MEASURING THE EFFICIENCY, EFFECTIVENESS, AND EXPERIENCE OF TEACHING-LEARNING FAMILY CONSTRUCTS FRAMEWORK

BY GUARIONEX SALIVIA, CYRUS AZARBOD, COLLEEN ROYLE, ANKIT GOEL, FLINT MILLION, MEGAN BENING

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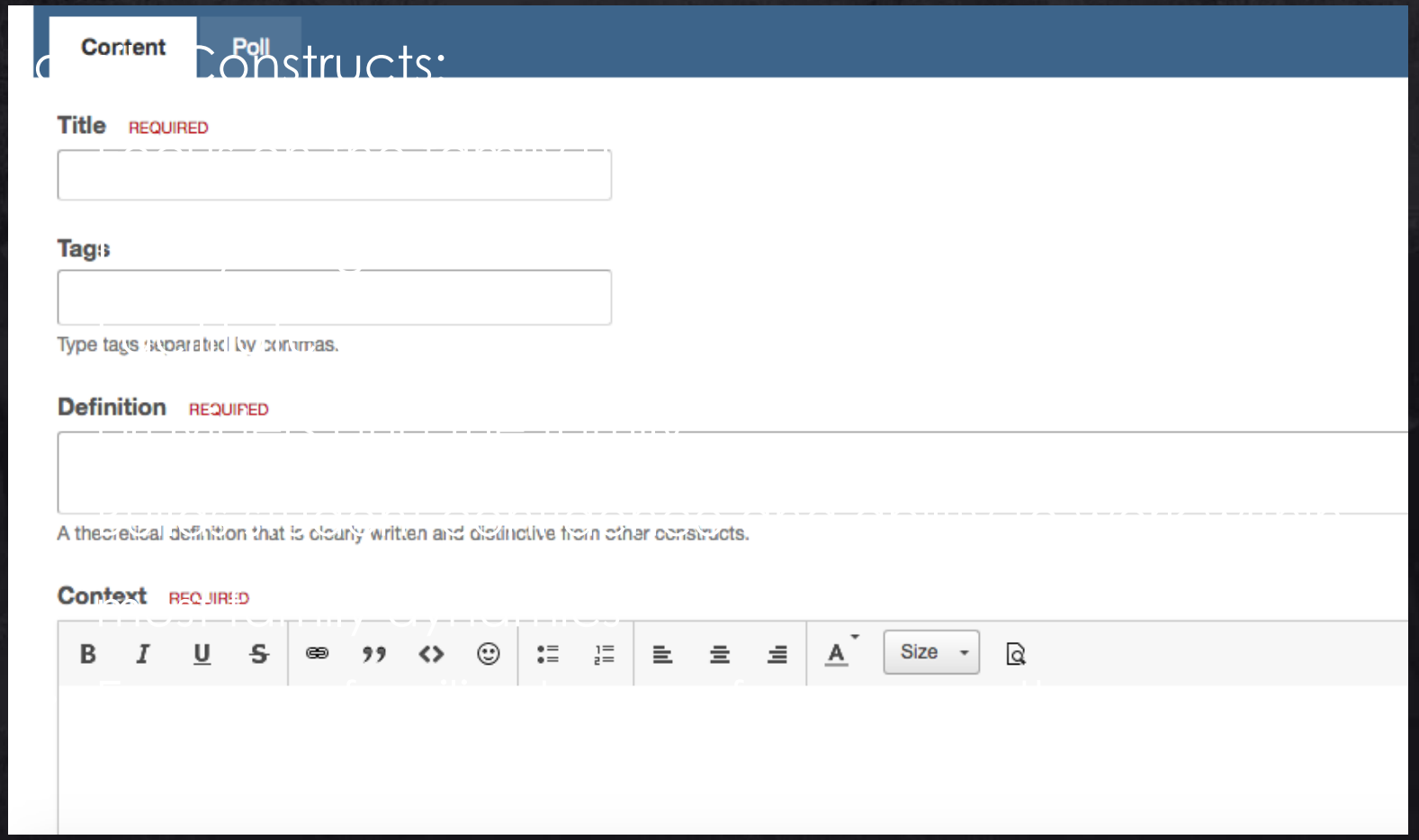
TECHNOLOGIES : FAMILY CONSTRUCT NETWORK

PURPOSE: CREATE, DISCUSS AND ENHANCE FAMILY CONSTRUCTS

- Constructs:



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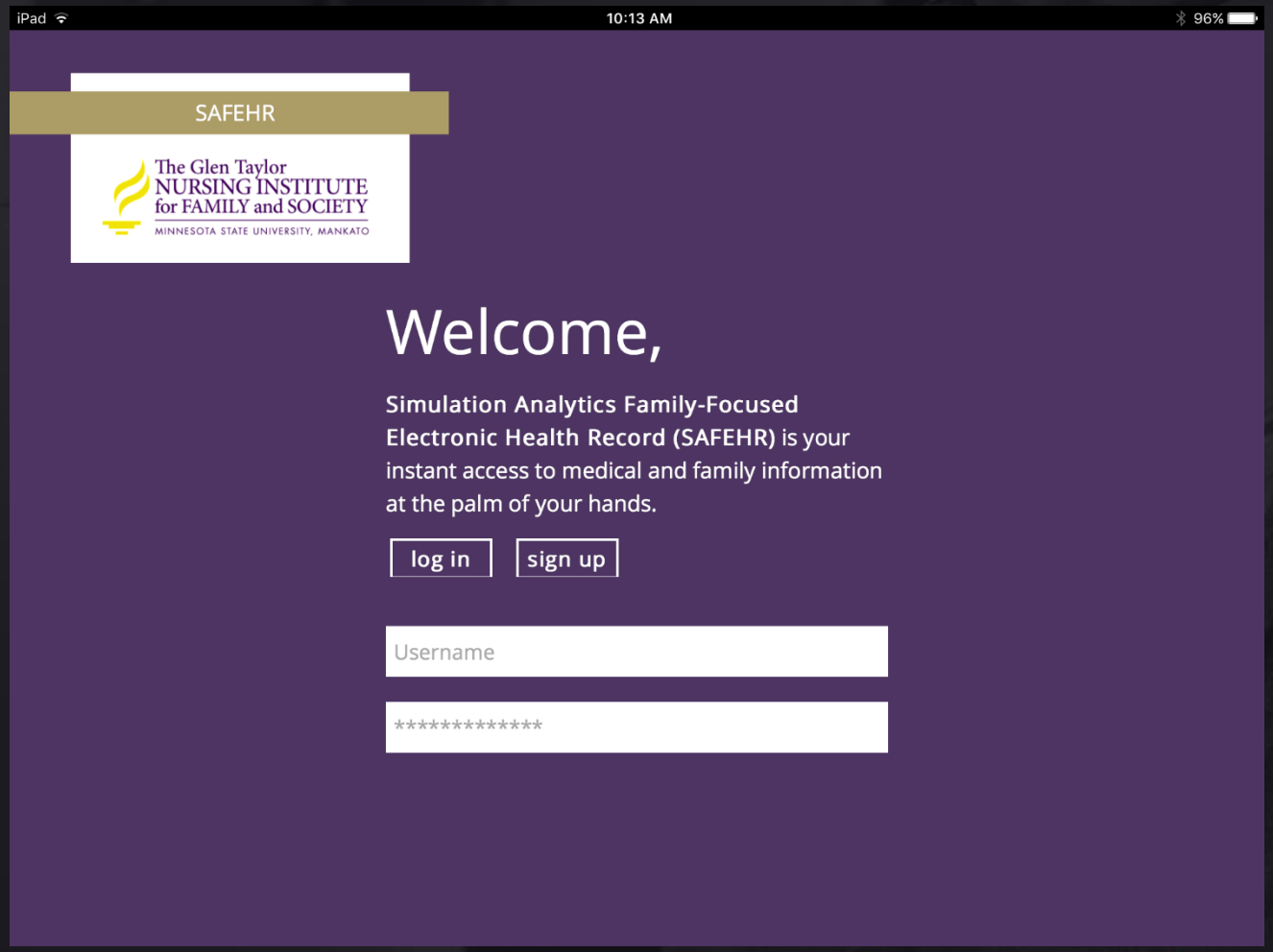
TECHNOLOGIES : SAFEHR

PURPOSE: MANAGE ELECTRONIC HEALTH RECORD



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RESEARCH QUESTIONS

SAFEHR

- What is the perceived usability, user experience and attractiveness of SAFEHR's genogram and family constructs functionality?

Family Construct Network

- Evaluation of the effectiveness and efficiency of the main functions in the Family Constructs Network.

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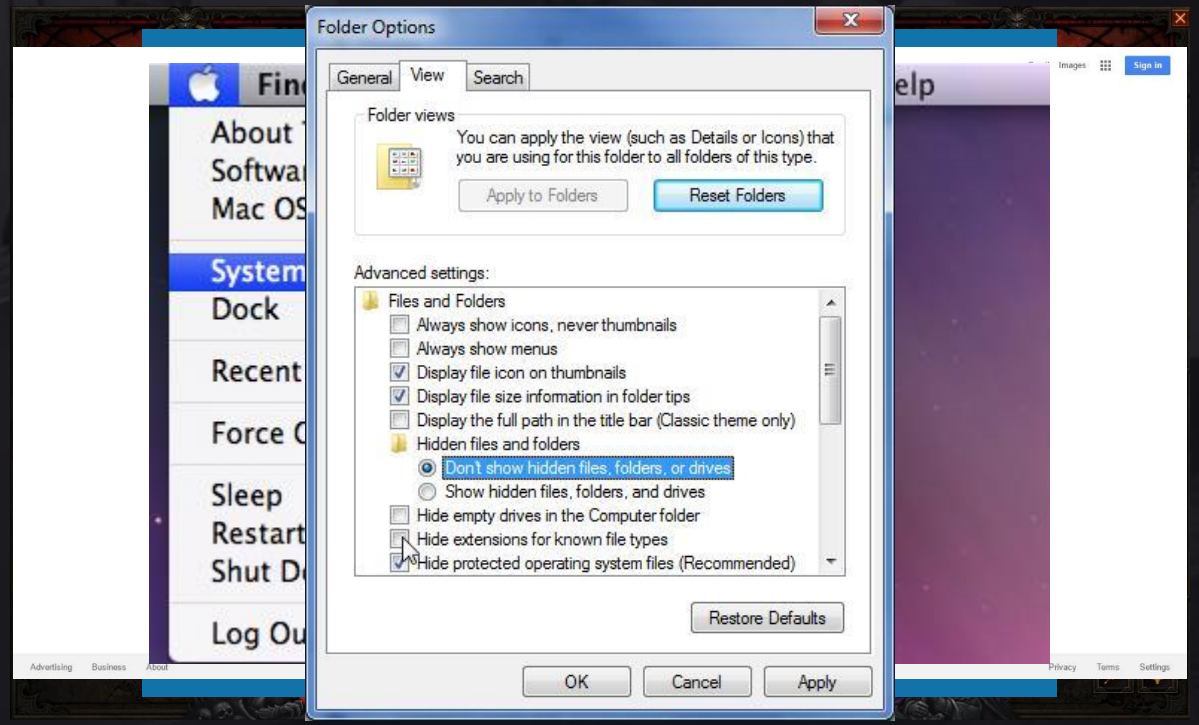
WHAT IS USABILITY?

"THE EXTENT TO WHICH A PRODUCT CAN BE USED BY SPECIFIED USERS TO ACHIEVE SPECIFIED GOALS WITH EFFECTIVENESS, EFFICIENCY AND SATISFACTION IN A SPECIFIED CONTEXT OF USE." [ISO DEFINITION (9241-11)]

"THE EASE WITH WHICH A USER CAN LEARN TO OPERATE, PREPARE INPUTS FOR, AND INTERPRET OUTPUTS OF A SYSTEM OR COMPONENT." [IEEE STD.610.12-1990]



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WHAT IS USER EXPERIENCE?

USER EXPERIENCE (UX) FOCUSES ON HAVING A DEEP UNDERSTANDING OF USERS, WHAT THEY NEED, WHAT THEY VALUE, THEIR ABILITIES, AND ALSO THEIR LIMITATIONS.

Desirable aspects	Undesirable aspects
helpful	unpleasant
enjoyable	annoying
motivating	childish
stimulating	frustrating
supporting	verbose

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USABILITY AND LEARNING

- According to Sandars (2010) "…it is not the content that usually determines effective e-learning but how the content is delivered …" (p. 6) "…there will be a slow learning curve towards achieving effectiveness unless the usability aspects are considered." (p. 8)
- According to Granic and Cukusic (2011) "if the interface is not transparent and easy to use, the learners/students concentrate on interaction aspects and not on acquiring content" (p. 107)
- Borsci, Federici and Lauriola (2009) found a correlation between perceived usability and perceived learnability. (p. 196)

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METHODOLOGIES – SAFEHR STUDY

- Traditional Usability Test with 25 participants (juniors/seniors; in-progress)
- create a genogram; identify family constructs and nursing actions from evolving scenarios
- Participants complete a questionnaire similar to the one used by Groth and Haslwanter (2015)
- Questionnaire and observations from all phases are used to determine intuitiveness, attractiveness and usability of the application

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METHODOLOGIES : FAMILY CONSTRUCT NETWORK STUDY

- Five participants in a heuristics evaluation following the guidelines by Nielsen (1995)
- to gather the expert opinion on the overall usability of the Web-application.
- Heuristics include: visibility, consistency, error prevention, flexibility and aesthetic design

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PRELIMINARY RESULTS – SAFEHR STUDY

- Some participants became quickly accustomed to the application, were visibly excited and relaxed, and had overwhelmingly positive comments after completing the study.
- Some participants found the application challenging but were still optimistic about it.
- all participants strongly agree they would like to use this system frequently.
- All participants scored between 8 and 10 that they would recommend the app to a friend (net promoter score).
- All participants have indicated a very strong desire to have access to the application for their coursework.

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RESULTS – FAMILY CONSTRUCT NETWORK STUDY

43 usability problems were found

- Homepage was too wordy
- 'Submit a New Construct' button was small and not easily visible
- An example was needed for the users to base their construct proposals of
- The forum labels were not explained properly
- Text boxes size in the forum was not appropriate
- Font size was not consistence

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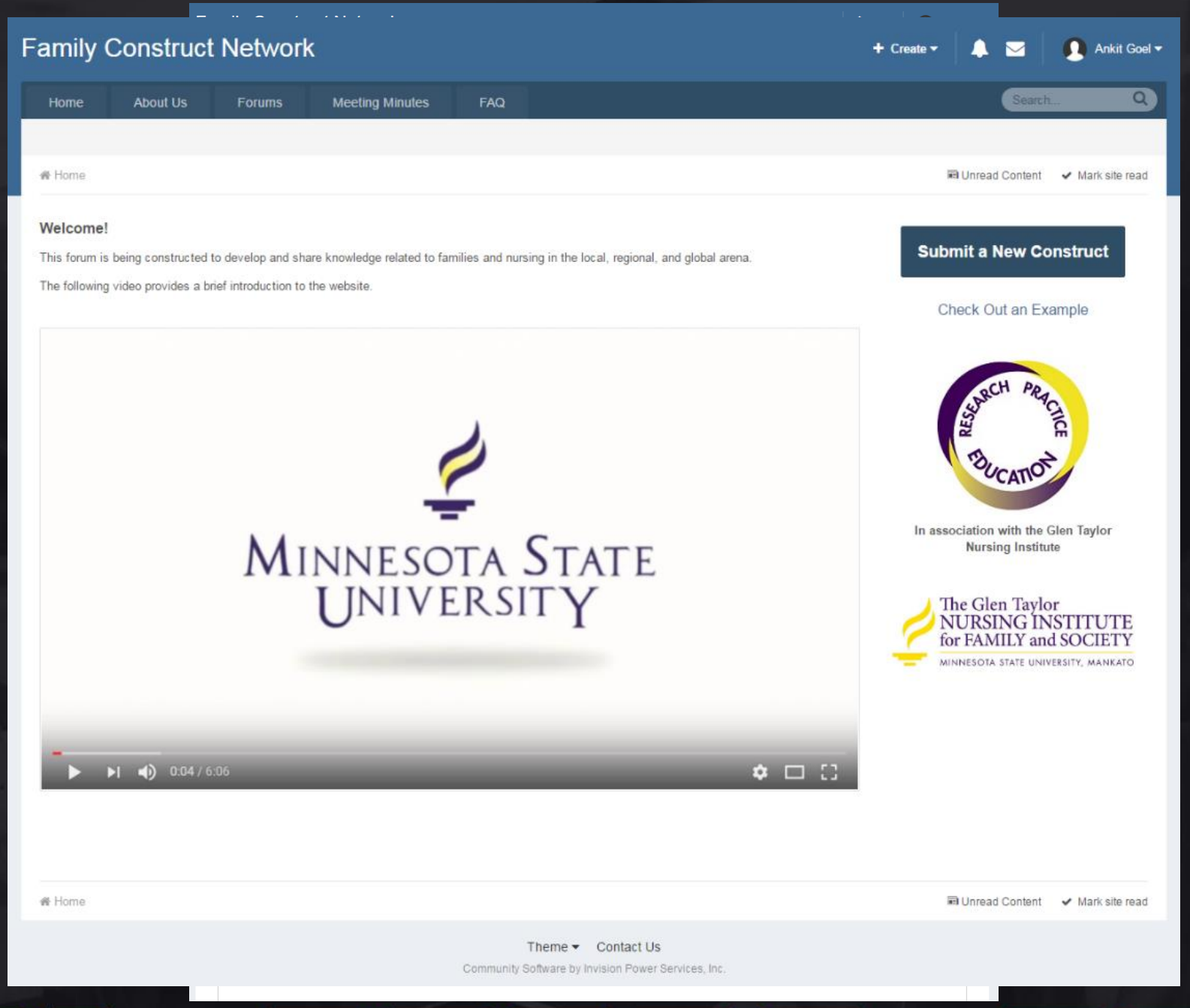

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CONCLUSIONS

- USABILITY/UX TESTING LEAD TO POTENTIALLY HIGH LEARNABILITY
- WE STUDIED TWO TECHNOLOGIES TO HELP STUDENTS LEARN ABOUT FAMILY CONSTRUCTS
- RESULTS FROM HEURISTIC EVALUATION HELPED IMPROVED DESIGN AND PROVIDE BETTER EXPERIENCE FOR USERS OF THE FAMILY CONSTRUCTS NETWORK
- PRELIMINARY POSITIVE RESULTS FROM SAFEHR USABILITY/UX STUDY

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FUTURE WORK

- PILOT SAFEHR APP IN THE CLASSROOM
- CORRELATE COURSE LEARNING OUTCOMES WITH SAFEHR USAGE
- STUDY AND ENHANCE OTHER SAFEHR APP FEATURES SUCH AS ECOMAPS AND SIMULATIONS
- STUDY STUDENT PERFORMANCE EFFICIENCY AS A RESULT OF USING SAFEHR
- STUDY FACULTY EVALUATION EFFICIENCY AS A RESULT OF USING SAFEHR

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