Week 2 (1/3)

In this article, author Justinmind explains what is interaction design through some classic cases and definitions. I first learned that interaction design and UX design are not exactly the same concept. UX design deals with the big picture of the product, while interaction design focuses on specific actions and reactions between the user and the product. At the same time Gillian Crampton Smith mentioned five dimensions of interaction design:

Simple and understandable words, clear and understandable visual representations, physical objects or spaces, time and behavior. Interaction design has many principles as a way for humans and machines to create meaning. It is more necessary to consider whether the product has actual value from the user's center; as some examples, the cleanliness and consistency of the interface can leave a good impression on the user. Real-time storage of user input information, efficient return to the main page and interesting waiting pages will make users more favorable. Finally, Justinmind also stressed the importance of the double diamond model during the development phase.

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In this article, Dr. Jeff Sauro explains five well-known laws for improving the user experience of applications and websites.

**Miller’s Law of Short Term Memory Load:** Most people can only hold about seven pieces of information in short-term memory at the same time (the magic number 7+-2)

**Fitts’ Law:** It takes longer for users to point to on-screen links and buttons if objects are smaller in size or farther away from the main location

**Hick-Hyman Law**: There is a linear relationship between the time it takes for a person to make a decision based on the number of options available and the information transmitted

**Power Law of Practice**: This law states that the time to complete a task decreases linearly with the number of practice trials taken when both are expressed as logarithms.

**Pareto and Zipf Laws**: Pareto: it can be applied to the most profitable customers and most critical usability problems, as well as identifying top tasks.

**Zipf**: the most frequent word will occur approximately twice as often as the second most frequent word, three times as often as the third most frequent word, and so on.

This article gave me the feeling that the seemingly simple interaction design actually contains many very complex laws that can be accurately expressed in formulas. Many formulas study some psychological behaviors of users.

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In this article, Aurora Harley explains the design philosophy of interactive elements on touch screens. It defines an element to be at least 1cm\*1cm in size when rendered. Too small targets and crowded designs lead to longer acquisition times for users and an increased chance of errors. Users don't like cumbersome and cluttered pages and they also don't like to try many times for single operation. At the same time, the screen size of different devices and different types of user groups need to be considered. Sometimes obvious buttons can provide great convenience in some situations. Aurora Harley also mentioned that the design of interactive elements should follow a user-centered design philosophy.