

Department of Computer Science and Engineering

College of Engineering, University of Nevada, Reno

CS 791 Special Topics in Computer Science: HCI

Study Required for Midterm Test #2

version 2 – complete

November 12, 2018

This written, closed-book, 70-minute test will take place on **Thursday, November 29, 2018** in SEM-257 from 12:00 pm (regular classroom and time). The test weights 15% in the course grade.

A Chapters Required from the textbook *Human-Computer Interaction: An Empirical Research Perspective* by I. Scott MacKenzie:

Chapter 4 SCIENTIFIC FOUNDATIONS

Chapter 5 DESIGNING HCI EXPERIMENTS

Chapter 8 WRITING AND PUBLISHING A RESEARCH PAPER

Note: from items A above, Sections 5.12 (Group effects and asymmetric skill transfer) and 5.13 (Longitudinal studies) are not required.

B Research papers (3 in total, denoted Paper 4, Paper 5 and Paper 6, respectively), 1 assigned by the instructor, 2 presented by students.

Paper 4: [Tinwala & MacKenzie, 2010] on Eyes-free Text Entry – assigned by instructor

Q01. Describe the three issues found in the original prototype that led to the redesign process presented in [Tinwala and MacKenzie, 2010]

Q02. Explain how the Auditory Display integrates the error correction algorithm with the user interaction in [Tinwala and MacKenzie, 2010].

Q03. Describe the three feedback modes used in [Tinwala and MacKenzie, 2010].

Q04. Briefly describe the Design of the experiment used in the [Tinwala and MacKenzie, 2010] paper. Also, explain what was the purpose of the training session and what was actually done during this session.

Paper 5: [Schwind et al, 2018] on Virtual Reality on the Go? – proposed by Vineeth

Q05. Consider the user study presented in [Schwind et al, 2018]. Comment on the social acceptance of smart glasses and describe the significance of this study.

Q06. Consider the user study presented in [Schwind et al, 2018]. Describe the method used by the authors: purpose and type of experiment, independent and dependent variables, conditions, what the participants were asked to do, and sample questions (3 or 4 will

suffice). It is not required to provide details about the 47 participants involved or the results obtained.

- Q07.** Consider the user study presented in [Schwind et al, 2018]. Describe the independent variables of this study and their levels (conditions) and summarize the study's *qualitative results*. It is not required to summarize the study's quantitative results.

Paper 6: [Lang et al, 2018] on Improving Driving Habits via VR – proposed by Rahul

- Q08.** Consider the research work presented in [Lang et al, 2018]. Indicate two of the major contributions of this work and provide an overview of the approach proposed by the authors (for the latter, see Section 3).
- Q09.** Consider the experiment presented in [Lang et al, 2018]. Summarize it in terms of training conditions (groups) and procedures, post-evaluation, and metrics. It is not required to provide details of the 50 participants involved or the results obtained.
- Q10.** Consider the approach presented in [Lang et al, 2018]. Briefly indicate what this approach is about and discuss two of its benefits and two of its limitations. Explain how the limitations could be addressed in the future.