IAT 834: Mixed Methods in Design Evaluation

Student Presentation Guidelines

Time: 15 minute presentation followed by 5 minutes for discussion led by audience.

Goal: To provide the opportunity to analyze the mixed methods approach to a design evaluation oriented research paper in the field of HCI or interactive technology.

Pick: A journal or IEEE/ACM long conference (or alternative) paper that focuses on a mixed methods design evaluation (empirical). Ask me for suggestions if you like. Paper must be approved by me.

Work: in pairs. Send me pair names and preferred time slot by Thursday March 9 2017.

Assessment: 20%

Use PPT and other materials as appropriate. Use no more than 20 slides. Have no more 50 words per slide. Use images, sketches, diagrams, charts, table, etc as helpful. Be concise. Focus on the main contribution of the paper.

Template – Cover the following points:

1. A brief summary of Introduction

    i. Who studied what -- Summarize information about the humans, technology, activity and the context of use.

    ii. State the research problem
    iii. State the research questions (or hypotheses) if stated in the paper.

2. Discuss the stated or implied goals of the design evaluation (if different from 1.ii or iii above) as framing for your evaluation of their methodology. Exactly, what do they want to find out and why?

3. Provide a summary of their research methods including:

    i.   Identify the paradigm they are working under (e.g., post-positivism, constructivism, pragmatism)

    ii. Identify the dominant methodology (experimental, case study, grounded theory, ethnographic, etc)

    iii. Identify three things about the mixing:

        a. how does the mixing occur? (i.e. at what level -- > e.g., mixed designs, mixed methodology, mixed data collection, mixed analysis, mixed interpretation)

        b. what is the mixed methods study design (triangulation, embedded, explanatory, exploratory) and include timing and emphasis using standard notation (e.g., QUAN(qual))

        c. why does "work" does the mixing do? (to triangulate on a single construct, to follow up with participant selection, to identify key factors in order to develop a research instrument, to explore outliers, etc)

    iv. List the main concepts and/or constructs and/or variables (IV and DV) necessary to understand the main contribution of the work with an operational definition of each (if given). Recall: An operational definition includes a set of instructions for how to determine if the construct exists or not in the world and to what level or degree (i.e., it includes a description of what it is, and the method of collecting data from the world about it).

        For example, UI concept = interface style; OpDef (IV)= tangible (3D physical objects) or touch (2D virtual objects) [2 levels]

For example, People concept = user's motivation; construct: child's interest in practicing drums; OpDef = measure = self reported rating of "interest" questions using Likert scale of 1-7. [7 possible ratings]

For example, People concept = meaningfulness; construct = value or meaning attributed to sharing photographs; OpDef (data) = responses to open interview questions about value or meaning attributed to sharing photographs [degree of meaningfulness].

    v. List the methods used to analyze and interpret data (e.g., descriptive statistics, inferential statistics, thematic analysis, general summary etc). Relate this to main constructs or variables.

4. Analyze why you think the authors used a (i) mixed methods approach and why they chose particular (ii) data collection methods and (iii) data analysis and interpretation methods. If the authors give a justification for their mixed methods approach, critique their justification.

5. Analyze the strengths of their methodological decisions with respect to the ability of their (i) mixed methods evaluation approach and their choice of (ii) data collection and (iii) data analysis/interpretation methods to address the goals of the evaluation – in the context of the research problem they are trying to solve.

6. Analyze where you think there are assumptions, limitations, issues and/or challenges in using their (i) mixed methods approach to evaluation and/or (ii) data collection methods and/or (iii) data analysis methods. Include a discussion of validity and reliability for both qualitative and quantitative approaches.

7. Analyze the quality of the interpretation of findings back into the design practice if relevant.

8. Analyze the quality of the interpretation of findings in terms of creating design knowledge. For example, were generalization made? Do you think these generalizations are externally and/or ecologically valid?