How Good is Your User Experience? Measuring and Designing Interactions

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Digitalism and the new focus on interaction and experience /// Form and function are important dimensions of consumer choice, but there is more in our increasingly digital world. It is not only products per se that need to be designed but the whole interaction between consumers and brands. The whole UX or user experience is more important than ever before. Digitalism nowadays is everywhere, and even mundane products are becoming more digital (e.g. ovens), while others evolve that are purely digital (e.g. PayPal). The question is: How can we effectively measure and design interactions in this highly digital and complex environment? For quite a long time ''usability'' was the one and only measure on the agenda. But consumer experience goes far beyond ease of use or high functional quality. UX is a complex construct with several dimensions, as demonstrated in the following example:

UX goes beyond usability /// In June 2010, Samsung released its new Galaxy S Smartphone, which was appreciated by the press for its great usability. It was sold around 10 million times within seven months. Within this time the price of the Galaxy S dropped from its initial €649 to €420. One month later the iPhone 4 was launched. It was sold around 30 million times from July to December 2010. More importantly, the price of the iPhone 4 in January 2011 was still around €629. In some countries the iPhone 4 could only be bought at certain providers, forcing customers to change their mobile provider if they wanted to use an iPhone4. Hence, despite the constantly higher price, the obstacle of a necessary provider change and a similar usability, the iPhone 4 sold three times more than the Galaxy S. Apparently, usability alone cannot explain the huge difference in sales between the two smartphones. And, while brand identification might have played an important role

here, it alone cannot account for this difference as well. The same applies for other aspects such as design or features of the smartphones. No single factor alone can help to explain this sales difference. It is the whole experience that makes the difference.

Measuring the user experience /// Definitions of UX vary in scope and detail. Common ground is that user experience is formed by several qualities and dimensions that are independent of each other. Based on previous conceptualizations and an expert workshop, GfK developed the following model (figure 1) as the basis for a proprietary tool to measure the subjective perception of user experience, the UX score.

The UX score was internationally validated and uses the following three dimensions that are measured on five subdimensions with a 12-item scale:

> Task oriented qualities reflect the instrumental subdimensions of learnability and operability. They can be summarized under the term "usability."

> Self-oriented qualities reflect more general human needs. This dimension is made up of the subdimensions product fit and inspiration.

> Finally aesthetic qualities reflect the subdimensions of product look and feel.

The UX Score captures all relevant facets of UX, generating results that are directly practicable and provide a comprehensive understanding of how users interact with these products. To demonstrate how this construct can deliver managerial-relevant insight and how to design products and experiences in a manner that is more user oriented, we present two cases (box 1 and 2).

FIGURE 1:

Dimensions of the UX score

TASK-ORIENTED QUALITIES

SELF-ORIENTED QUALITIES

AESTHETIC QUALITIES

Learnability/
Operability

Product fit/
Inspiration

Look & feel
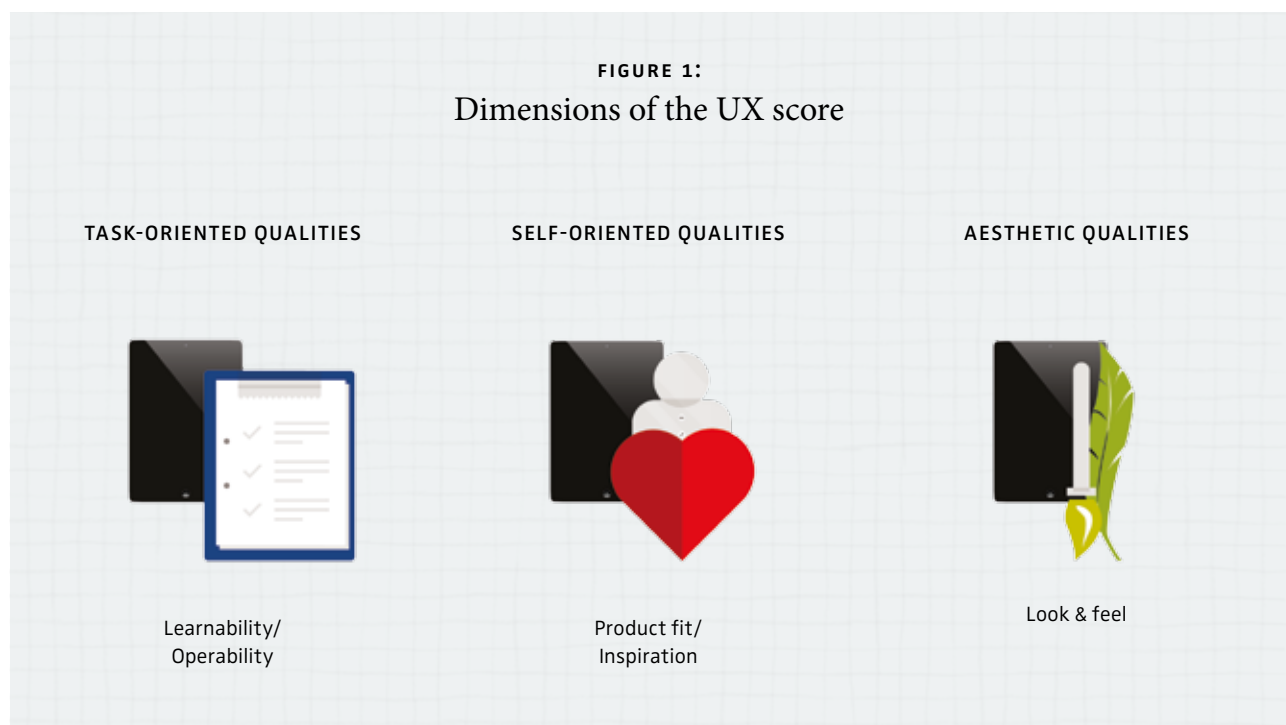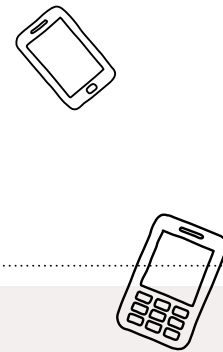
MEASURING THE UX OF SMARTPHONES

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Our first case deals with smartphones and was conducted in Germany. Can the UX score differentiate between different products? And can the results of the dimensions/subdimensions deliver valuable insight on how the product design should be changed in order to improve the user experience?
To answer these questions, four smartphones were tested in a sample of 396 respondents. The result was very clear. Figure 2 shows that the iPhone 4 is clearly rated superior to its competitors. It further shows that this superiority to competitor 1 and competitor 2 is not so much due to the usability dimensions learnability and operability but more to product fit, inspiration and – especially for competitor 2 – to look and feel. So if competitors 1 and 2 would like to close the UX score gap to the iPhone 4, they first should work on the last three subdimensions, less on the first two.

FIGURE 2:

UX Scores and scores for UX subdimensions
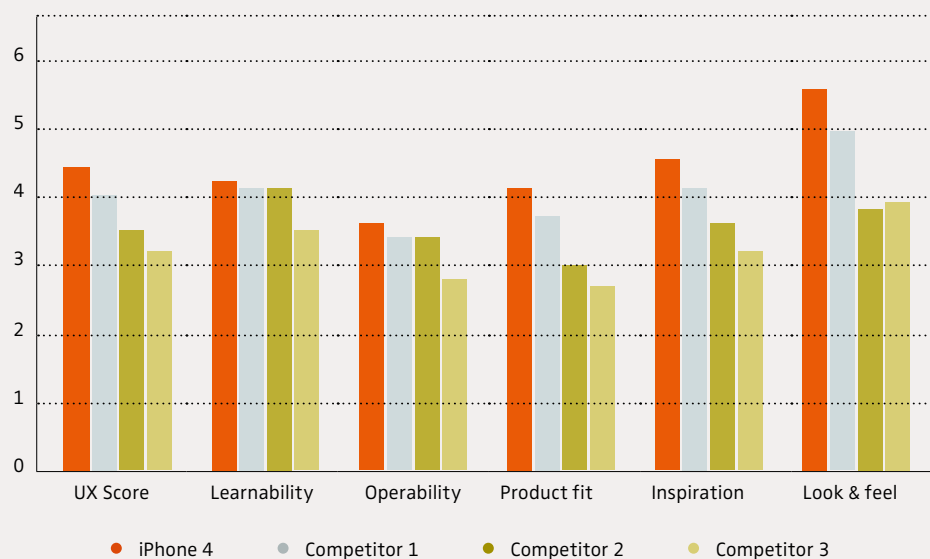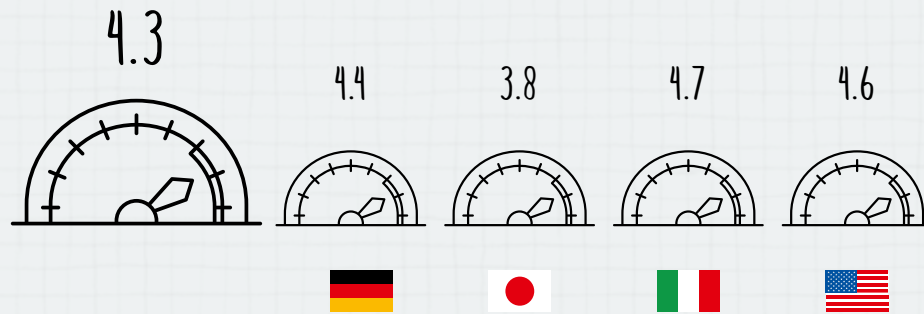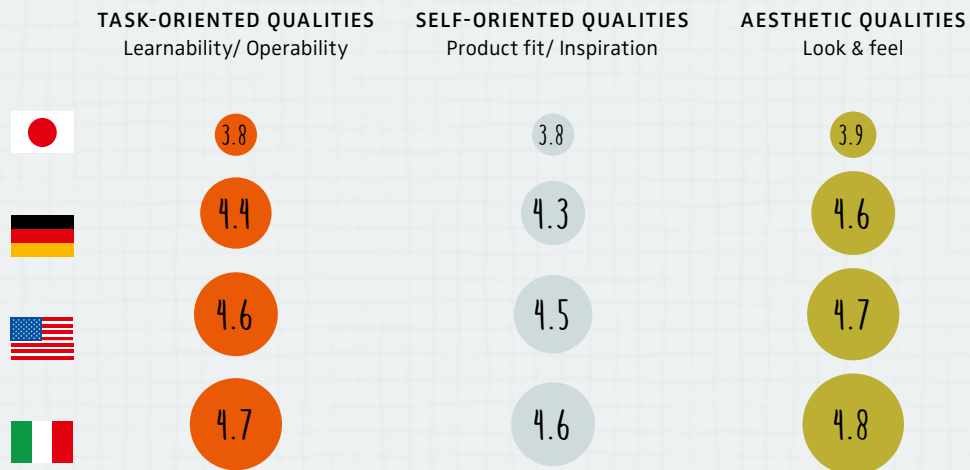## of four smartphones (higher is better)

FIGURE 3:

UX Score infotainment systems in different countries

Basis: total n=3,776; GER n=1,146; ITA n=403; JPN n=1,238; USA n=988

FIGURE 4:

Results of UX dimensions in different countries

	TASK-ORIENTED QUALITIES Learnability/ Operability	SELF-ORIENTED QUALITIES Product fit/ Inspiration	AESTHETIC QUALITIES Look & feel
🇯🇵	3.8	3.8	3.9
🇩🇪	4.4	4.3	4.6
🇺🇸	4.6	4.5	4.7
🇮🇹	4.7	4.6	4.8

Basis: total n=3,776; GER n=1,146; ITA n=403; JPN n=1,238; USA n=988

{ *Box 2* }

APPLYING THE UX SCORE ON CAR-INFOTAINMENT SYSTEMS

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In a recent GfK study, we surveyed around 3,700 drivers in the US, Japan, Germany and Italy on their user experiences with the human-machine interfaces of car-infotainment systems of 15 different brands. Drivers in the US were most likely to give high scores to infotainment systems generally; out of six, the average UX Score in the US was 4.6, compared to 4.3 globally (figure 3). In the US, Nissan took the lead, followed closely by Honda, while the German brands scored highest in Europe (Germany and Italy).

> *Benchmarking across competitors* The UX score can be applied internationally and deliver valuable insights on the perceived user experience of different competing brands and different regions. As demonstrated in the mobile phone example, the UX score indicates the relative position of a brand compared to competitors and shows in which areas the brand should improve. Our second example of car-infotainment systems shows how UX is perceived in different segments and countries.

> *Focusing on the right dimensions* Results of the UX score can be matched with other data, and the user experience can be improved in the areas that have the highest impact. For car infotainment, e.g., understanding the icons and system commands were the functions that impacted the UX score the most and negatively. This is a very clear mandate for improvement and helps illuminate drivers' needs. The UX score helps understand ''what'' cause difficulties and ''why.'' It helps to test different designs and solutions and their regional/market applicability.
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How to design better products with UX score results /// The UX Score builds a bridge between a scientific approach and the practical world. It is easy to understand and more comprehensive than other available tools that attempt to describe the user experience. In particular in the following areas it provides valuable insights for products and brands and enables marketing managers to design products that enhance customer satisfaction.

> *Get the complete picture* In contrast to traditional usability and user experience measures, the UX Score appears to be the only tool so far to comprehensively capture user experience. Despite its task-oriented factor that parallels the usual usability facets of other measures, it offers explanations for the more emotional aspects of use. Product usage for example should not only be enjoyable but also inspiring and exciting. Consequently, the ''inspiration'' subdimension of the self-oriented factor provides a more intensive ''joy of use'' which can explain these aspects. Additionally, other UX measurement systems contain ''usefulness'' as an important factor. In contrast, the ''product fit'' subdimension of the UX Score is more emotional, as products do not only need to be useful, but the users have to ideally identify with the product. Our aesthetic qualities include design aspects that other measures capture as well, but it goes far beyond.

FURTHER READING

Bosenick, Tim; Wildner, Raimund (2014):
How to Measure User Experience …
and to Calculate its ROI,
Esomar, Amsterdam.