcare Professional Programme

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Abstract : The Master's of Physician Associate Studies (MPAS) programme at St George's, University of London (SGUL), is an intensive two-year course that trains students to become physician associates (PAs). PAs are generalized healthcare providers who work in primary and secondary care across the UK. PA programmes face the difficult task of preparing students to become safe medical providers in two short years. Our goal is to teach students to develop clinical reasoning early on in their studies and historically, this has been done predominantly through problem-based learning (PBL). We have had an increase concern about student engagement in PBL and difficulty recruiting facilitators to maintain the low student to facilitator ratio required in PBL. To address this issue, we created 'Clinical Application of Anatomy and Physiology (CAAP)'. These peer-led, interactive, problem-based, small group sessions were designed to facilitate students' clinical reasoning skills. The sessions were designed using the concept of Team-Based Learning (TBL). Students were divided into small groups and each completed a pre-session quiz consisting of difficult questions devised to assess students' application of medical knowledge. The quiz was completed in small groups and they were not permitted access of external resources. After the quiz, students worked through a series of openended, clinical tasks using all available resources. They worked at their own pace and the session was peer-led, rather than facilitator-driven. For a group of 35 students, there were two facilitators who observed the sessions. The sessions utilised an infinite space whiteboard software. Each group member was encouraged to actively participate and work together to complete the 15-20 tasks. The session ran for 2 hours and concluded with a post-session quiz, identical to the pre-session quiz. We obtained subjective feedback from students on their experience with CAAP and evaluated the objective benefit of the sessions through the quiz results. Qualitative feedback from students was generally positive with students feeling the sessions increased engagement, clinical understanding, and confidence. They found the small group aspect beneficial and the technology easy to use and intuitive. They also liked the benefit of building a resource for their future revision, something unique to CAAP compared to PBL, which our students participate in weekly. Preliminary quiz results showed improvement from pre- and post- session; however, further statistical analysis will occur once all sessions are complete (final session to run December 2022) to determine significance. As a post-graduate healthcare professional programme, we have a strong focus on self-directed learning. Whilst PBL has been a mainstay in our curriculum since its inception, there are limitations and concerns about its future in view of student engagement and facilitator availability. Whilst CAAP is not TBL, it draws on the benefits of peer-led, small group work with pre- and post- team-based quizzes. The pilot of these sessions has shown that students are engaged by CAAP, and they can make significant progress in clinical reasoning in a short amount of time. This can be achieved with a high student to facilitator ratio.

Keywords : problem based learning, team based learning, active learning, peer-to-peer teaching, engagement

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