

With support from the Courseware Development Grant, an interactive virtual reality courseware that cover an important topic “Pediatric intravenous infusion” in a third-year nursing course, “NURS 3152 Nursing in Clinical Specialties I”. The objectives of this project are (1) maximize students’ learning by allowing them to learn in their own pace with the use of the developed courseware; (2) support flipped classroom implementation in the course; and (3) engage students in an active learning environment.

The topic use for developed courseware is “Pediatric intravenous infusion”. This topic is chosen because they contained a mixture of knowledge and concepts which are more appropriate to learn by engagement in problem-solving scenarios and interactive activities. On the other hand, the “presence” offered in the VR courseware provided students with the opportunity to be an active participant in the simulated hospital environment. These experiences were difficult to be presented and described in the lectures.

To facilitate students to learn about the topic, students will be required to use the courseware in the practical session. With the developed courseware, the course teachers could make use of the class time to revisit the important concepts described in the micro-modules and clarify any misunderstandings that arouse. At the same time, students were expected to participate in various in-class activities, such as discussions, to consolidate what they learned in the courseware. All these helped the students to apply their knowledge and practice their critical thinking skills.

To date, the project has been evaluated by student surveys and qualitative interviews. The surveys indicated that 90.6% of the students agreed that the courseware helped them to gain a better understanding of nursing knowledge and skills on the designated topics. Most of them (80.1%) agreed that the courseware helped them to learn at their own pace. Majority of students agreed that more courseware should be produced in the future. The qualitative interviews indicated that majority of students liked the developed courseware because the VR scenarios make learning more engaging and interesting. Most importantly, these courseware helped them enhance their understanding the skills in administrating pediatric intravenous infusion.

The evaluation indicated that the project has achieved its objectives effectively and completely.