

Measuring The User Experience in Young Children : A Self-report Preference Scale

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Overview

- ❖ Measuring user satisfaction in usability tests. [Slaughter, Harper & Norman (1994)]
- ❖ How to apply Likert-like satisfaction scales to children?
- ❖ Visual scales used successfully in medicine
- ❖ Will visual scales work when testing with younger children?

SAMHSA Usability Test

- ❖ Educational games for children aged 4-7
- ❖ Child / Parent co-discovery
- ❖ Searching for a self-report method to measure interaction satisfaction in young users



QUIS and Wong-Baker



❖ Sample QUIS Question:

Overall reaction to the system:
dull 1 2 3 4 5 6 7 stimulating

❖ Sample Wong-Baker Question:



Measure Challenges



❖ Wong-Baker scale is one-tailed

- No Pain to Great Pain

❖ Preference measures are two-tailed

- Dislike to Like

❖ Traditionally use a neutral center score

Hybrid Approach



❖ Positive to negative scale

❖ Clear mid-point

❖ Age appropriate labels

❖ Rater-specific anchors for end points

- Favorite Activity
- Least Favorite Activity



Testing Structure

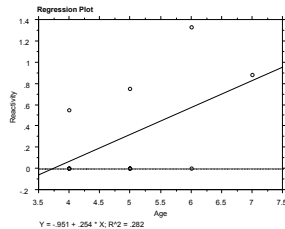


- ❖ Eleven participants between four and seven years of age.
- ❖ Six educational Flash™ games
- ❖ Co-discovery with parent or guardian
- ❖ Collect rating information directly following the completion of each game

Outcome



- ❖ Reactivity = Average difference of response from the mean
- ❖ Participants whose preference did not change across games would produce a reactivity score of 0
- ❖ Participants whose scores were extremely variable could produce variances up to 2.5 for a 5 point scale.
- ❖ Older children tended to use a wider range of scale values to express their preferences.
- ❖ Younger children reported strongly liking every game



Usability Results



- ❖ The mean rating for all participants across games was 4.5 out of 5
- ❖ Subjective observations:
 - Several games were clearly preferred
 - Several others were clearly frustrating
- ❖ Tests uncovered a range of moderate to serious usability problems not reflected in preference scores

Discussion



❖ Potential Explanations

- Young children are not yet able to make multi-level preference judgements
- Ceiling Effect - All of the games were highly enjoyable
- Even a bad day playing video games with your parents is better than the alternatives

Take-Aways



❖ Measuring satisfaction in children using self-report is tricky

- Age = ~7 years and older
- Observational measures should be used for younger groups

❖ Behavioral assessment of satisfaction and preference may prove useful for both children AND adults
