

## Assessment of Pain Management Therapeutic Outcomes Training Using a “Gaming-Technology” Scenario

The purpose of this project is to develop and assess a gaming-technology case scenario for student pharmacists' pain management outcomes training. Departmental and School of Pharmacy and Health Professions goals include development of methods that are technology-based and applicable for training students in distance-education pathways. This project will assess the time and effort needed to produce these types of cases and whether or not student-learning is improved by the use of this process. Because of the gaming activities of this generation of students, it is believed that they will benefit from this type of computerized scenario.

The project is designed to compare a gaming-technology scenario to our current case-training standard in third year pharmacy students. Currently, students are asked to make drug therapy recommendations about medications by traditional techniques such as listening to lecture and reading the textbook. A pain management patient case for the application of drug therapy management will be developed. It will consist of a game-type algorithm that is structured to help students choose the appropriate therapy based on drug, dose, route of administration, and side effect profile. Students should recognize when to use the selected medication, when not to use the medication, and how to use the medication. The case will include a patient presenting with a chronic pain problem with corresponding questions, written prescriptions that may be incorrect and need to be rectified, dose adjustments and side-effect management, as well as an expert-panel discussion of how they would manage the case.

First, a pre-test assessment on the topic of pain management will be developed and given to 40 third year pharmacy students. The group will be divided in half, 20 taught using the standard method of training and the other 20 being the gaming-technology scenario cohort. The standard method of learning will use our current methods of teaching using textbooks, lectures, labs, etc. The gaming-technology scenario group will participate in interactive, algorithm based learning using distance education applications. They will view the scenario and select the case management options presented in the “game”. A post-test will be given to both cohorts to assess and compare their abilities to manage chronic pain.

The time-line is as follows:

January-February 2011: Students identified and given a pre-test over pain management

March-April 2011: Student will be divided into their respective cohorts. Students will participate in the standard method or gaming-technology case scenario.

April 2011-May 2011: Conduct the post-test assessment over pain management

The expected results will demonstrate that this generation of students has improved learning with the use of gaming-technology scenarios. Future activities include the expansion of this method to other medication therapy management topics using this template.

The production of these scenarios will use equipment and software to sustain this effort after this project's funding and completion. There will be significant amount of time invested in creating the gaming-technology scenarios. These will be used for future campus and distance students in the pharmacy program. And there may be a market for them in other pharmacy and health care training programs.

The budget will allow research for production and analysis of the assessment data. The creation of the gaming-technology case scenario will require faculty time and will not be funded directly from this project.

**Budget:**

**Hard ware:**

Flip Video Ultra HD	3	\$ 150.00	\$ 450.00
Seagate Free Agent 2TB External HD	3	\$ 140.00	\$ 420.00
HP LP2475w 24" widescreen TFT active matrix LCDmonitor	1	\$ 500.00	\$ 500.00
Sunpak 7575 Pro Platinum Plus Tripod	3	\$ 60.00	\$ 180.00
Logitech USB headsets	4	\$ 28.00	\$ 112.00
HDMI Micro cables	3	\$ 12.00	\$ 36.00
Slik Lighty Pod III Monopods	3	\$ 40.00	\$ 120.00
Total			\$ 1,818.00

**Software:**

Jing Pro Annual Subscription Fee	2	\$ 20.00	\$ 40.00
Pinnacle Studio HD software	2	\$ 50.00	\$ 100.00
Total			\$ 140.00

Grand Total \$ 1,958.00