Project Title

Faculty And Staff Simulator Training (FASST)

Project Description

The purpose of this project is to familiarize and provide training for both staff and faculty within the George Brown College Simulation Centre on patient simulators, their hardware and software.

Needs Assessment

During a Simulation Centre end of term operational staff meeting, lab faculty and support staff identified an unfamiliarity with the simulators utilized in the Centre. Exploring this revelation, many could not identify the model or type based on the market name, nor how to utilize their hardware, software or how to incorporate it into curriculum. They conveyed an expressed need to supplement their skill set in curriculum delivery. They were also expressing a future or anticipated need as they projected their course out and how it would be able to evolve and not remain static (Morrison et al., 2019).

Participants

The participants in this project included all faculty who taught lab courses in the Simulation Centre. Further, all support staff employed in the centre were also included in the participant pool.

Data Collection

A short, informal electronic survey was sent to all faculty and support staff who were involved in the lab component of curriculum delivery. There were both fillable text boxes and Likert scale type questions seeking further information from this stakeholder group. A total of seven out of 19 individuals completed the survey. Five faculty and two support staff completed the survey.

Results

The data confirmed participants wanted to utilize more educational technology within their courses to support all three learning domains of learning: psychomotor, cognitive, and affective. Their confidence level on its use and its incorporation into curriculum was low. The data collected also showed that a training program would be beneficial to them. One stated she would like to target specific communication capacities of the manikin for learners to develop therapeutic relationships. Another indicated she would like the manikin to be able to be the focal point to promote and teach interprofessional education between practitioners.

Goal Analysis

The goal statement for this project would be: ***To develop and implement a simulator training offering for all internal Simulation Centre stakeholders to enhance fidelity in their curriculum delivery prior to the commencement of winter semester.***

Learner Analysis

The targeted learners of this training session would be faculty and staff within the Simulation Centre at George Brown College in Toronto Ontario Canada. As a result:

- All participants would be Master's educated, middle-aged adult females who would align to adult learning theory and a specific nursing approach identified as Novice to Expert Theory (Benner, 1984).
- There is a highly skewed demographic to cacuasian female.
- Female learners tend to lack the confidence and utilize enhanced technologies at a lower rate than males. "Females feel less confident with computers because they have learned less and practiced less and feel more anxious about using computers when compared with male counterparts" (He & Freeman, 2010).

- Most do not have specific training on the patient simulators, however, will be familiar, if not experts with the psychomotor skills requiring teaching and testing.

Context Analysis

- **Orienting Context –** Learners will be motivated to learn as it could create efficiencies in their job, and it could make it easier as they feel constrained by shortened lab times to show and test specific skills.
- **Instructional Context –** the training will be of a hybrid approach. There will be pre-work with some flash cards to identify the simulators and peripherals. The experiential component will take place on campus in the nursing labs. The full day training will take place the week prior to the semester starting, with a half day drop-in session mid-semester during week eight (Reading week).
- **Transfer Context –** learners will be able to directly apply the learning objectives of the instruction and enhance their offerings to the students.

Task Analysis

The task analysis as described by Morrison et al., (2019) consists of three components.. First is the topic analysis, where the SME in this portion would be the Simulation Technologists. Second is procedural analysis where tasks, psychomotor skills and cognitive sequencing are outlined. Working with both the faculty and simulation technologist in this area would be best practice. A need for a critical incident method does not appear to be necessary. An evaluation of the training will occur post event.

NEEDS ASSESSMENT

Topic Analysis

Facts

- Companies that produce simulators (Laerdal, CAE, Gaumard)
- Types of simulators (geriatric, adult, paediatric, preemie)
- Model names (Nursing Anne, Juno, Harvey, Preemie Hal, SIM-man 3G, SIM-baby)
- Hardware (link box, Sim-pad, battery, connectors)
- Software (LLEAP)

Concepts

- Set-up (proper set up of the simulators – plug ins, network cables)
- Connectivity (connecting to the WIFI network, microphones, simulator, and Sim-pad)
- Functionalities (differing functionalities of different manikins)
- Operationalizing (actual use of the manikin)

Principles and Rules

- Setup and connectivity are inter-related as without proper set up, connectivity will be impossible.
- Utilizing the correct simulator with the proper functionality for specific curriculum delivery – adult patient simulator who can seize and foam at the mouth.
- Hardware and software compatibility – certain simulators have specific hardware and software to operate them.

Procedures

- Removal from case and placing where it is most optimal for student learning.

- Proceeding through the appropriate steps of plugging it in and powering it on, connecting hardware, connecting it to the network, launching software.
- Turning the simulator and peripherals off and storing appropriately.

Interpersonal Skills

- These simulators are a great tool to teach these skills through dialogue and video recording interaction should they be required.

Attitude

- This training will enhance the affective learning domain, by creating empathy for the patient, equipment and the technologists who maintain these tools.

Procedural Analysis

Working with the Simulation Technologist the following procedure would be identified.

- Identifying the correct simulator and requesting it via the online portal.
    - Work with SME for alignment of simulator to learning objectives.
    - Proceed online to https://www.georgebrown.ca/health-sciences/learning-environment/simulation-centre/room-equipment-supply-allocation
- Unpacking and set up.
    - Unpack simulator and its peripherals. Identifying components ensuring everything required is there. Inspecting for previous damage and noting it.
- Powering up the simulator.
    - Follow proper sequence for powering on and connecting the simulator and its peripherals, ensuring components for teaching are functional.
- Troubleshooting

    - Tips and tricks should something not be working.
- Packing up
    - Specific procedure for powering down simulator.

References

Benner, P. (1984). From novice to expert. *Menlo Park*, *84*(1480), 10-1097.

He, J., & Freeman, L. A. (2010). Are men more technology-oriented than women? The role of gender on the development of general computer self-efficacy of college students. *Journal of Information Systems Education*, *21*(2), 203-212.

Morrison, G. R., Ross, S. J., Morrison, J. R., & Kalman, H. K. (2019). *Designing effective instruction*. John Wiley & Sons.