Evaluation Report for Products

"Spaceship Game Hybrid" and "Spaceship Game Touch-Only"

Objectives:
How user-friendly and attractive is this product?

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Method of investigation

AttrakDiff™ is an instrument for measuring the attractiveness of interactive products.

With the help of pairs of opposite adjectives, users (or potential users) can indicate their perception of the product. These adjective-pairs make a collation of the evaluation dimensions possible.

The following product dimensions are evaluated:

Pragmatic Quality (PQ):
- Describes the usability of a product and indicates how successfully users are in achieving their goals using the product.

- Hedonic quality - Stimulation (HQ-S):
  Mankind has an inherent need to develop and move forward. This dimension indicates to what extent the product can support those needs in terms of novel, interesting, and stimulating functions, contents, and interaction- and presentation-styles.

- Hedonic Quality - Identity (HQ-I):
  Indicates to what extent the product allows the user to identify with it.

- Attractiveness (ATT):
  Describes a global value of the product based on the quality perception.

Hedonic and pragmatic qualities are independent of one another, and contribute equally to the rating of attractiveness.

Characteristics of investigation

Product title A:	Spaceship Game Hybrid
Product title B:	Spaceship Game Touch-Only
Product industry:	IT
Duration of study A:	01.09.2014 - 30.11.2014
Duration of study B:	01.09.2014 - 30.11.2014
Project-type:	Comparison product A - product B, that means two different products are rated.
Variant:	The same test participants in both project parts.
Number of ratings for A:	8
Number of ratings for B:	8

Portfolio of results

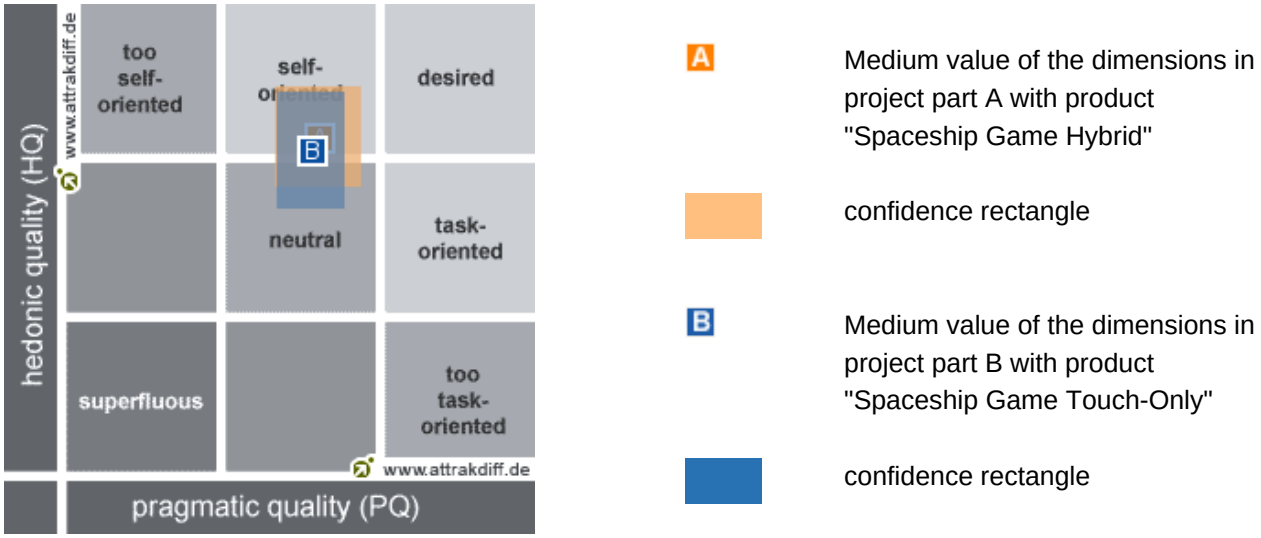


Diagram 1: Portfolio with average values of the dimensions PQ and HQ and the respective confidence rectangles of products "Spaceship Game Hybrid" and "Spaceship Game Touch-Only"

In the portfolio-presentation the values of hedonic quality are represented on the vertical axis (bottom = low value). The horizontal axis represents the value of the pragmatic quality (i.e. left = a low value).

Depending on the dimensions values the product will lie in one or more "character-regions".

The bigger the confidence rectangle the less sure one can be to which region it belongs. A small confidence rectangle is an advantage because it means that the investigation results are more reliable and less coincidental.

The confidence rectangle shows, if the users are at one in their evaluation of the product.
The bigger the confidence rectangle, the more variable the evaluation ratings (more information is available in the appendix).

Interpretation for help

Project part A, product "Spaceship Game Hybrid"

The products user interface was rated as "fairly self-oriented".

Pragmatic quality is clearly the classification. The user is assisted by the product, however the value of pragmatic quality only reaches the average values.

Result: Consequently there is room for improvement in terms of usability.

In terms of hedonic quality the character classification does clearly not apply because the confidence interval spills out over the character zone. The user is stimulated by this product, however the hedonic value is only average.

Result: Room for improvement exists in terms of hedonic quality.

The confidence intervals of both dimensions are large. This could be attributed to limited sampling or to greatly differing product ratings.

The users are at one in their ratings of both dimensions.

Project part B, product "Spaceship Game Touch-Only"

The products user interface was rated as "fairly self-oriented".

Pragmatic quality is clearly the classification. The user is assisted by the product, however the value of pragmatic quality only reaches the average values.

Result: Consequently there is definite room for improvement.

In terms of hedonic quality the character classification does clearly not apply because the confidence interval spills out over the character zone. The user is stimulated by this product, however the hedonic value is only average.

Result: Room for improvement exists in terms of hedonic quality.

The confidence interval HQ is large. This could be attributed to limited sampling or to greatly differing product ratings.

Comparison of results of both project parts

Product Spaceship Game Hybrid performs better than product Spaceship Game Touch-Only. Pragmatic quality as well as hedonic quality is higher.

The difference in value between the pragmatic quality of product Spaceship Game Hybrid and product Spaceship Game Touch-Only is statistically insignificant. It might therefore concern a chance fluctuation of judgement (see details in appendix).
The difference in value of the hedonic quality of product Spaceship Game Hybrid and product Spaceship Game Touch-Only is statistically insignificant. It might therefore concern a chance fluctuation of judgement.

The confidence interval for pragmatic quality of product Spaceship Game Touch-Only is smaller than for product Spaceship Game Hybrid. In the rating of pragmatic quality of product Spaceship Game Touch-Only the users are more at one in their evaluation. Thus the rating of product Spaceship Game Touch-Only applies with greater certainty to the product.
The confidence interval for hedonic quality of product Spaceship Game Hybrid is smaller than for product Spaceship Game Touch-Only. In the rating of hedonic quality of product Spaceship Game Hybrid the users are more at one in their evaluation. Thus the rating of product Spaceship Game Hybrid applies with greater certainty to the product.

Diagram of average values

The average values of the AttrakDiff™ dimensions for the evaluated product are plotted on the diagram.

In this presentation hedonic quality distinguishes between the aspects of stimulation and identity. Furthermore the rating of attractiveness is presented.

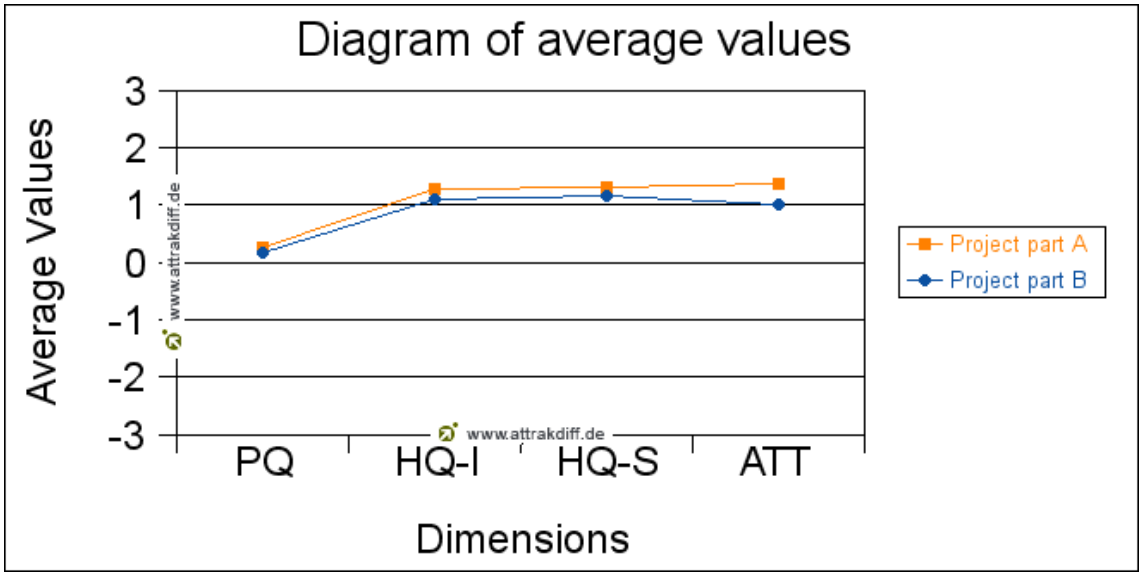


Diagram 2: Mean values of the four AttrakDiff™ dimensions for the products "Spaceship Game Hybrid" (project part A) and "Spaceship Game Touch-Only" (project part B)

Interpretation for help

Project part A, product "Spaceship Game Hybrid"

In terms of pragmatic quality the product is located in the average region. It meets ordinary standards.

Result: Should you wish to provide the user with really great assistance you must strive to improve the quality even more so.

With regard to hedonic quality – identity, the product is located in the above-average region. It provides the user with identification and thus meets ordinary standards.

Result: Should you wish to bind the user more strongly to the product, you must aim at improvement.

With regard to hedonic quality – stimulation, the product is located in the above-average region. It meets ordinary standards.

Result: Should you wish to motivate, enthral and stimulate users even more intensely, you must aim at further improvement.

The product's attractiveness value is located in the above-average region.

Result: The overall impression of the product is very attractive.

Project part B, product "Spaceship Game Touch-Only"

In terms of pragmatic quality the product is located in the average region. It just about meets ordinary standards.

Result: Should you wish to assist the user you must aim at improvement.

With regard to hedonic quality – identity, the product is located in the above-average region. It provides the user with identification and thus meets ordinary standards.

Result: Should you wish to bind the user more strongly to the product, you must aim at improvement.

With regard to hedonic quality – stimulation, the product is located in the above-average region. It meets ordinary standards.

Result: Should you wish to motivate, enthral and stimulate users even more intensely, you must aim at further improvement.

The product's attractiveness value is located in the above-average region.

Result: The overall impression of the product is very attractive.

Comparison of results of both project parts

In terms of pragmatic quality, product Spaceship Game Touch-Only performs less well than product Spaceship Game Hybrid. This difference is however statistically insignificant.

In terms of the identity aspect of hedonic quality, product Spaceship Game Touch-Only performs less well than product Spaceship Game Hybrid. This difference is however statistically insignificant.

In terms of the stimulation aspect of hedonic quality, product Spaceship Game Touch-Only performs less well than product Spaceship Game Hybrid. This difference is however statistically insignificant.

In terms of attractiveness quality, product Spaceship Game Touch-Only performs less well than product Spaceship Game Hybrid. This difference is however statistically insignificant.

Description of word-pairs

The mean values of the word pairs are presented here. Of particular interest are the extreme values. These show which characteristics are particularly critical or particularly well-resolved.

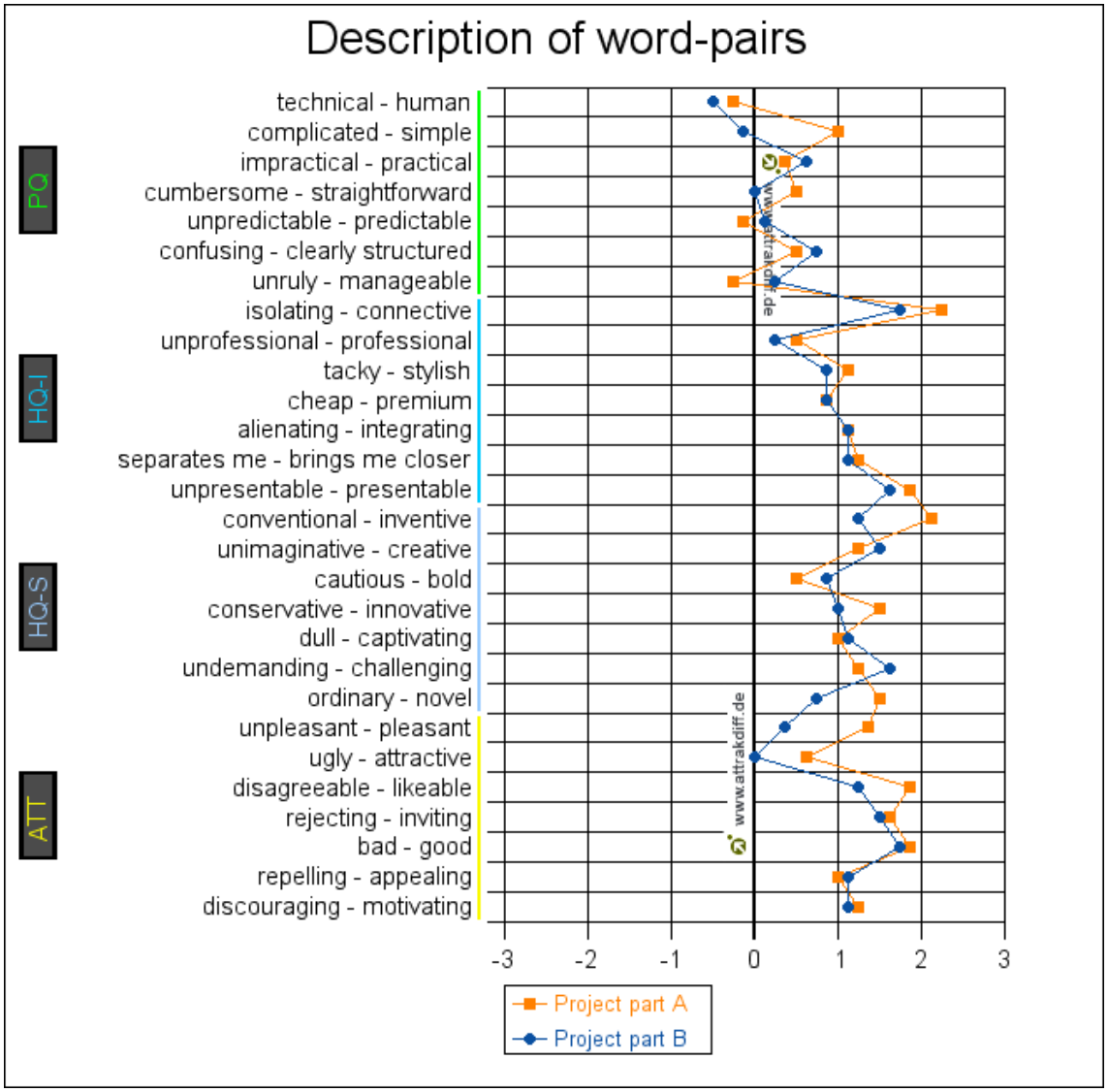


Diagram 3: Mean values of the AttrakDiff™ word pairs for products "Spaceship Game Hybrid" (project part A) and "Spaceship Game Touch-Only" (project part B)

APPENDIX

Classification of test participants

Age

20 to 40:	8 test participants

Gender

Male:	5 test participants
Female:	3 test participants

School qualification

Lower Secondary Education 2:	2 test participants
Higher Secondary Education:	1 test participants
University:	4 test participants
Other:	1 test participants

Profession

Game Designer:	1 test participants
GameDesigner:	1 test participants
Studentin:	1 test participants
immer noch eine doofe Frage:	1 test participants
Studentin:	1 test participants
Student:	1 test participants
Fachinformatiker Anwendungsent:	1 test participants
Fachinformatiker Anwendungsent:	1 test participants

Product experience

less than a month:	8 test participants

Confidence Intervals

The confidence intervals create a so-called confidence rectangle. As it is almost impossible to involve all users in the evaluation.

The project co-ordinator has to settle for a number of selected product users to evaluate the product. For this reason one can never be 100% sure that the outcome of the evaluation is representative of the collective users. It might be that the evaluation by the selected users differ from that of the collective users were it possible to ask them all.

The confidence interval outlines the area where the "true" values would lie were it possible to ask all the users.

The confidence rectangle suggests with what certainty the product equals the mean values of the characteristic dimensions.

Significance Tests

Significance tests make it possible to test whether the difference between 2 values can be attributed to the qualities of the product or whether the difference is the result of incidental fluctuations. E.g. If a product receives a higher pragmatic rating than another it does not necessarily mean that it is more pragmatic than the other.

Small, chance fluctuations of judgement can result in a higher value even when there is no systematic difference between the two products. In this case the difference measured is not very relevant.
T-Tests for independent random sampling to check whether there are in fact significant rating differences between the two products. The significance standard lies at 0,05.

This is interpreted as follows:
The difference in ratings is considered "significant" when one can assume with 95% certainty that there are no incidental fluctuations. A difference is considered "insignificant" when the probability of incidental fluctuation is greater than 5%.