
Approachable Analytics for Indirect SAS Users

An Evaluation of SAS Report Visuals UX

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Introduction

- Product Description
 - SAS Product info
 - Goal
 - Project Scope
 - evaluating SAS's Demo Report
 - prototyping
 - evaluate refined SAS Report
-

Methodology

- Participants
 - purposive and convenience sampling
 - background characteristics
 - Measures
 - Cognitive approachability
 - Emotional approachability
 - Evaluation Sessions
 - 3 parts (Pre-eval; Evaluation Tasks; Post-eval)
-

Evaluation Tasks

- Evaluate
 - What?
 - Screenshots
 - Overview tab and Type 2 Analysis tab
 - How?
 - Observe *the report*
 - Describe *the content*
 - Retrieve information
 - Why?
 - Understandability
-

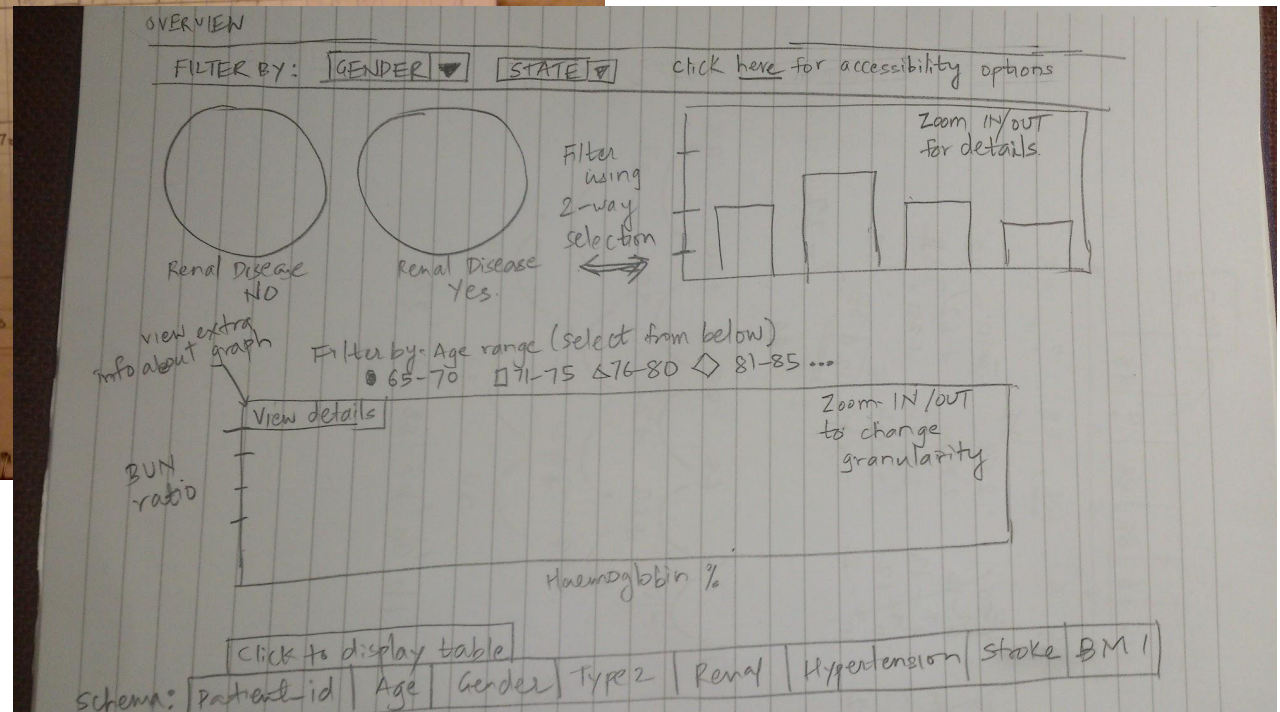
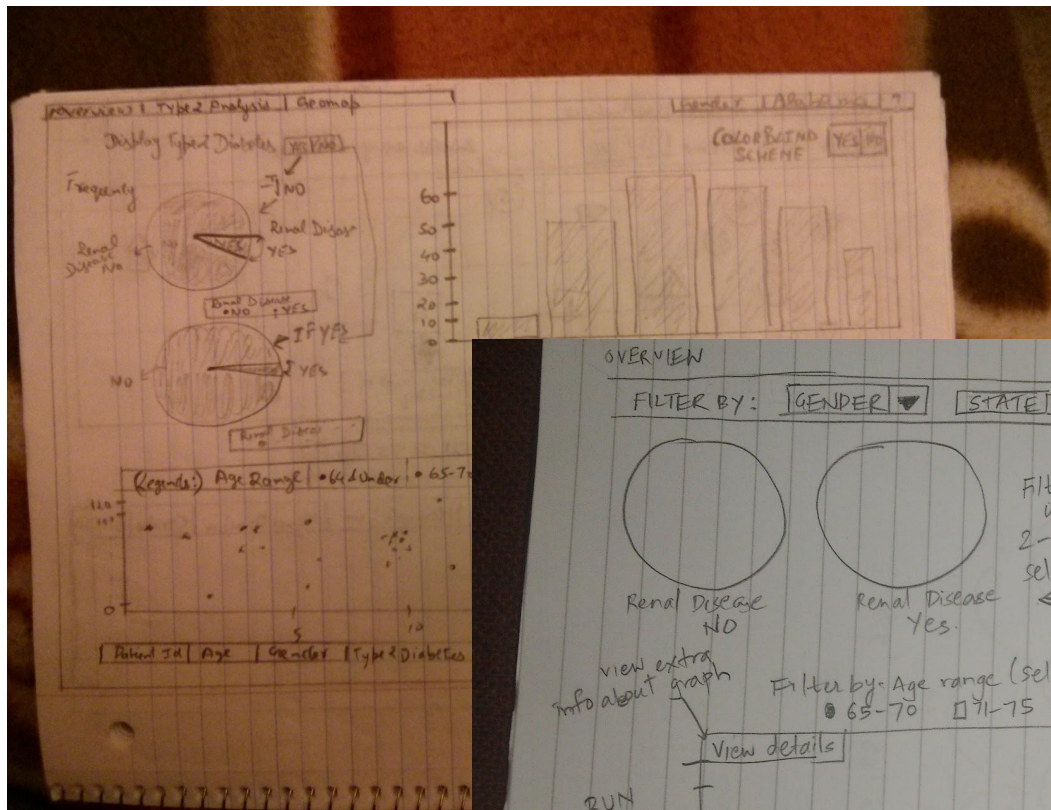
Phase 1 - Evaluation Results

- Hedonic
 - Emotional
 - Difficulty
 - Report
 - Tasks
 - Overall Experience
-

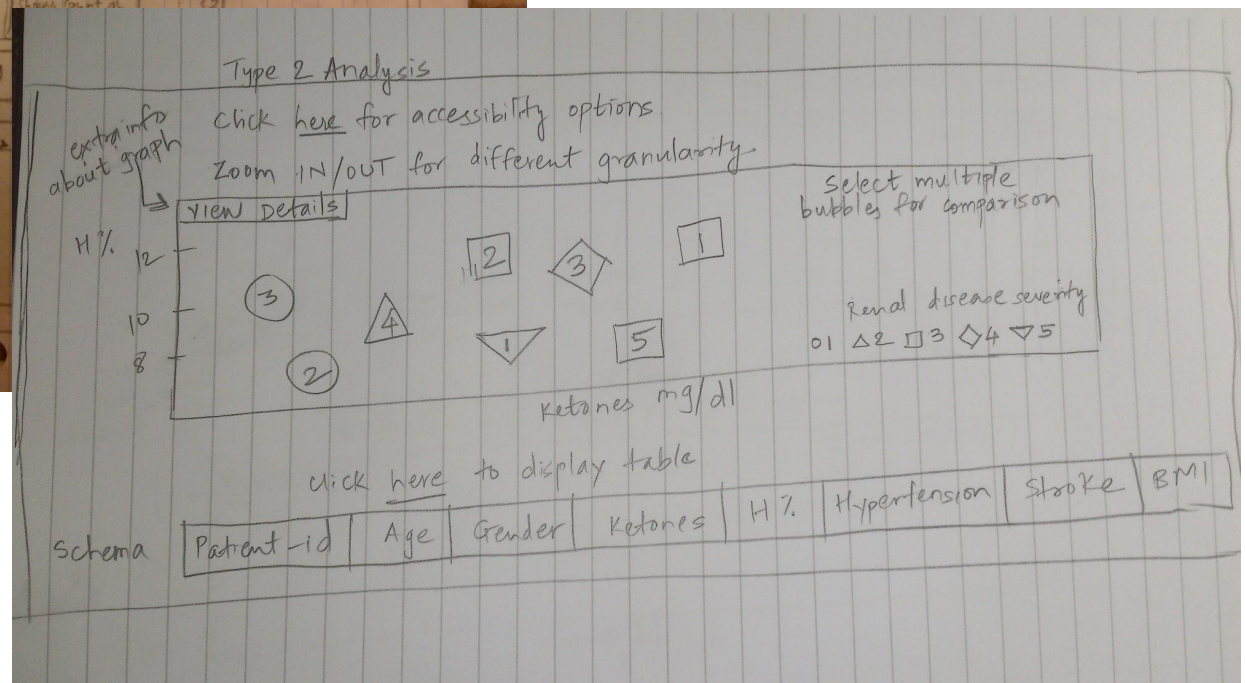
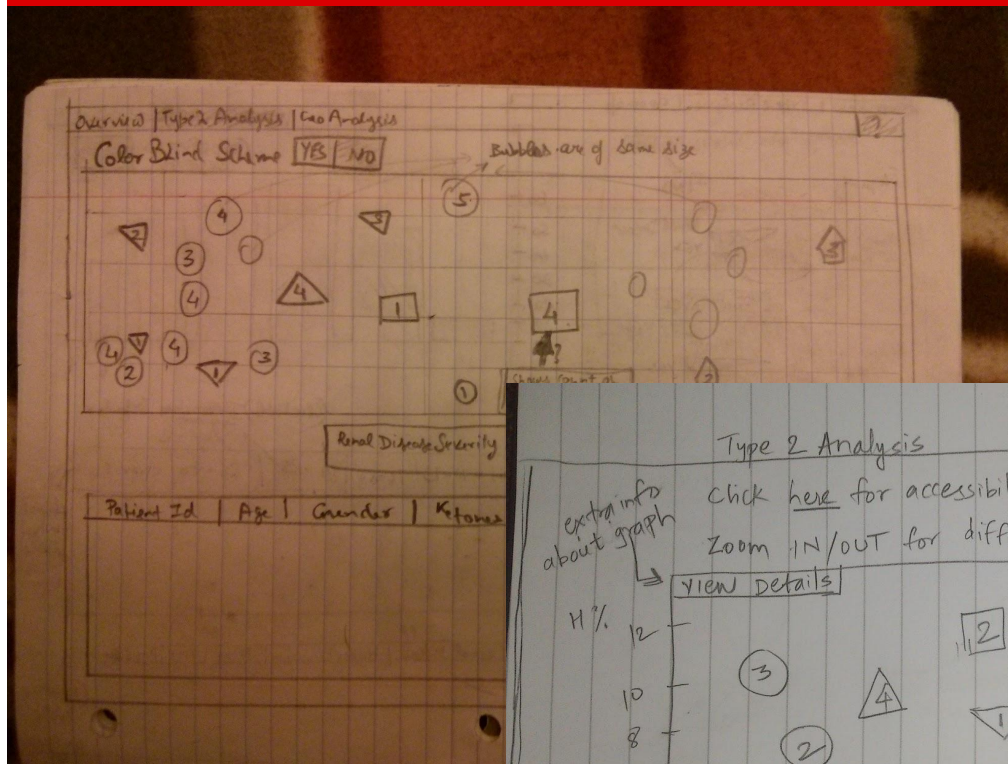
Phase 2 - Prototyping

- Sketching with pencil and paper
 - Collaborative mock-up in Google Draw
 - Final static prototyping using Adode Illustrator
-

Sketching (Overview Tab)

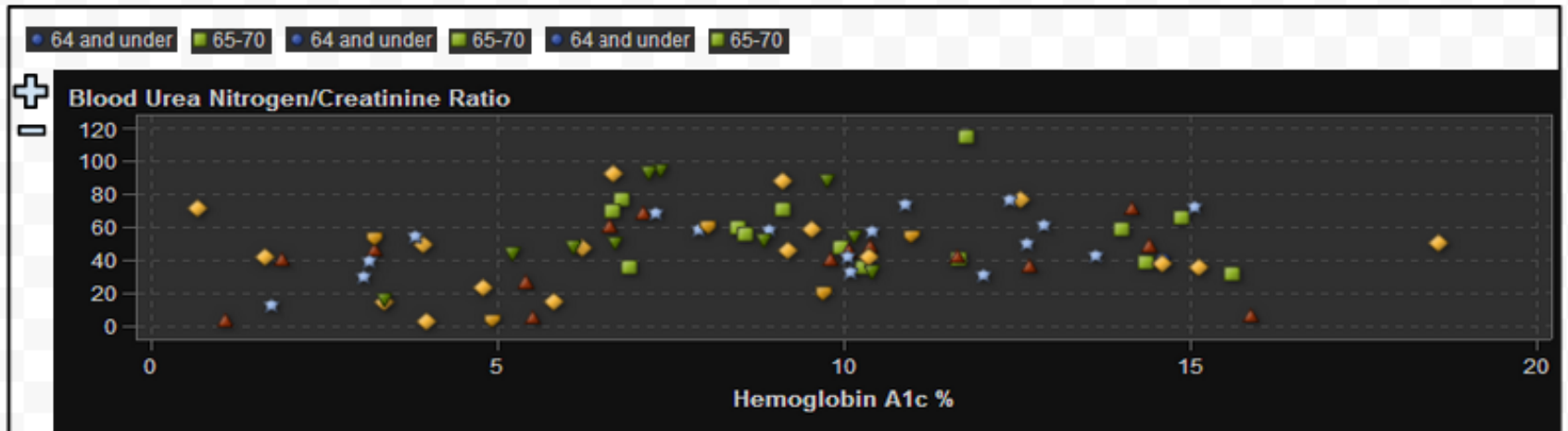
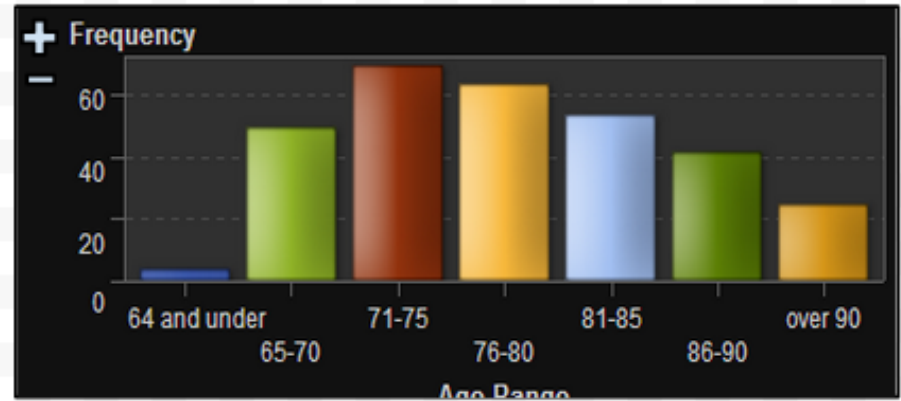
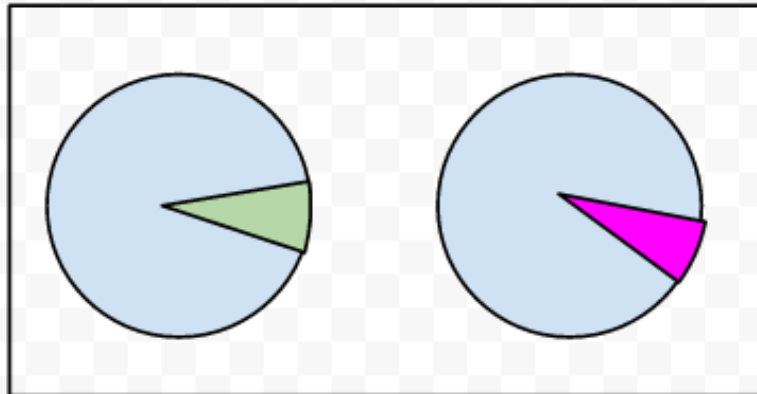


Sketching (Type 2 Analysis Tab)



Mockup (Overview Tab)

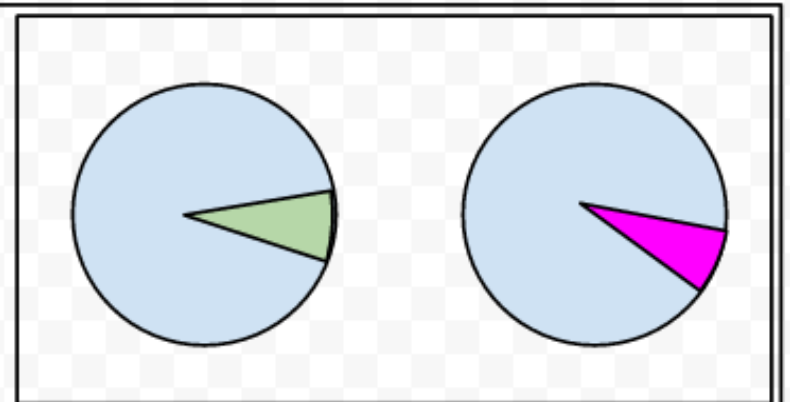
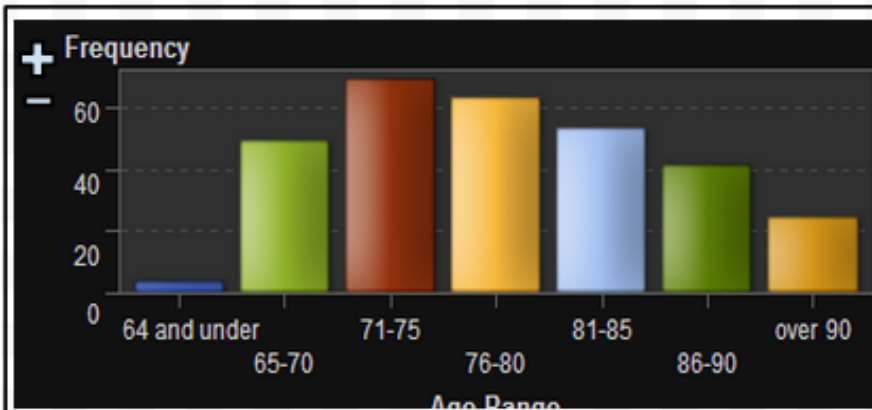
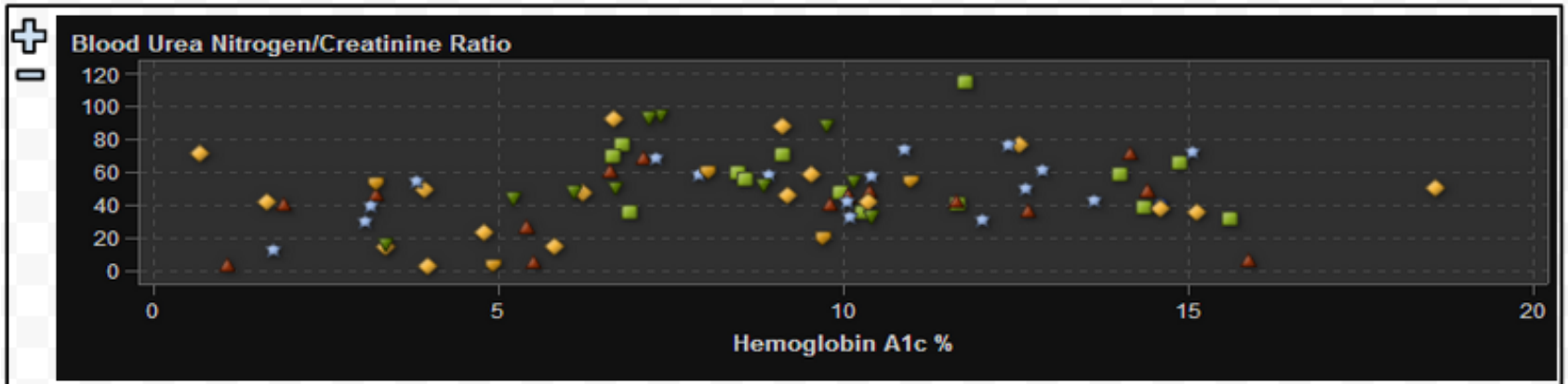
Gender ▼ States ▼ Theme ▼ filter on click ☐




Data Table

Mockup (Type 2 Analysis Tab)

Theme  filter on click 



Data Table 

1st iteration of Overview Tab



Final Prototype (Tab 2 Analysis)



Accessibility important to approachability: color choice

Protanopia View



Accessibility important to approachability: color choice

Protanopia View



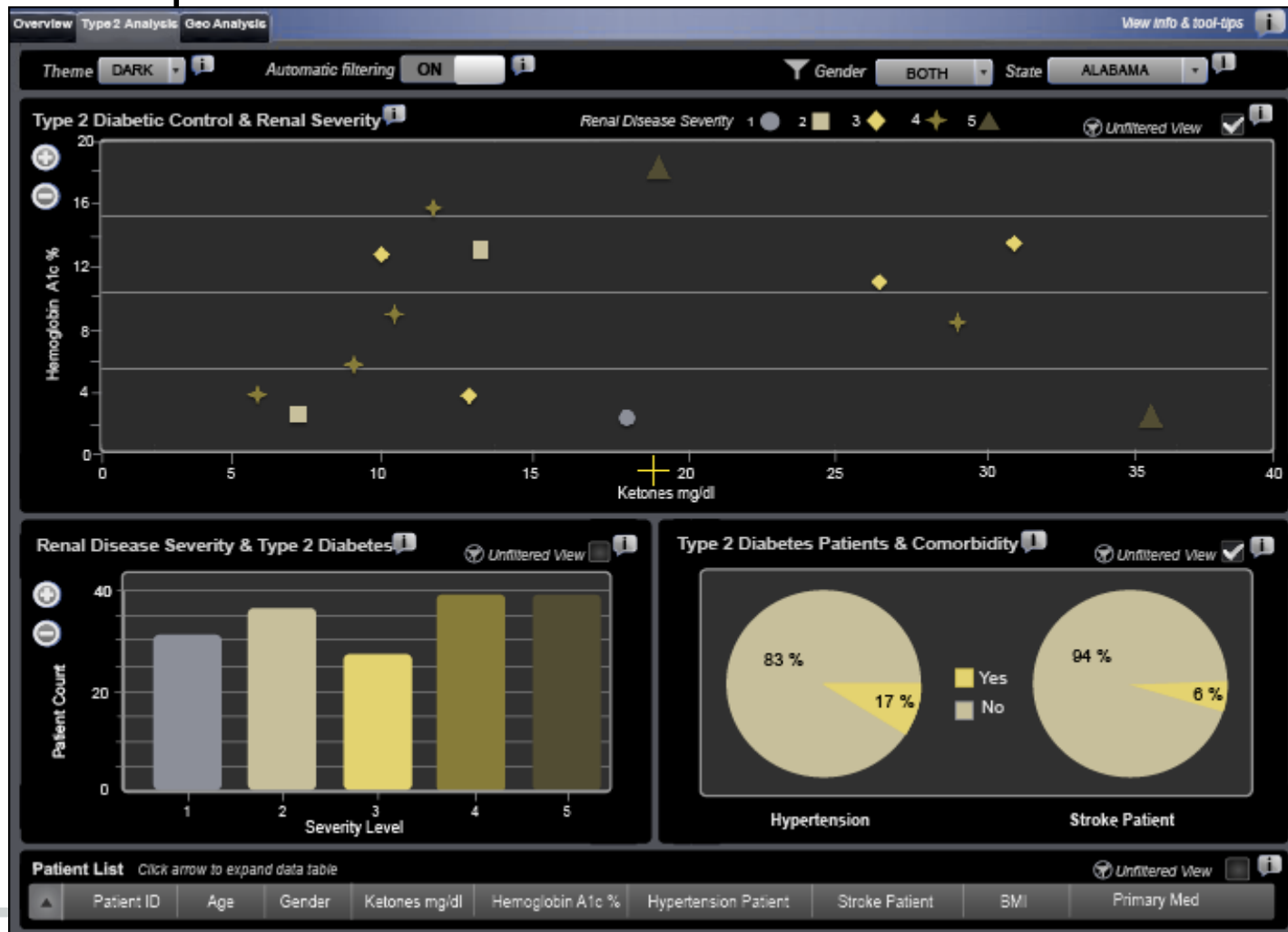
Accessibility important to approachability: color choice

Deuteranopia View



Accessibility important to approachability: color choice

Protanopia View



Accessibility important to approachability: color choice

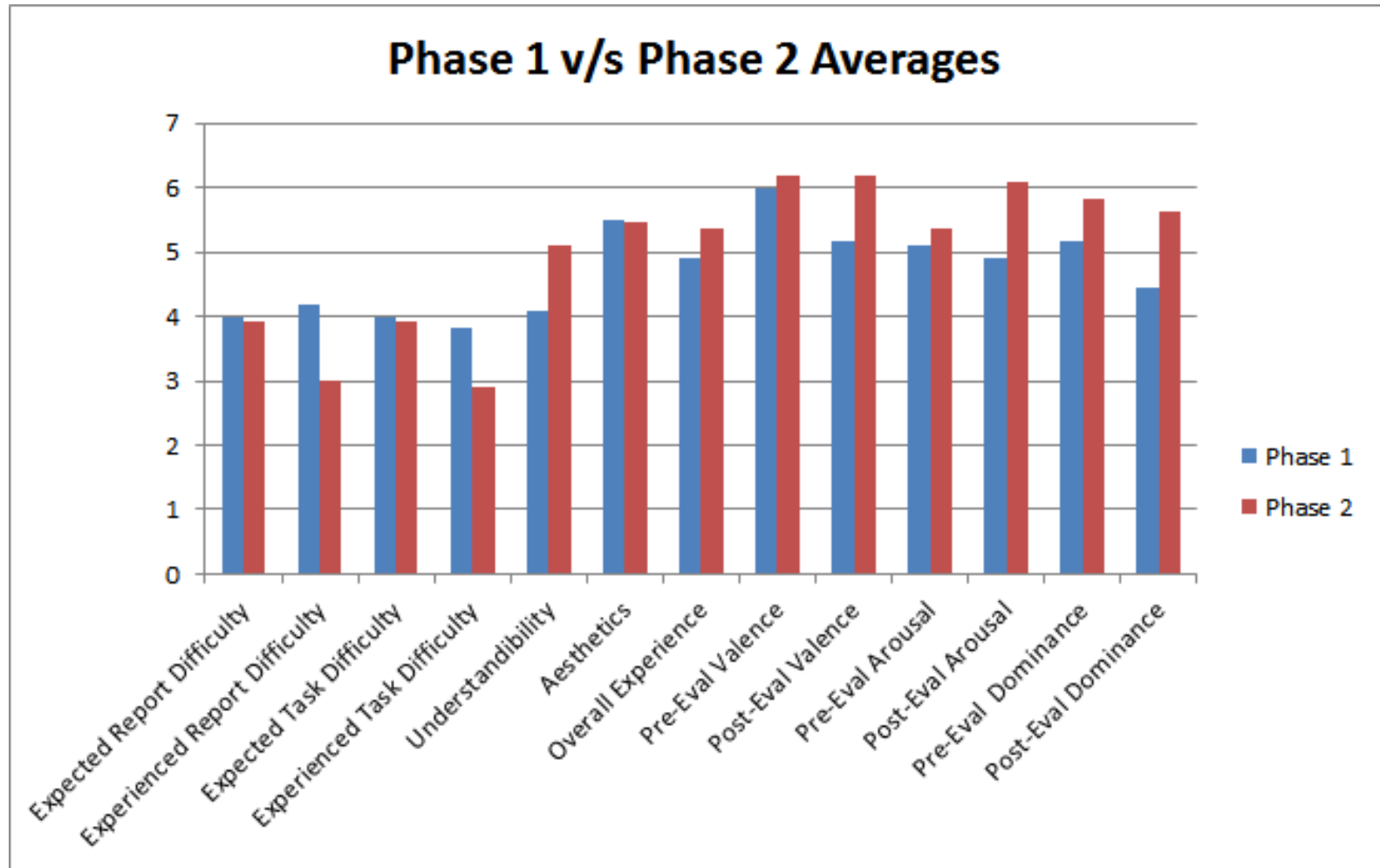
Deuteranopia View



Phase 2 - Evaluation Results

- Difficulty
 - Report
 - Tasks
 - Hedonic
 - aesthetics
 - Emotional
 - valence
 - arousal
 - dominance
 - Overall Experience
-

Phase 1 v/s Phase 2 Results



Conclusion

Approachable viewer

- Proto: More approachable; Equally aesthetic
 - Simpler graphics (report-specific, though)
 - Compress/expand table as needed
 - Explicit Zoom and Filter options
 - Pop-up tool tips
-

Conclusion

Approachable viewer (cont)

- Enhanced selection and filtering
 - Highlight trends; optional overlays
 - Accessible color schemes, flat design
 - Overall better experience
 - Further room for improvement
-

Further Work

- Expand evaluation to other reports, viz types
 - Prototype and evaluate options for creating infographic-like reports (crafting narrative)
 - Bookmarking/exporting views
 - Improve geographic data display
 - Focus on interactions, legend display
 - Approachability↔device display interactions
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Questions?

Thank you for attending
our project presentation!

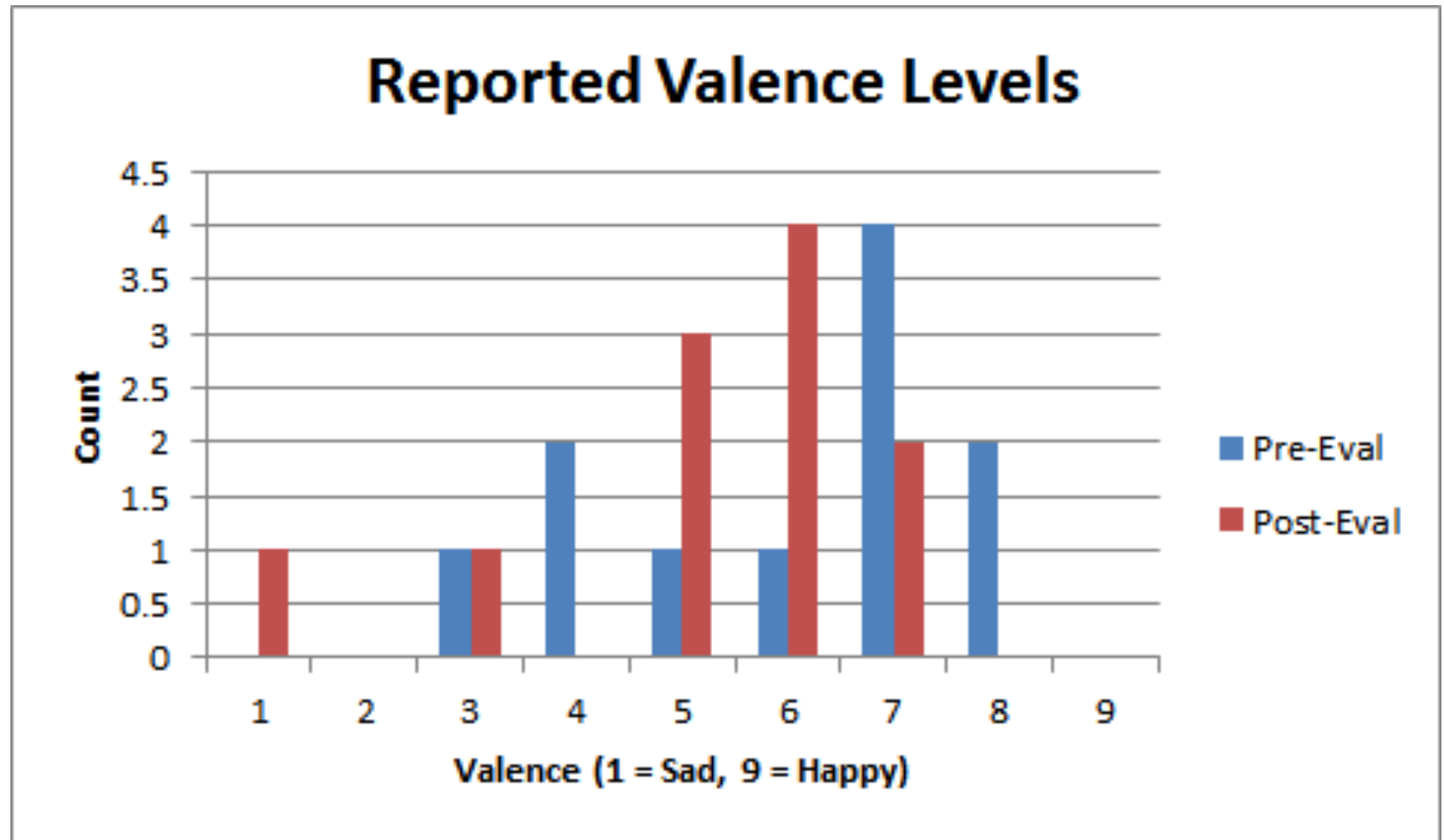
And a special thank you to Dr.
Watson and our clients at SAS
who made this project possible!

Evaluation 1 Results

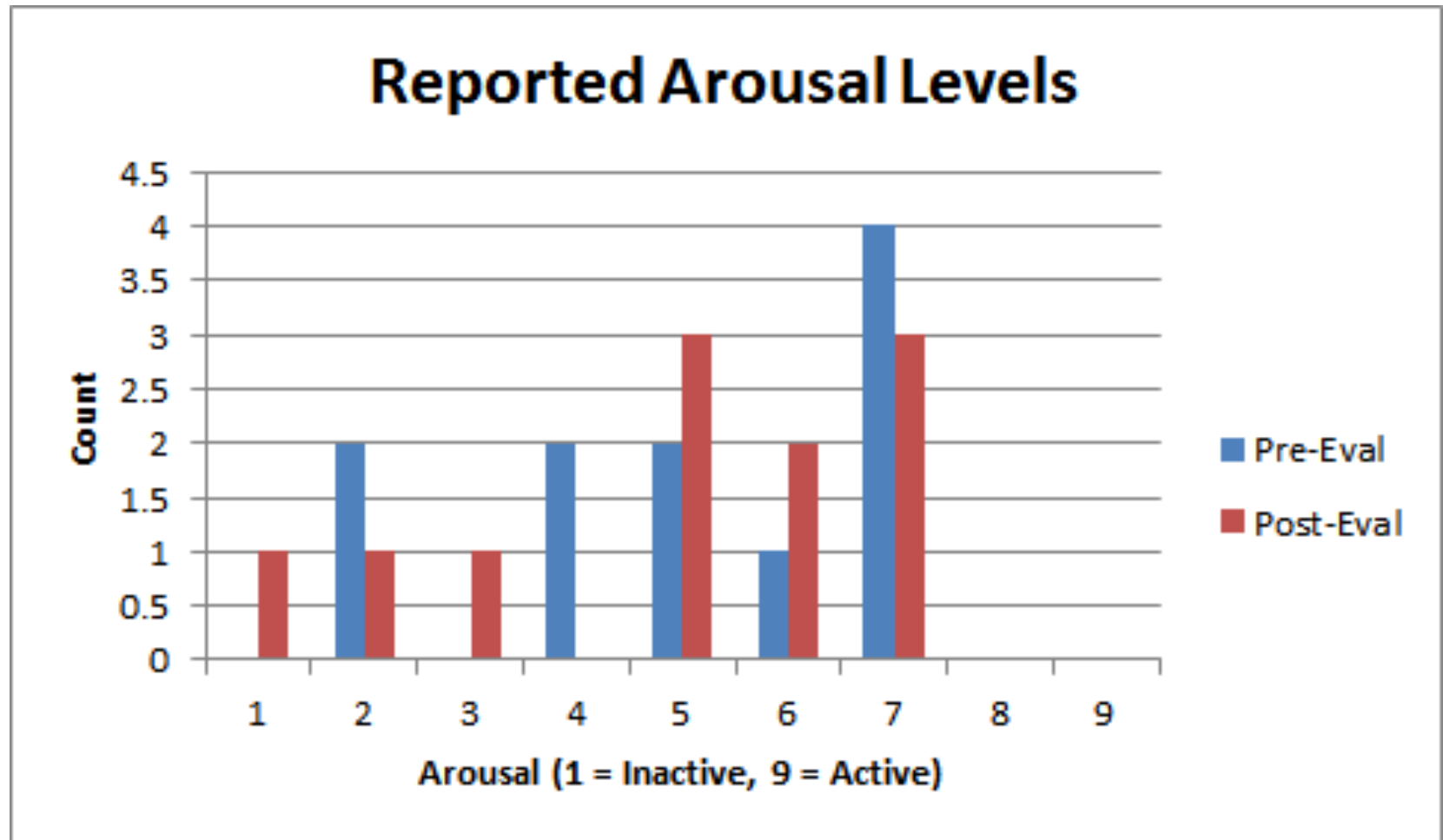
Phase 1 Feedback and Suggestions

- Features
 - most appealing
 - least appealing
 - Preferred Changes
 - Addition
 - Deletion
 - Modification
-

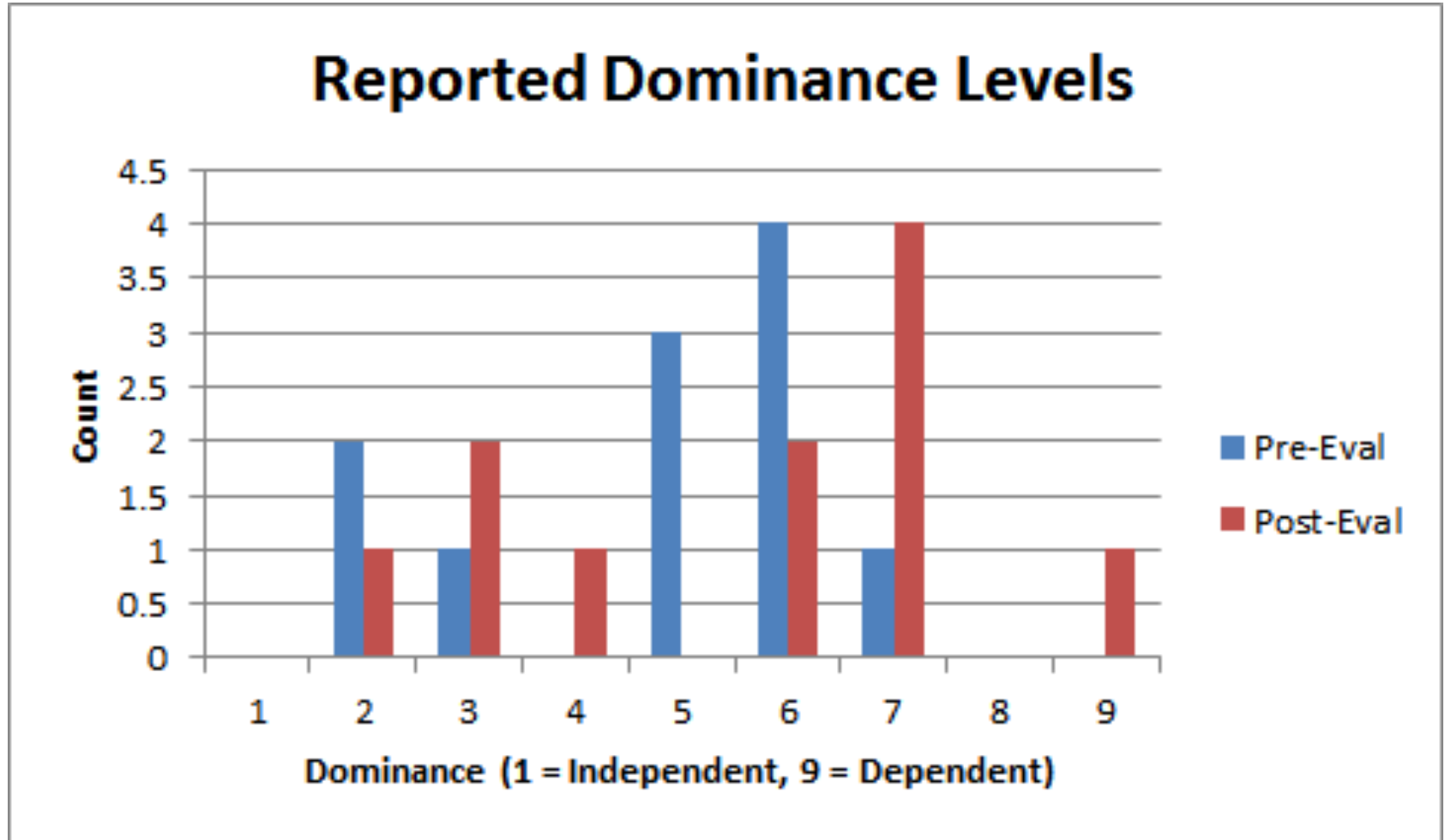
Valence



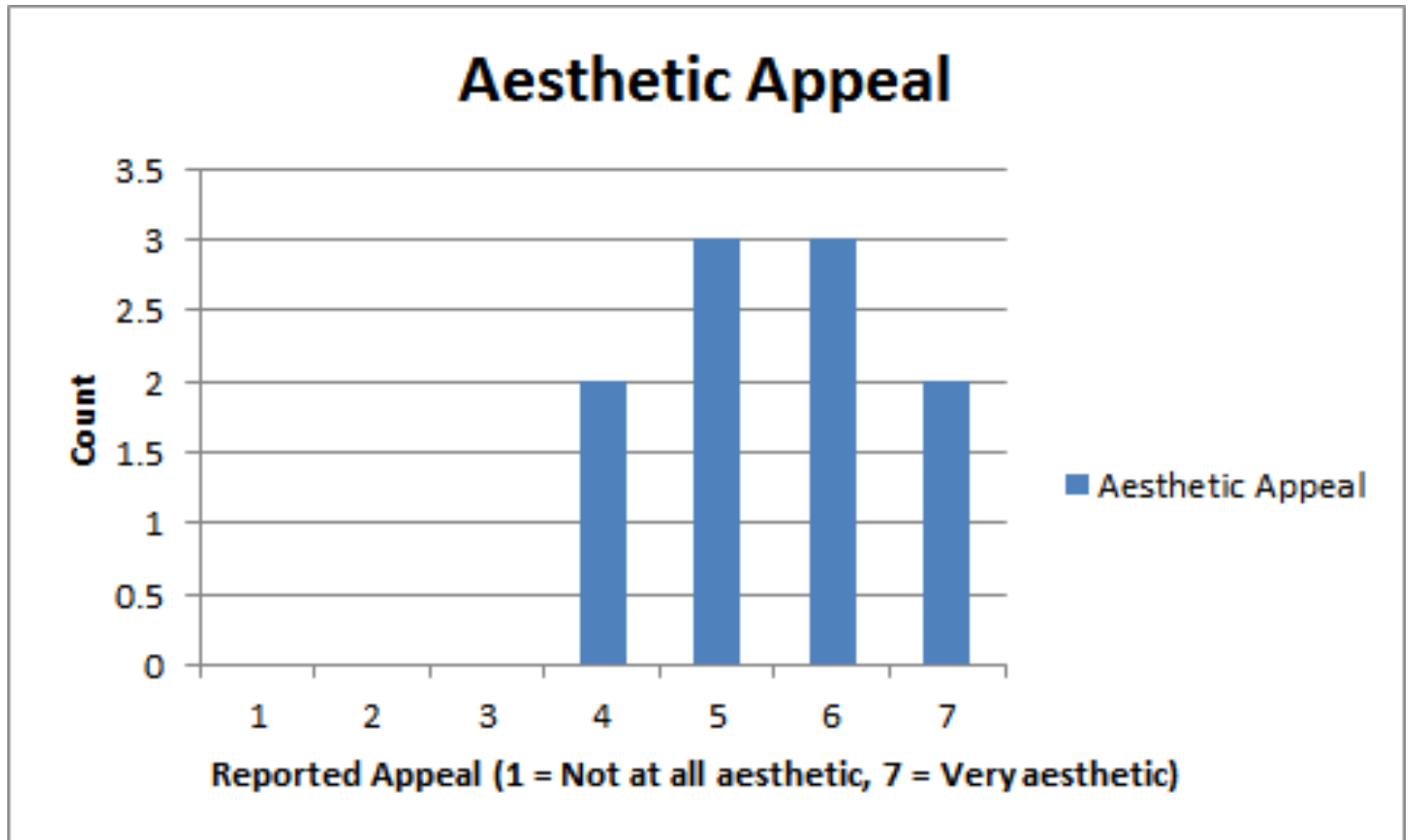
Arousal



Dominance

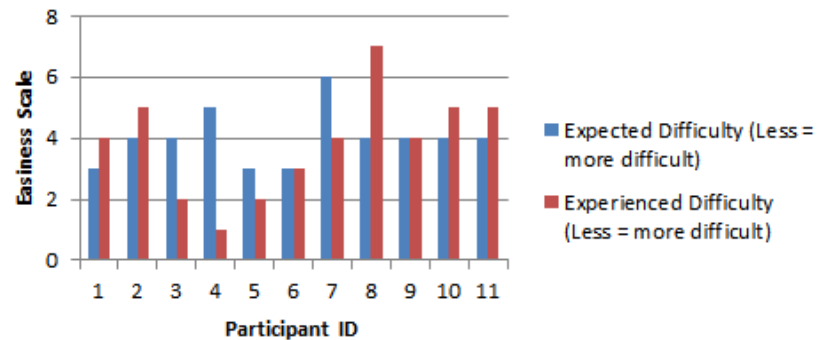


Aesthetic Appeal

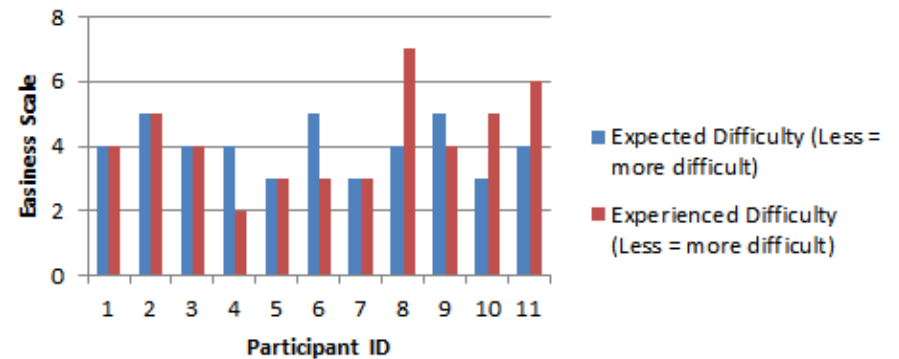


Difficulty

Per participant expected and experienced difficulty (report)



Per participant expected and experienced difficulty (task)

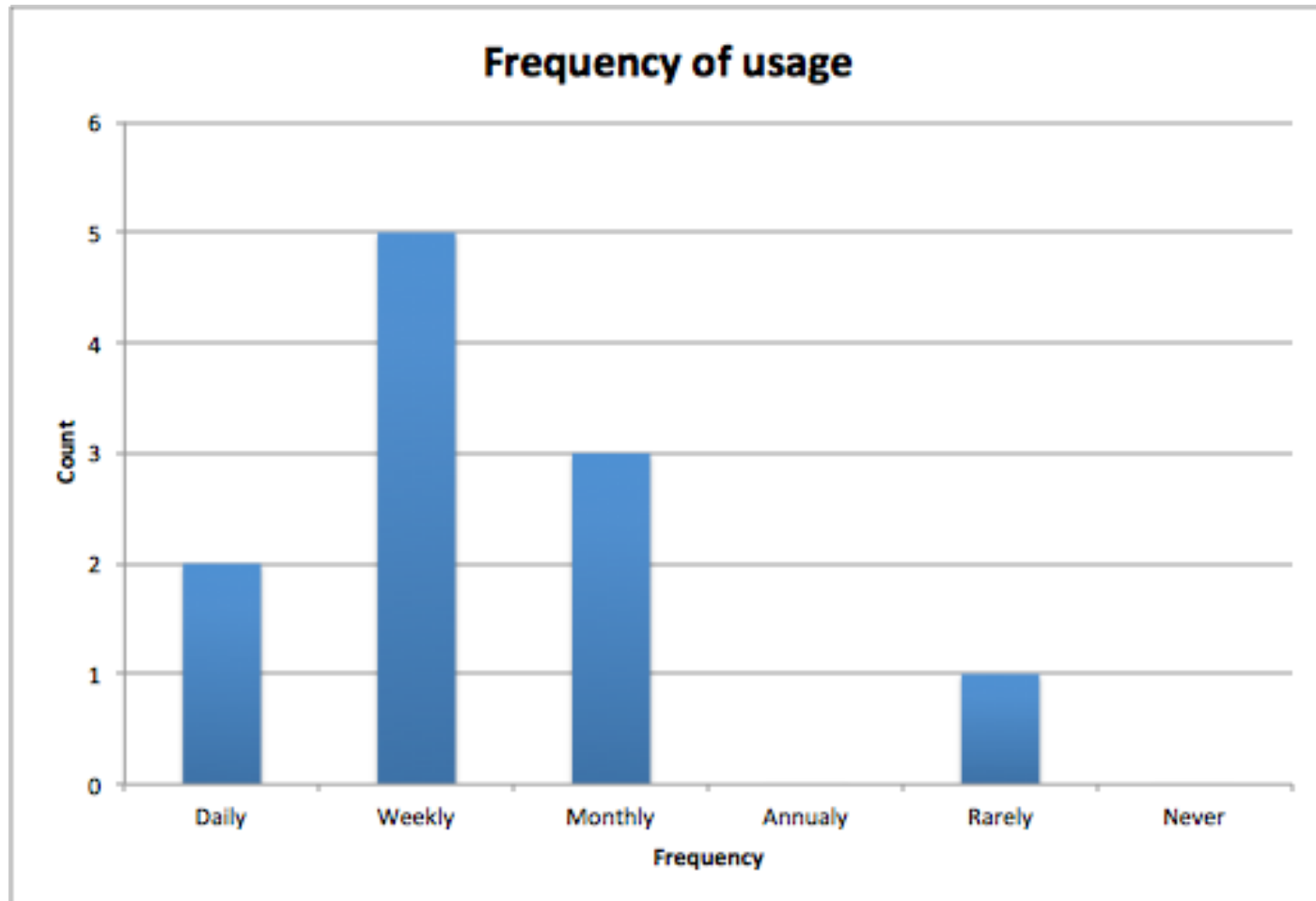


Overall Experience

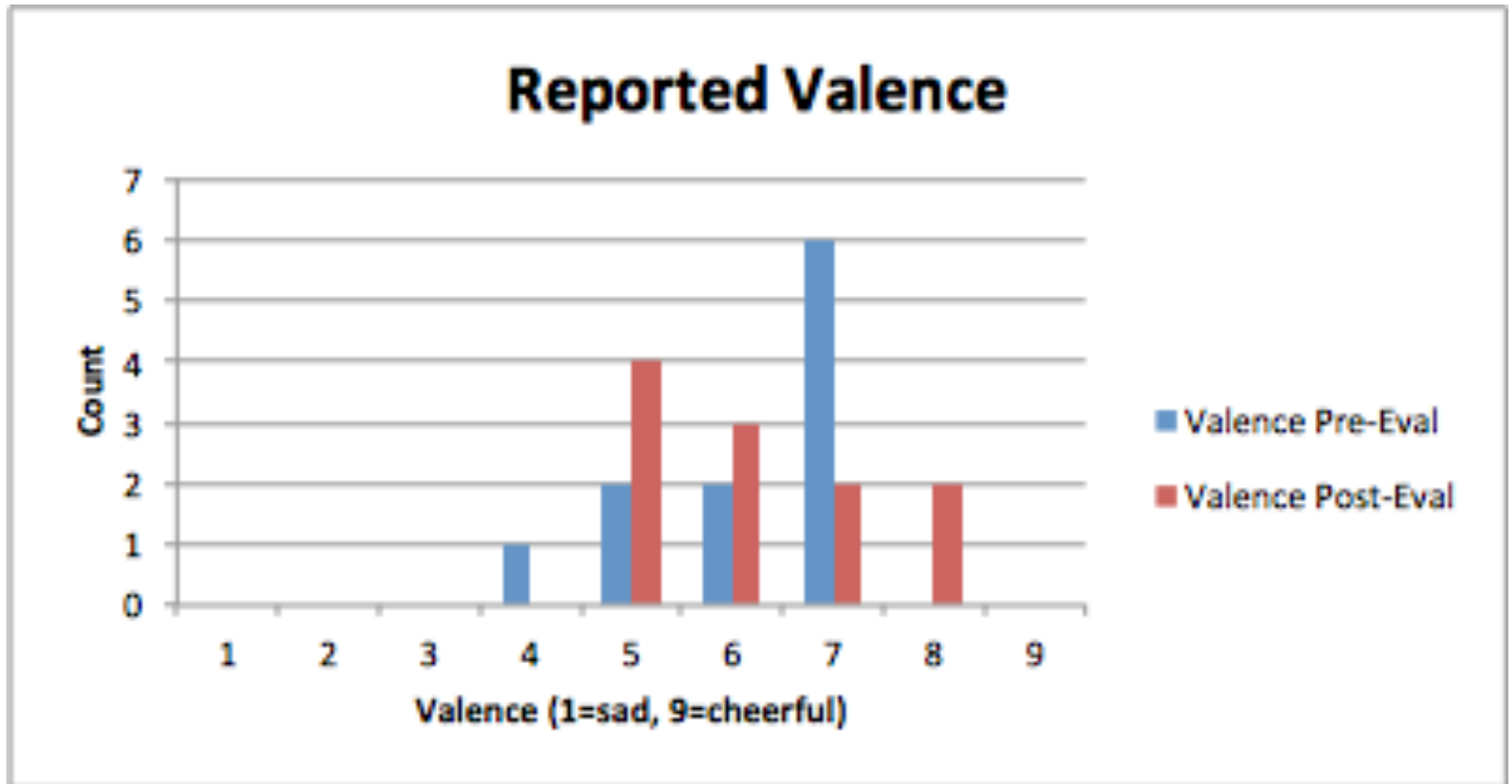


Evaluation 2 Results

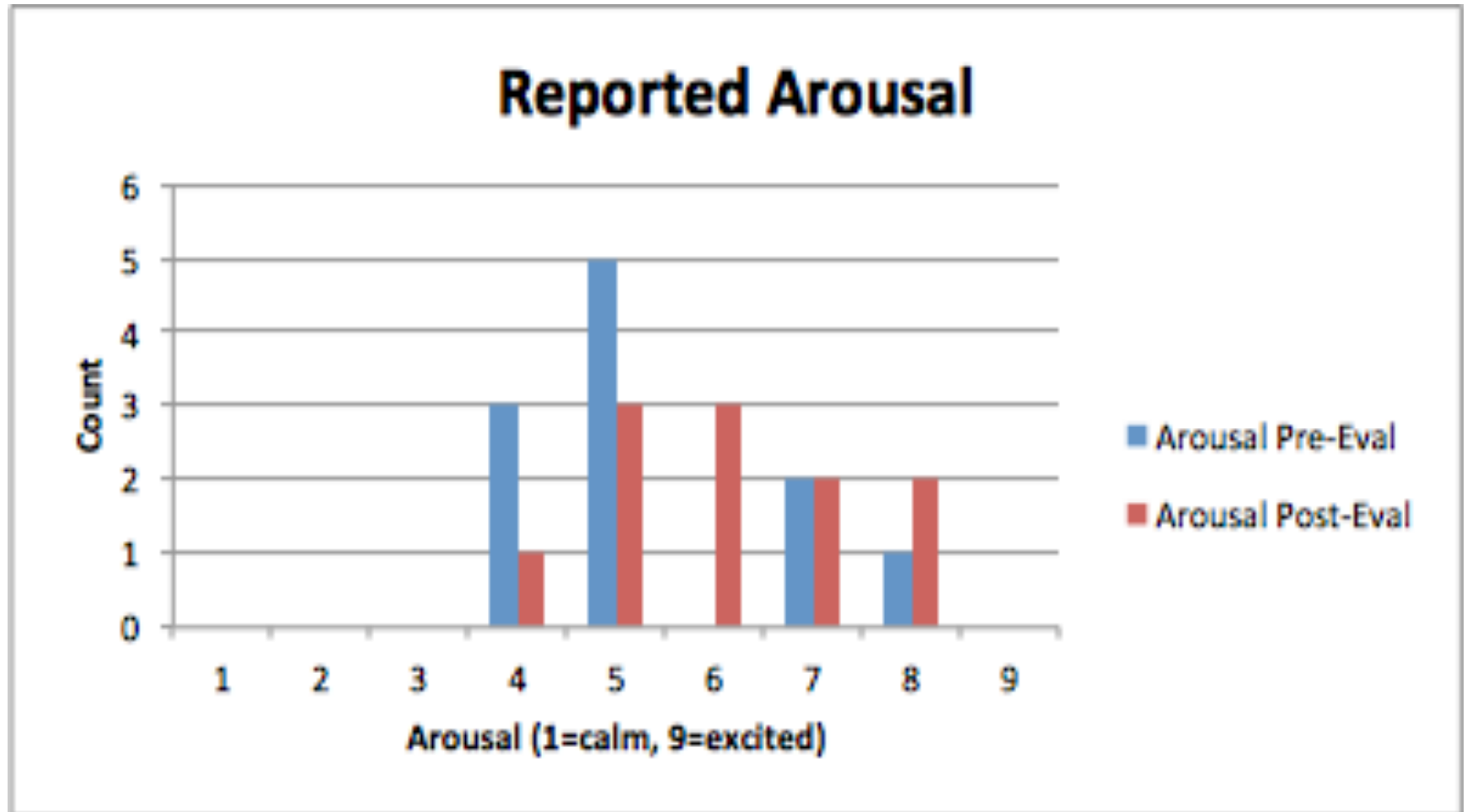
Visual Literacy



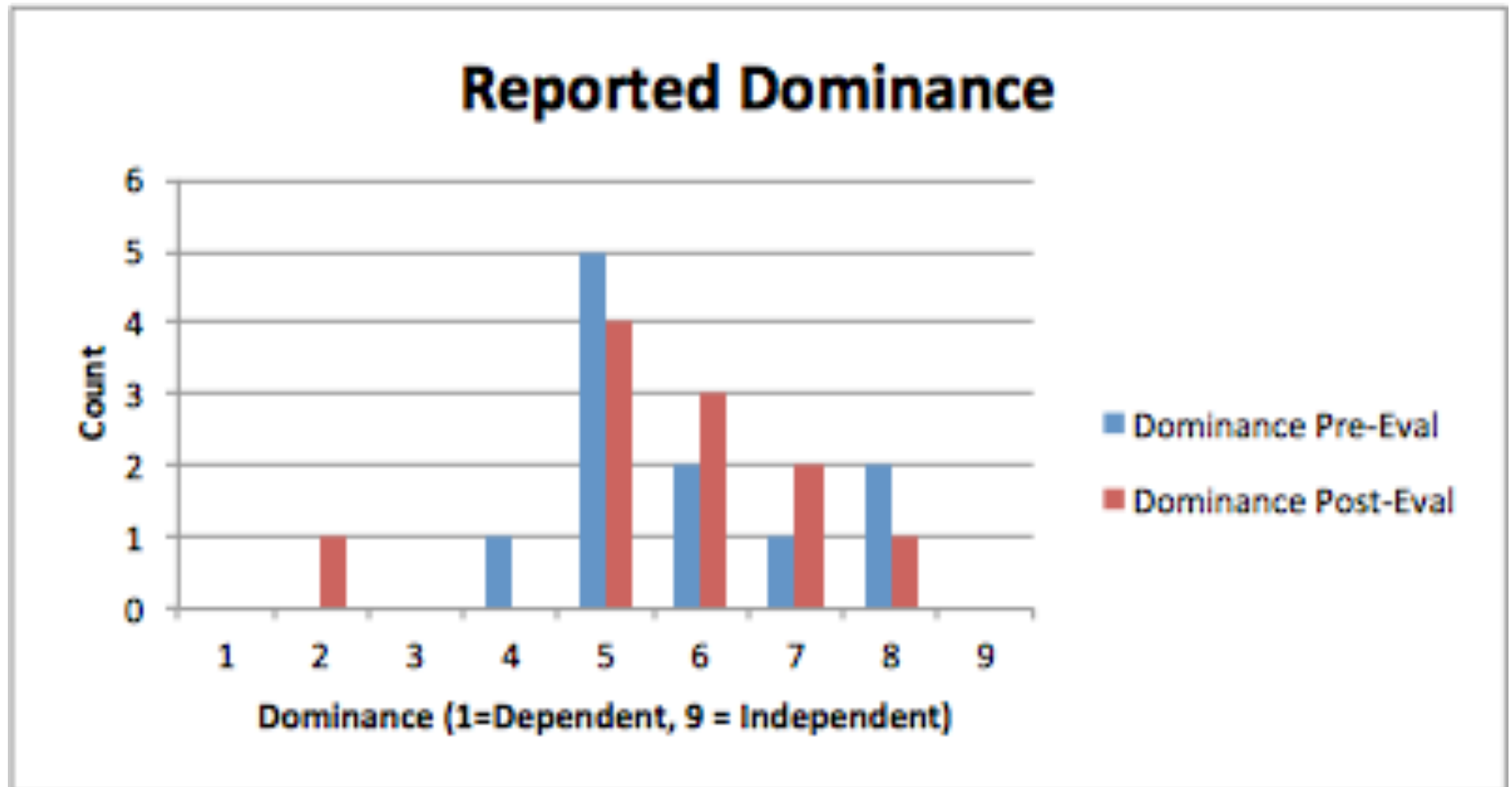
Valence



Arousal

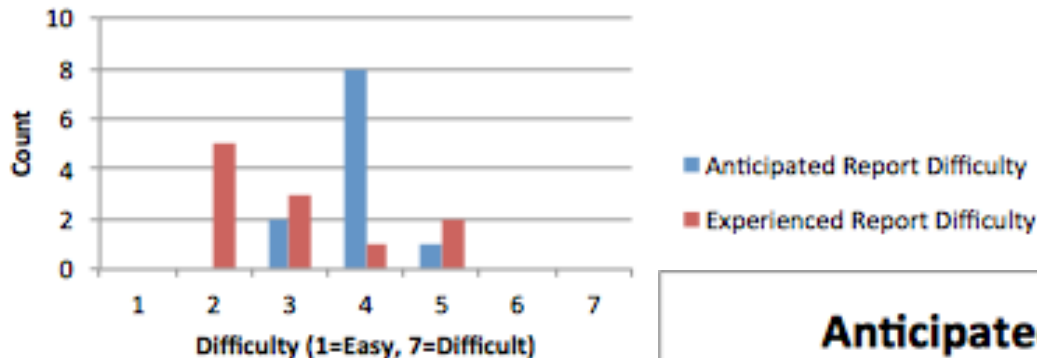


Dominance

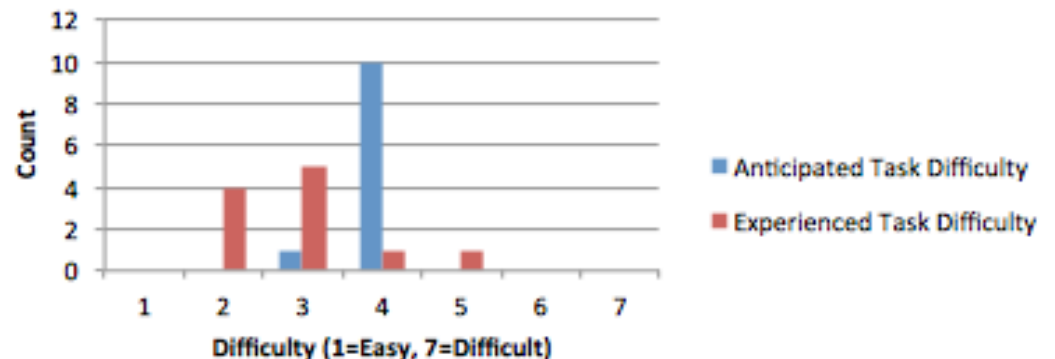


Anticipated v/s Experienced Difficulty

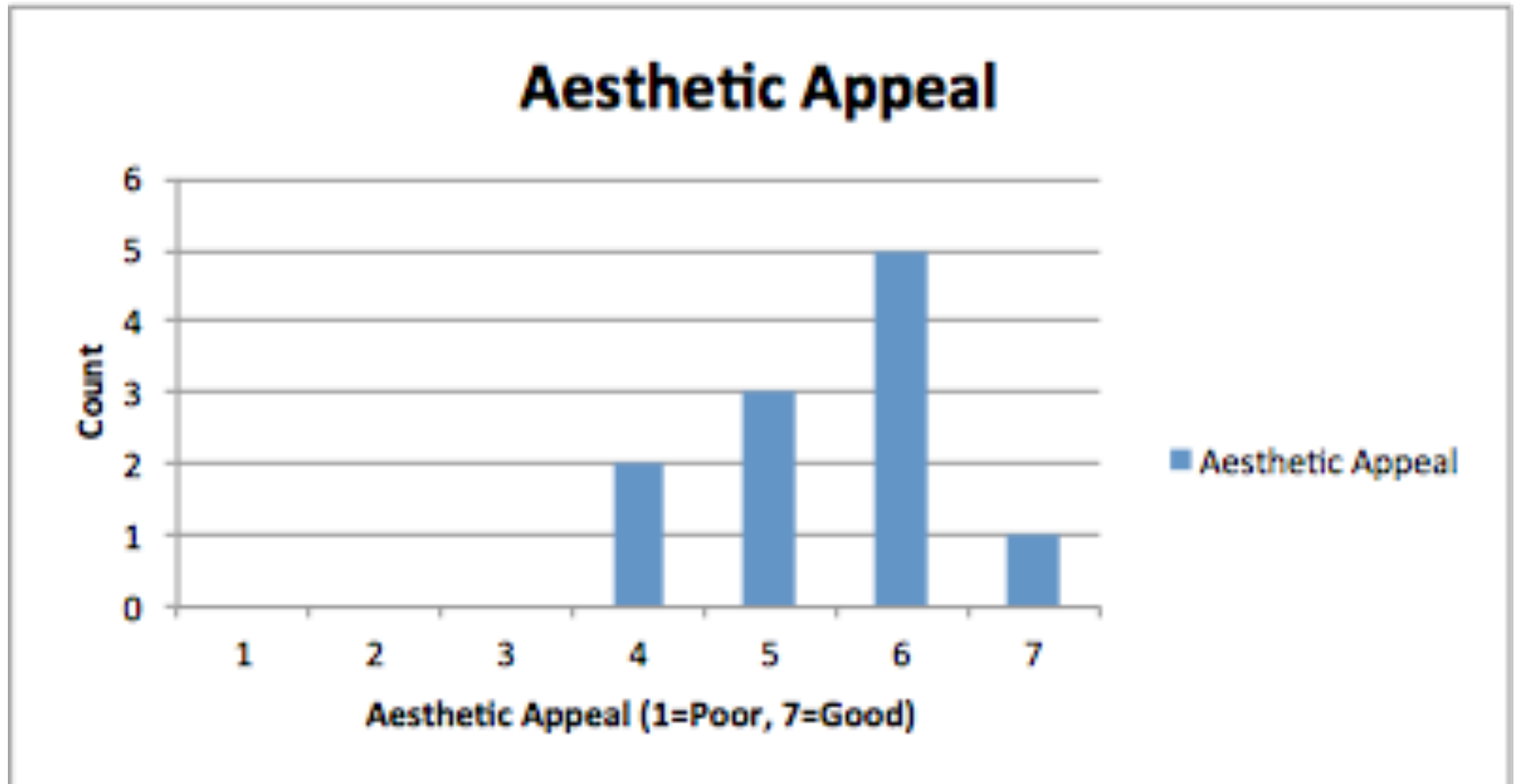
**Anticipated v/s Experienced Difficulty
(Report)**



**Anticipated v/s Experienced Difficulty
(Tasks)**



Aesthetic Appeal



Overall Experience



Alternate view of Overview Tab

