

Descriptive Words for Expressing the User Experience

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Abstract. User experience is a function of various traits of the artifact including the usability. In the first part of this article, various traits of the artifacts were examined before the purchase, during the purchase and after the purchase (usage) on how values of each trait vary depending on the phase. In the second part, the direct examination on the descriptive words in terms of the user experience was examined based on the proposed concept of GOB, POB and SOB.

Keywords: user experience, usability, satisfaction, pleasure, happiness.

1 Introduction

The User Experience (UX) (Roto et al. 2011) can be regarded as a function of various traits of the artifact including the usability. In other words, the UX is a dependent variable and various traits are independent variables, hence the UX and the usability is not the same. In the first part of this study, the analysis of 24 artifact's traits was conducted in terms of three different phases to see what kind of traits are regarded to be important in each phase. In the second part, what kind of subjective impression regarding the hedonic quality will matter depending on the situation. In other words, the first part concerns the dependent variables and the second part the independent variable.

2 Method

The same informants participated in two studies and the same method (questionnaire) was used to specify the nature of dependent and independent variables. Informants included 15 undergraduate students and 17 graduate school students. But due to an unexpected accident, 4 data was missed and only 28 data was used in the analysis. The research was conducted on December, 2010.

3 Study 1: Dependent Variables of UX

Informants were asked to rate the importance of the 24 quality traits including 1. brand image, 2. initial cost, 3. reputation, 4. familiarity, 5. novelty, 6. beauty, 7. self-expression, 8. functionality, 9. performance, 10. Infrastructure, 11. running cost,

12. ease of operation, 13. compatibility, 14. environmental adaptability, 15. durability, 16. maintenance, 17. reliability, 18. safety, 19. disposability, 20. physical fitness, 21. ease of memorizing, 22. ease of learning, 23. efficiency and 24. effectiveness. The evaluation was conducted on the 4 point scale (1: unrelated, 2: do not matter, 3: mind a bit, 4: mind very much) in terms of 3 phases including a. before the purchase, b. at the purchase, and c. usage (after the purchase). The third phase c. means the real usage of the artifact in the real situation for a certain long time. Targeted artifacts were the cell phone and the automobile.

3.1 Results for the Cell Phone

Following graphs show the average value and the standard deviation of ratings for each of 24 independent variables (quality traits) for the cell phone and the the graphes are combined for three periods including a.before purchase, b. purchase and c.usage. Wherever there was found the significant difference based on the multiple comparison (Turkey method), the asterisk is shown (* for 5 %) on the graph.

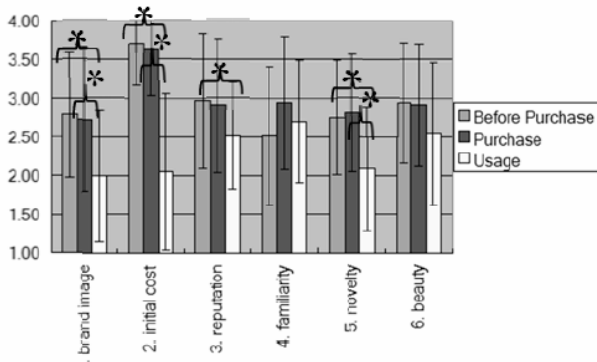


Fig. 1. Scale values for quality trait 1 through 6 (cell phone)

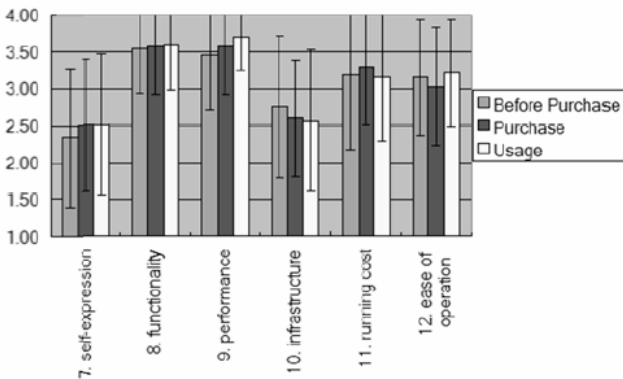


Fig. 2. Scale values for quality trait 7 through 12 (cell phone)

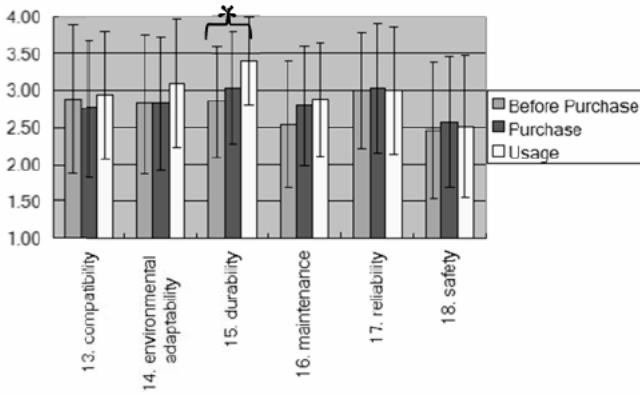


Fig. 3. Scale values for quality trait 13 through 18 (cell phone)

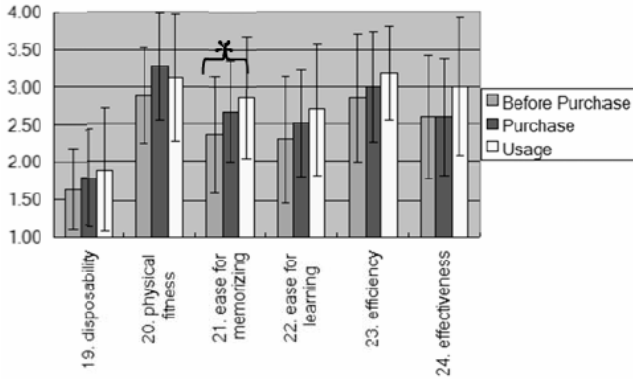


Fig. 4. Scale values for quality trait 19 through 24 (cell phone)

As can be seen in Fig 1-4, almost all quality traits had similar significance except 1, 2, 3, 5, 15, 21, there were significant differences especially between before the purchase and usage (after the purchase). Quality traits 1,2,3 and 5 become less important after the purchase, where quality traits 15 and 21 become more important after the purchase.

3.2 Results for the Automobile

For the automobile, only scale 1, 2 and 3 were significantly different between before the purchase and the usage (after the purchase). All other scales were judged to have equal importance regardless of the phase.

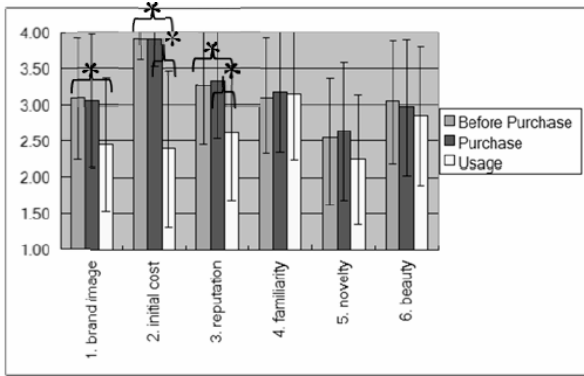


Fig. 5. Scale values for quality trait 1 through 6 (automobile)

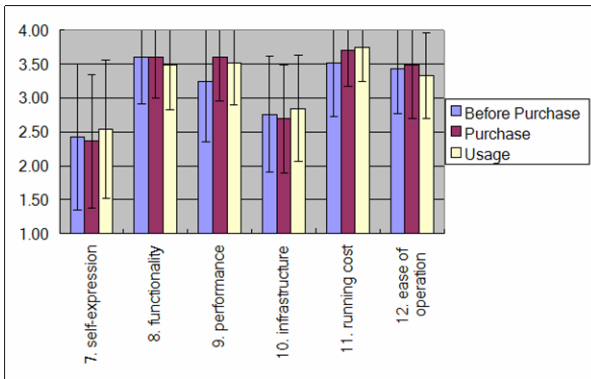


Fig. 6. Scale values for quality trait 7 through 12 (automobile)

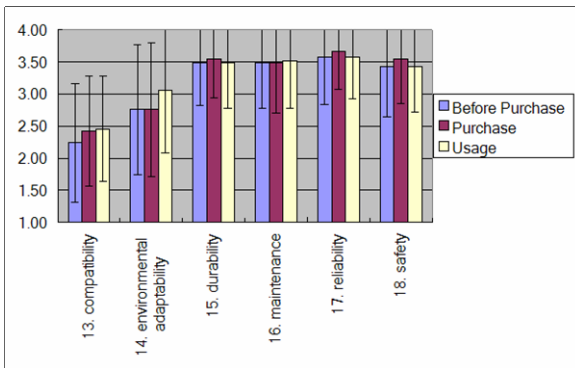


Fig. 7. Scale values for quality trait 13 through 18 (automobile)

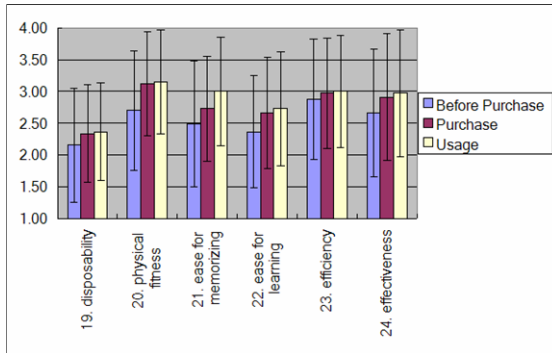


Fig. 8. Scale values for quality trait 19 through 24 (automobile)

4 Study 2: Independent Variables of UX

The UX can be expressed in various ways. 10 different situations were evaluated by 6 different scales, namely 1. Comfort, b. pleasure, c. delight, d. pleasantness, e. happiness and f. satisfaction.

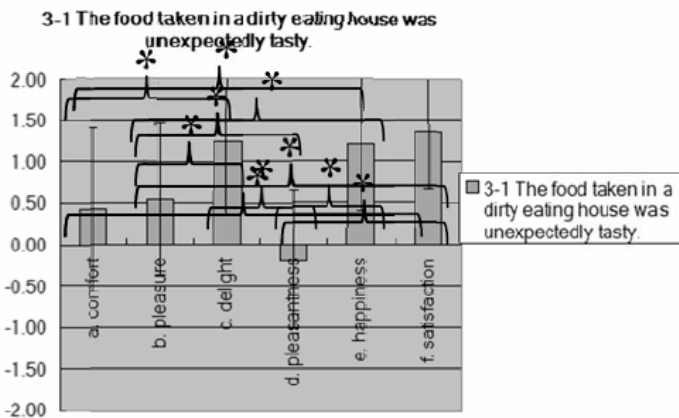


Fig. 9. The food taken in a dirty eating house was unexpectedly tasty

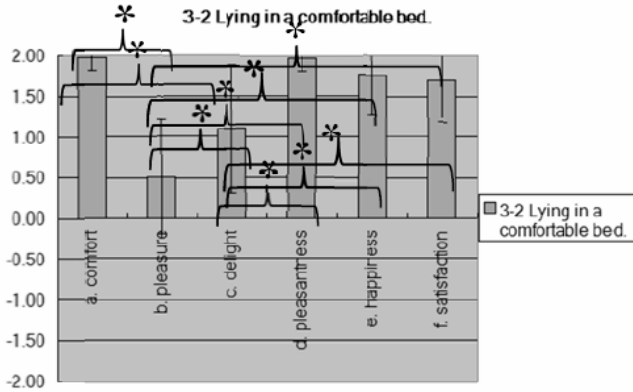


Fig. 10. Lying in a comfortable bed

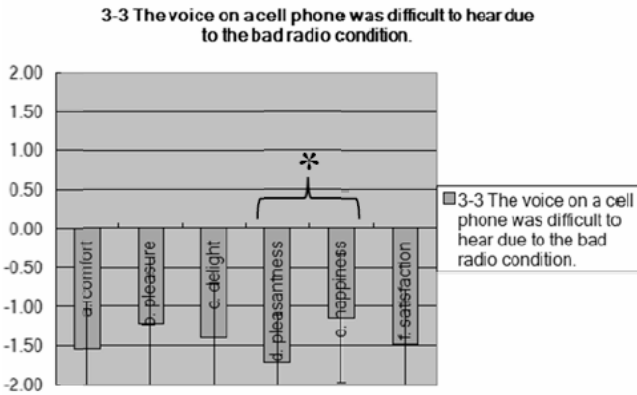


Fig. 11. The cellphone was difficult to hear due to the bad condition

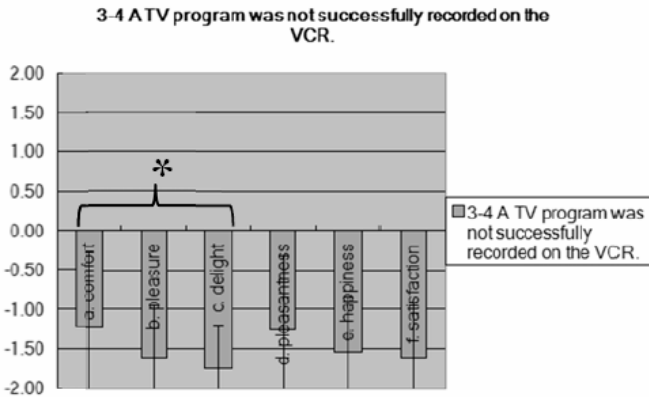


Fig. 12. A TV program was not successfully recorded on the VCR

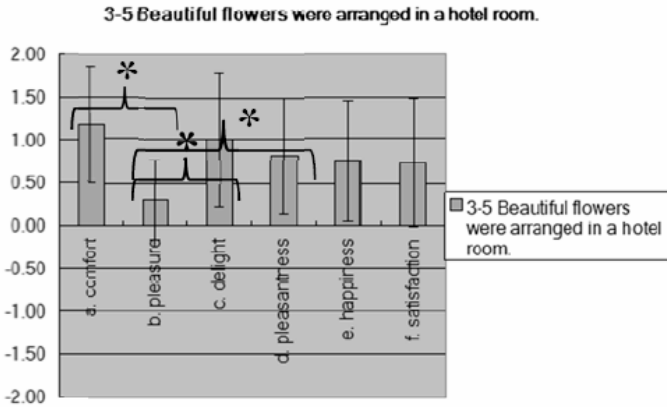


Fig. 13. Beautiful flowers were arranged in a hotel room

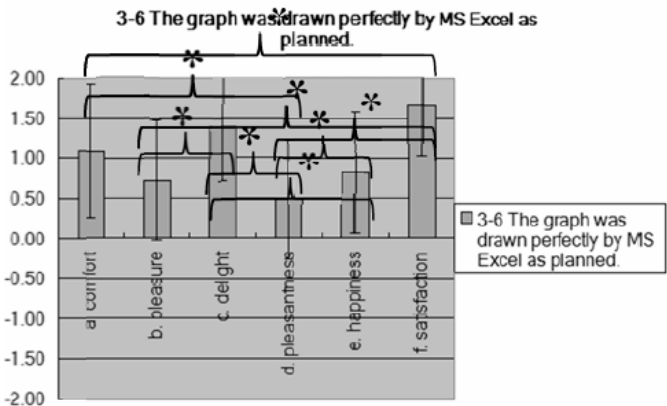


Fig. 14. The graph was drawn perfectly by MS Excel as planned

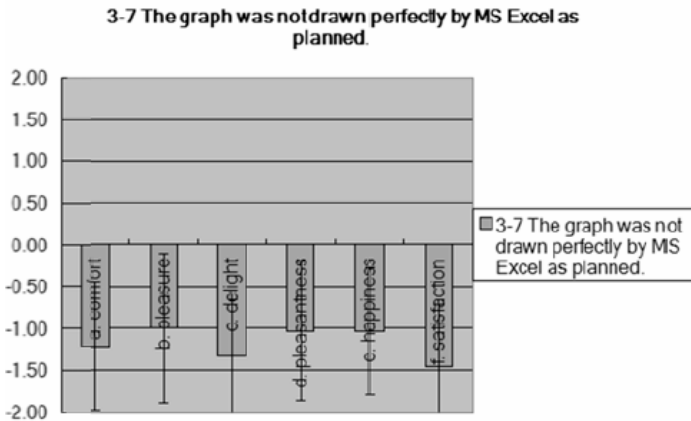


Fig. 15. The graph was not drawn perfectly by MS Excel as planned

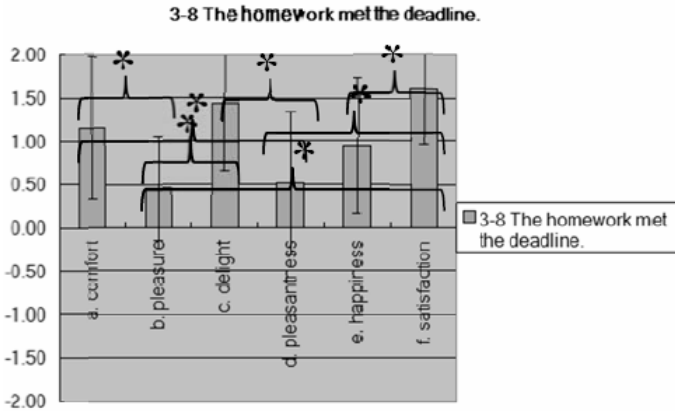


Fig. 16. The homework met the deadline

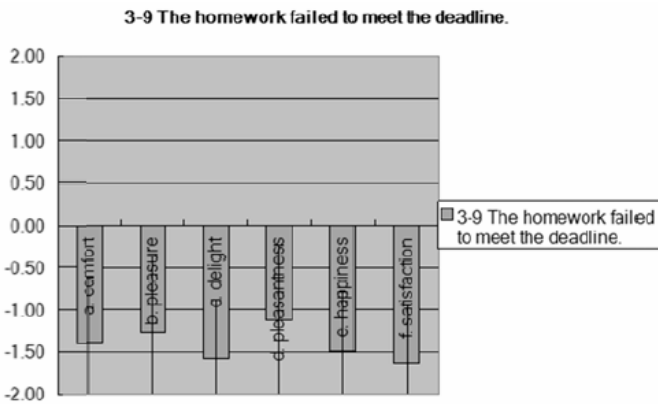


Fig. 17. The homework failed to meet the deadline

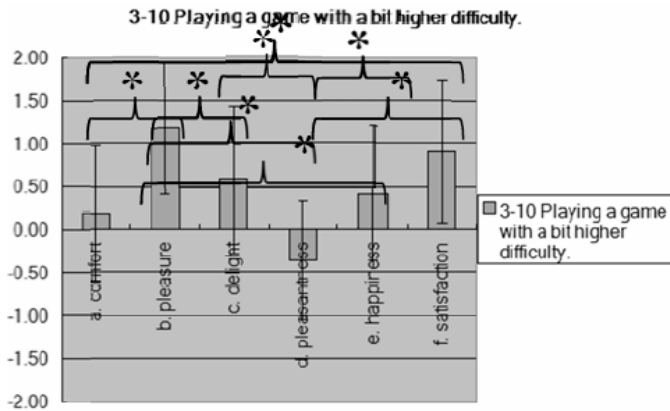


Fig. 18. Playing a game with a bit higher difficulty

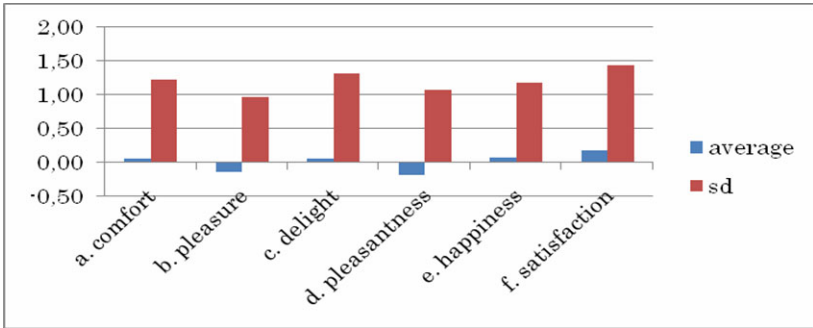


Fig. 19. The standard deviation (and the average) of each scale

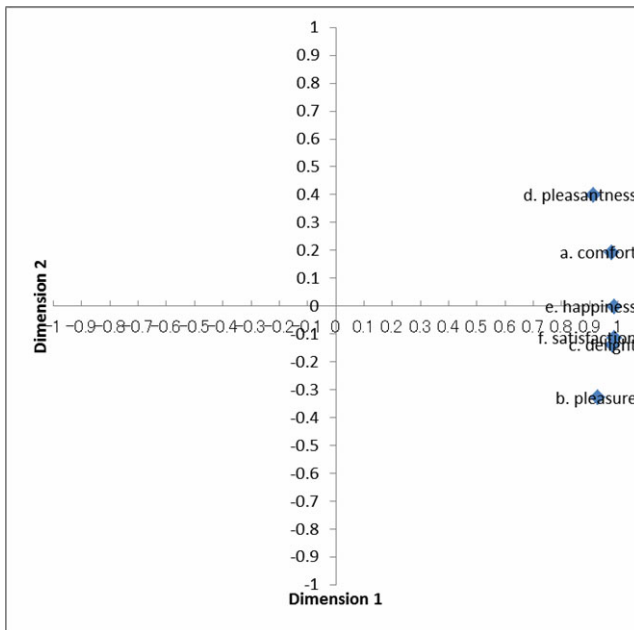


Fig. 20. Result of the principal component analysis showing each scale

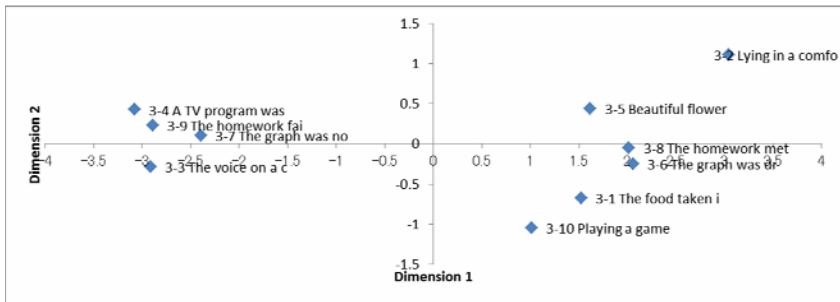


Fig. 21. Result of the principal component analysis showing each situation

5 Conclusion

Regarding the quality traits, just some of them differed in evaluating before / after the purchase. Regarding the description of UX, each scale used in experiment a bit of differences among them.

Reference

Roto, V., et al.: User Experience White Paper (2011)