Summative Reflection

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This summative reflection focuses on the experience of spending time in various departments of Boonshoft School of Medicine (BSOM) and learning different technology applications. This experience will help the transition at Sultan Qaboos University Oman in the implementation of a paperless system. The reflection summarizes the objectives of identifying technology applications and choosing the most effective electronic alternatives in educational technology. By doing so, time and effort is reduced in managing data and information using up-to-date educational technology in medical education.

Residency Management Suit (RMS) is a software designed to provide different information at any time. This includes personal data with pictures of residents, courses they have completed, sizes of uniforms, visa statuses, and conferences they have attended, among other things. In the 'schedules' tab you can view different rotations the residents are completing and the dates of these rotations. The RMS provides graphical information as an overview of different activities residents have completed and feedback from instructors. The calendar feature is impressive. This features displays different conferences that are eligible for specific residents. The uploading of Power Point slides is an added feature which is very useful for posting flyers. The 'reminder' option is useful for reminding residents about forth-coming conferences. The RMS would play an important role if implemented in Oman since we have residents rotating in different hospitals. This creates a challenge in tracking their schedules and assessments. The RMS would solve these issues.

Though there are lots of devices and software that can be purchased and used to deliver content to students, Apple devices are the favorite. iTunes U is intended to work with a management system of any kind including Moodle. Students can be enrolled in iTunes U by sending them the URL for registration. Since everyone will be required to have an iPad, the

software can be provided for free by Apple. It is a powerful tool that has a capability of installing

PowerPoint presentations with voice. Students can download the app onto their devices and use

it for their learning. Apple devices come with Mobile Device Management (MDN) as well as

iBook which works best for presentations. Once downloaded, students can view their notes

offline. They can bookmark or make notes at any time. Furthermore students are more involved

during the session by interacting with other students using this technology. The instructor could

flip the classroom by having students watch videos at home and come to class prepared for the

lecture.

The Cox Simulation Center in Kettering is helpful for hands-on training for medical

students. The center is equipped with high-tech manikins for training pediatric, cardiac and

surgery cases. Expired medicines such as gel are used for training purposes only. There is a

control room where the instructor responds as a patient and controls what is displayed on the

screen. The x-ray images are projected on a separate screen for students to view. The physician

in charge of the center, Dr. Ray, is able to change the controls when students give proper

medication to the patient. The amazing part about the manikins is that you are able to hear the

heartbeat and, in the case of infants, the sound of crying with a single click from the computer.

This type of training is very beneficial for medical students before they see patients in the clinic.

Students are able to practice without fear on the manikins.

Flight is an in-house exam software developed at Boonshoft School of Medicine

(BSOM). It includes features such as a question bank, as well as sections for evaluation and

testing. The Graphical User Interface (GUI) is categorized by course. There are about 8,000

questions built in to the question bank. Each question contains a serial number, when it was used,

its correlation and when it was last edited. Faculty can create new multiple choice or expanded

multiple choice questions. They can attach an image then a new database is created. Furthermore, an instructor can log into Flight and create a quiz. There is an option of creating a new test by typing the title, the year to be used, and the exam type, then clicking the 'create' option. Questions can be deleted, or tests can be printed in faculty view mode or student view mode. The author or statistics can also be viewed. Once the test is prepared, it is then locked. Students can only access the questions on the exam date. After locking, the date for the exam is created. The IP address accessing the exam will need to be specified. There are different layers of security before a student can access an exam. After the exam is completed, students will have the review session to see the exam. There are challenges to be considered in creating new software for examinations. If there are many of students doing the exam at the same time, the network would become slower. A technician has to be hired who is familiar with the software in case of any technical issues. There will always be resistance from faculty who are accustomed to the traditional method of conducting examinations on paper. Regardless of these challenges, it is still worth the effort to implement this software.

As a result, having software similar to the RMS in our medical school would play an important role in tracking the assessments and feedback of residents rotating in different hospitals. The problems of missing feedback forms from other hospitals would be eliminated. Furthermore, it would be very easy to track the hospitals in which residents are rotating.

Having a high-tech simulation center would provide adequate training for medical students by having the flexibility of group work and avoiding the fear that something might go wrong with real patients. By doing so, students will gain the necessary skills to ensure patient safety. The current simulation center in Oman does not provide adequate training because the manikins are not high-tech.

In-house exam software provides flexibility for both students and faculty. Students would have the comfort of doing examinations by using the latest technology such as iPads. With this technology, faculty prefer easy-to-use software to manage assessment and engage with students. Though there are security issues involved in conducting online assessments, there are more benefits than drawbacks. An increase in physical storage space, a reduction in the cost of printing, and improved efficiency for conducting examinations are some of the benefits of using this technology.