Bringing Procedural Knowledge Instruction to Life Through Scenario-Based Online Lessons

Beth Marcellas
Dina Kurzweil
Justin Woodson
Jennifer Chuba
Clint Hospodar
Spencer Heggers

Uniformed Services University of the Health Sciences
United States

Abstract: Using checklists and standing operating procedures (SOPs) can help increase efficiency and effectiveness in a wide variety of fields, such as medicine, aviation, and manufacturing. However, in order for such tools to work well, the people who will be using them need to become familiar with them and understand them. The challenge for educators is to provide learning environments and materials that facilitate this process. Scenario-based lessons can meet this challenge. The goal of this presentation is to show the steps required to bring a scenario-based online lesson focused on SOPs from outline to execution, highlighting the unique contributions of the many experts involved in its development. The presentation will also explore the ways that building the development of procedural knowledge into a narrative-based learning experience can improve performance when the learners are called to use that knowledge again in the future.

Using checklists and standing operating procedures (SOPs) can help increase efficiency and effectiveness in a wide variety of fields, such as medicine, aviation, and manufacturing. However, in order for such tools to work well, the people who will be using them need to become familiar with them and understand them. The challenge for educators is to provide learning environments and materials that facilitate this process. Narrative learning theory and active learning theory suggest a promising approach. By developing scenario-based interactive instruction that engages learners in using the tools in real-world situations, educators can motivate learners to spend more time with the tools and help learners to recognize their significance.

This project aimed to use scenario-based interactive instruction to introduce students at a military health sciences university to the Go Book, a set of checklists and SOPs. The Go Book was designed to enable students to successfully complete a number of tasks during a military field training practicum that is the capstone of their academic program in military medicine. The instructional design and development team at the university worked with the course faculty to facilitate student use of the Go Book by creating learning materials rooted in realistic storylines that introduced the students to the operational environment and their role within it. The learning materials required the students to use the Go Book to solve problems and help save lives as they advanced through the storyline. By drawing students into a narrative and asking them questions that drew upon the checklists and SOPs in the Go Book, this learning activity helped students to see the importance of the Go Book in their military medical training environment. This best practices presentation will describe philosophy behind the Go Book as well as the design, development, and creation of the interactive, web-based tool used to introduce students to it. The presentation will explain the strategies, methods and teamwork necessary to successfully implement the project along with the rationale for the instructional decisions made during the project. The goal of this presentation is to show the steps required to bring such a lesson from outline to execution, highlighting the unique contributions of the many experts involved in its development. Though the content of this course was specific to military health sciences students, the processes involved are applicable to a number of fields where SOPs and checklists are employed. In any of these fields, building the development of procedural knowledge into a narrative-based learning experience can improve performance when the learners are called to use that knowledge again in the future.