

**Title:**

Measuring the Efficiency, Effectiveness, and Experience of Teaching-Learning Family Constructs Framework

**Guarionex Salvia, PhD**

Computer Information Science Department, Minnesota State University, Mankato, Mankato, MN, USA

Norma Krumwiede, EdD

School of Nursing, Minnesota State University, Mankato, Mankato, MN, USA

---

**Session Title:**

Enhancing the Experience for Nurse Educators and Nursing Students Through Interprofessional Collaboration and Innovative Technologies

**Slot:**

D 09: Sunday, 29 October 2017: 2:45 PM-4:00 PM

**Scheduled Time:**

3:05 PM

---

**Keywords:**

Family Constructs, Teaching-learning Experience and Usability Test

**References:**

Nielsen, J. (1993). *Usability Engineering*. San Francisco, CA: Morgan Kaufmann Publishers Inc.

Ratwani, R. M., Fairbanks, R. J., Hettinger, A. J., & Benda, N. C. (2015). Electronic health record usability: Analysis of the user-centered design processes of eleven electronic health record vendors. *Journal of the American Medical Informatics Association*, 22 (6), 1179-1182. doi: 10.1093/jamia/ocv050

Liu, H. & Hartnett, E. J. (2015). Exploring the design of a social learning platform for supporting users' e-teaching skill development. *2015 SAI Intelligent Systems Conference (IntelliSys)*, 976-977.

Pereira dos Anjos, T., Amaral Gontijo, L., Simoes Vieira Guimaraes, R., & Porto Batista, G. (2016). Usability Evaluations of Health Institutions Inspection Software. *IEEE Latin America Transactions*, 14 (3), 1538-1547.

Nasiri, S., & Fathi, M. (2014). Toward an integrated e-health based on acquired healthcare knowledge. *2nd Middle East Conference on Biomedical Engineering*, Doha, 301-304.

Cardwell, A., Kruse, L., Luque, N., Ratliff, M., Stettinius, A., & Bailey, R. (2016). Developing and implementing a Usability Test Plan for the Challenger Center's

**Abstract Summary:**

Nurse educators have the desire to create meaningful teaching-learning experiences, and often rely on technology to enhance student engagement. By testing the efficiency and effectiveness of the technologies used to foster student understanding, nurse educators are better prepared to create teaching-learning experiences centered on the science and praxis of nursing.

**Learning Activity:**

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
Describe how technology can be used to enhance the teaching-learning experiences.	a) Explain the role of the SAFEHR application b) Explain the role of the Family Constructs Forum c) Incorporating technologies in the teaching-learning experience
Identify and apply methodologies for assessing the impact of technologies in learning experiences.	a) Describe the purpose and utility of a usability test b) Implementing scenarios to assess the perceived impact technologies in the learning experience c) Understand the limitation of assessment methodologies

**Abstract Text:**

**Purpose:** The purpose of this presentation is to describe how technology can be used to enhance the teaching-learning experiences for educators and students by focussing on the aim of advancing nursing practice with families. In particular, nurse educators can measure via a usability study the perceived impact of Simulation Analytic Family Electronic Health Record (SAFEHR) and the Family Constructs Forum in the process of learning the Family Constructs Framework, identifying Family Constructs, clinical judgement and reasoning via technologies by documenting Family Constructs and the associated nursing actions.

**Background:** Despite increasing evidence of the significance of family nursing to health outcomes, nursing education's focus is limited on family nursing actions. Nursing education pedagogies in this academic setting address nursing practice with individuals and families with an aim of helping students to gain competence in family-focused nursing care. We introduce a methodology to argue whether adopting new technologies deters or enhances the teaching-learning experience.

**Conceptual Framework:** Family Nursing Constructs Framework grounded in the science of nursing and nursing education.

**Method:** A Usability test is conducted a lab environment to support faculty and students in gaining knowledge of Family Constructs and related nursing actions. The impact of technologies in nursing education learning activities can be tested by measuring the efficiency (time completion of a task), effectiveness (number of errors when completing a task), and user experience (satisfaction, enjoyment, frustration, etc.) of tasks that support the learning objectives of Family Nursing Curricular Outcomes.

**Results:** A usability test measures the user experience and educational design efficiency and effectiveness. Nurse educators can use these methodologies to assess and improve the impact that technologies have in teaching. Selected family nursing learning experiences will be discussed to illustrate the usability method which provides faculty with a conceptual model of what the student's perception of the quality and overall satisfaction of the experience is. When did they look away, when did they become more distressed?

**Conclusions:** Ultimately, we can change the teaching experience to continue to improve it to allow students to experience the best possible way to learn a particular family nursing ability. A user-centered testing approach fosters a deep understanding of students' needs, their abilities, and their limitations. This shifts the paradigm of nursing education.