GOOD Flipped Classroom CASE

Flipped Learning and Teaching Initiative

07

RS459

Clinical Practice in Stroke Rehabilitation

Instructor
Mr Kin-Chung Tang

Department
Rehabilitation Sciences (RS)

Class size 20 - 25

Students
Year 4 students from RS

Details of Flipped Classroom IMPLEMENTATION

Why did the instructor use the flipped classroom approach?

In this course, students are required to apply their practical skills to treat real stroke patients who are recruited from the community. To help facilitate learning, KC implemented a flipped classroom approach, allowing students to learn, discuss, and plan treatments before class. As a result, they can review their practices and apply treatment to stroke patients during class time.

How was the flipped teaching approach implemented?

Preparation of materials

KC prepared videos demonstrating stroke rehabilitation treatments, performed by himself and previous students for teaching purposes. He also provided background information about the patients to help students plan their treatments. Additionally, KC created several WhatsApp groups to facilitate communication between his student groups and stroke patients.

Pre-class activity

Each student group is required to carefully review the background information of their assigned patients and design detailed treatment plans.

In-class activity

During the initial 3 to 4 weeks of the semester, KC helps students refresh their practical skills in stroke rehabilitation, which they have acquired over the past two years, through face-to-face tutorials. Subsequently, students have six weeks to practice these skills with their assigned patients. They are required to film their treatment progress and deliver a one-hour presentation after completing the treatment.

Post-class activity

Students are responsible for preparing the treatment plan, reviewing and discussing their applied treatments, and pre-paring presentations. Additionally, they are required to record a minimum of one video demonstrating their personal practice of the skills acquired throughout the class.

What was the impact on student learning?

In a traditional clinical practice course, students often watch numerous videos and engage in role-playing to simulate the progress of stroke rehabilitation treatments. However, this learning process falls short of providing students with genuine, empirical, and firsthand experiences. In KC's flipped classroom approach, students move beyond traditional simulations and engage directly with real-world stroke rehabilitation patients. By working with actual stroke patients, students gain firsthand experience, meticulously studying medical backgrounds, discussing cases, and drafting practical treatment plans. This direct interaction allows them to understand the complexities of health issues, emotions, and individual needs. Moreover, it fosters empathy and adaptability, as students learn to address patient concerns across diverse personalities, communication styles, and cultural backgrounds. Last but not least, in real-world situations, students receive positive and thankful feedback from actual patients, which motivates them to provide better healthcare services in the future.

What are the good practices that can be learnt from this case?

"Flipped" the study from the classroom to real-world practice

- Going beyond classroom simulations, KC took a bold step by involving actual stroke patients in the learning process. This hands-on experience allowed students to immerse themselves in the challenges and nuances of real-world practice, bridging the gap between theory and application. As they interacted with patients, students gained insights into clinical decision-making, communication, and empathy. This approach not only sparked a sense of responsibility but also ignited active participation, transforming their learning journey into a dynamic and meaningful experience.

Using Whtasapp groups to enhance teacher-student-patient communication

- KC utilises WhatsApp groups to foster connections among students, patients, and himself, enabling timely conversations. Within these familiar communication channels, KC shares essential information such as study materials, patient backgrounds, and real treatment videos with his students. Students benefit from direct access to their teachers, allowing them to seek guidance and receive prompt feedback. This instant communication channel effectively addresses practical challenges, ensuring students receive timely support. Additionally, patients can keep in touch with their therapists (who are also students), aiding them throughout the therapeutic process. The communication between teachers, students, and patients in stroke rehabilitation not only emphasises practical skills but also addresses the patient's spiritual and emotional well-being. Offering this support helps maintain a relaxed, balanced state during treatment, which cannot be fully experienced through classroom simulations.

What were the challenges encountered during the implementation and what solutions were used?

Technological support is essential to further enhance the practice

- To effectively treat stroke patients, it is crucial for students to carefully observe the patients' movements, taking into account the unique variability of stroke symptoms. Recognising that it is impractical to request patients to repeatedly perform these movements, KC proposes the adoption of virtual reality (VR) technology to replicate the movements of stroke patients. This innovative approach would enable students to examine the motions from multiple perspectives and review them as often as necessary. Furthermore, if students can engage in multiple practice sessions using VR simulation before interacting with actual patients, this could significantly reduce their anxiety levels.

  However, a significant challenge lies in the insufficient technological infrastructure required to conduct extensive volumetric captures of stroke patients and construct the 3D environment, as it is time-consuming and requires substantial computational resources.