JOHN RICHARD SCHUMACHER

Phone.....(952) 807 - 7145
Email.....John.R.Schumacher@ttu.edu
Website.....john-schumacher.github.io

OBJECTIVE

Passionate experimental researcher with user-centered design and testing training, seeking a collaborative and fast-paced UX Internship to beneficially impact the user experience and grow as a researcher.

EDUCATION

Ph.D. - Experimental Psychology: Cognition & Cognitive Neuroscience
Texas Tech University
Dissertation Topic: The effects of cognitions on self-paced reading of moral vignettes.
Advisor: Dr. Roman Taraban
GPA: 4.0

M.A. - Experimental Psychology: Cognition
Texas Tech University | 2014

B.S. - Psychology
Colorado State University | 2012

RESEARCH CONSULTING

Position
Design, Methodological, & Statistical Research Consultant

TTU Department/Location
Psychological Sciences | 2017 - 2018
Graduate School | 2019 - Ongoing

Responsibilities
Assist graduate students and faculty with making appropriate research decisions for their projects. Regularly provide help with formation of hypotheses/ research questions, the creation of experimental procedures, data preparation and visualization, assumption checking, statistical design and modeling, and interpretation/applicability of findings.

RELEVANT UX SKILLS

Discover & Explore

- ◊ Literature Review
- ◊ Field Testing
- ◊ Card Sorting
- ◊ Comparative & Competitor Analysis
- ◊ Walkthroughs / Talkthroughs
- ◊ Journey Mapping
- ◊ Cognitive Task Analysis
- ◊ User Profiling / Personas
- ◊ Wireframing & Paper Prototyping

Analyze & Evaluate

- ◊ Causal Hypothesis Formation
- ◊ Experimental Design
- ◊ A/B Testing
- ◊ Iterative / Agile Testing
- ◊ Significance / Inference Testing
- ◊ Small Sample Inference Testing
- ◊ Summative Usability Testing
- ◊ Formative Usability Testing

SELECTED PROJECTS

Refining the ESPN Mobile App Fantasy Football Free Agent Acquisition Process

- ♦ Determined the strengths and pain points of ESPN's player transaction process, employing cognitive task analyses, surveys, and other methods. Findings guided the mapping of the user journey and design recommendations to improve user performance. Recommendations were built into a wireframe prototype, which was tested against the original design. Data-driven testing included the use of survey responses, recorded voices, number of errors, and completion time to determine the benefits of the prototype over ESPN's original design and guided the presented recommendations.

Determining Global Study Strategies of Engineering Students and their Effectiveness

*Nominated for Best Paper at ASEE Conference

- ♦ Worked as the lead analyst on a collaborative multi-department study aimed at unearthing global study strategies of engineering students. Survey data that probed study strategy use of students in engineering courses was assessed using factor analytic methods. Resulting study strategy factors were found to be predictive of classroom performance. Results and real-world recommendations were presented at the American Society for Engineering Exposition.

Iterative Testing of the Testing Effect

- ♦ Employed multi-round iterative testing to determine the robustness of self-testing as a beneficial study strategy for college students. Differing factors thought to be relevant to the testing effect, such as learning material type, were manipulated and tested. Results showed that testing works best as a study strategy for lower-achieving students and is a fairly robust study strategy for these students. Recommendations were proposed and presented to relevant academic leaders.

SELECTED PUBLICATIONS & PRESENTATIONS

Schumacher, J.R., Akers, E., & Taraban, R. (2016, April 1). Unskilled and Unaware: A Metacognitive Bias [Web blog post]. https://www.improvewithmetacognition.com/unskilled-unaware-metacognitive-bias/

Schumacher, J. R., & Levulis, S. J. (2016, June). The Relationship between State-wide Handheld Cell Phone Bans and Fatal Motor Vehicle Accident Rates: An Epidemiological Study Using Hierarchical Linear Modelling. Poster presented at the annual Human Factors and Ergonomic Society meeting, Houston, TX.

Schumacher, J. R., & Taraban, R., (2017, April). Sound design and reliable implementation: Keys to worthwhile and generalizable research. Society of Clinical Research Associates (SoCRA). Texas Tech University Health Sciences Center. Lubbock, TX.

Taraban, R., **Schumacher, J. R.,** Dulli, H., Lamp, D., & Anderson, E. E. (2019). Assessing problem-solving strategy use by engineering undergraduates. Proceedings of the American Society of Engineering Education (ASEE) Annual Conference, Tampa, FL.

RELEVANT COURSES TAUGHT

Experimental Design / ANOVA
Graduate Lab

Multilevel Modeling
Graduate Lab

Categorical Data Analysis
Graduate Lab

Statistical Methods
Undergraduate Course & Lab

Research Methods
Undergraduate Lab

RELEVANT GRADUATE COURSES TAKEN

- Usability Testing & Research
- Cognitive Ergonomics
- Cognition
- Experimental Design/ANOVA
- Categorical Data Analysis
- Advanced Correlation Methods & Factor Analysis / Regression
- Multivariate Statistics
- Multilevel Modeling

AWARDS

Helen Devit Jones Excellence in Graduate Teaching
Texas Tech University | 2016

Excellence in Teaching an Undergraduate Lab
Psychological Sciences Department at Texas Tech | 2016

Excellence in Teaching a Graduate Lab
Psychological Sciences Department at Texas Tech | 2019

REFERENCES

Roman Taraban, PhD
Research Advisor (Cognition)
roman.taraban@ttu.edu
(806) 834-0450

Martina Klein, PhD
Teaching Advisor (ANOVA)
martina.klein@ttu.edu
(806) 834-4745

Andrew Littlefield, PhD
Teaching Advisor (Categorical)
andrew.littlefield@ttu.edu
(806) 834-3746

Amelia Talley, PhD
Teaching Advisor (Multilevel)
amelia.talley@ttu.edu
(806) 834-3937

EXPERIMENTAL SKILLS

- Literature Review
- Hypotheses Formation
- Creating & Validating Study Materials
- Reliability Testing
- Survey Design & Validation
- Counterbalancing / Randomizing
- Qualitative Interviewing
- Running & Debriefing Participants
- Data Collection, Handling, & Prepping
- Data Visualization
- Interpreting Results
- Clearly Communicating Results & Recommendations
- A Passion & Willingness to Learn

STATISTICAL SKILLS

- T TEST / Z TEST
- ANOVA/MANOVA
- Linear Regression
- Cluster & Factor Analysis
- Non-Linear Modeling
- Categorical & Non-Parametric Inference Testing (i.e., non-normal & small sample)
- Longitudinal Modeling
- Power / Monte Carlo
- Multilevel Modeling
- Bootstrapping
- Permutation Testing
- Missing Data Analysis

SOFTWARE

- R (proficient)
- SPSS (proficient)
- Excel (proficient)
- Qualtrics (proficient)
- Publisher (proficient)
- SAS (proficient)
- MPlus (proficient)
- GPower (proficient)
- EPrime (proficient)
- Python (learning)

HOBBIES & INTERESTS

- Cooking
- VR
- Skiing
- Music
- Anime
- Swimming