

# Field Study Report

## Introduction:

This report is about the ordering system in MAX restaurant in Uppsala's city center. The ordering system is a machine which can help the customer(user) to order the food without any help from the staff in order to save time for both customers and staffs, so that the staffs could concentrate on preparing foods instead of ordering menus and on the other hand the customer could avoid long queue which would cost a long time to wait before ordering. In this report, I am going to list several point based on my observation of the system, including the standard usage, different usage patterns and my estimation, the type of incidents and the insights I have gained from the observation.

## Methods:

Here I am going to briefly explain different types of methods that I used in observation and researching different questions.

1. Go through the system by myself: Firstly, in order to know the system better, I go through the menus and options in the system and successfully ordered several times.

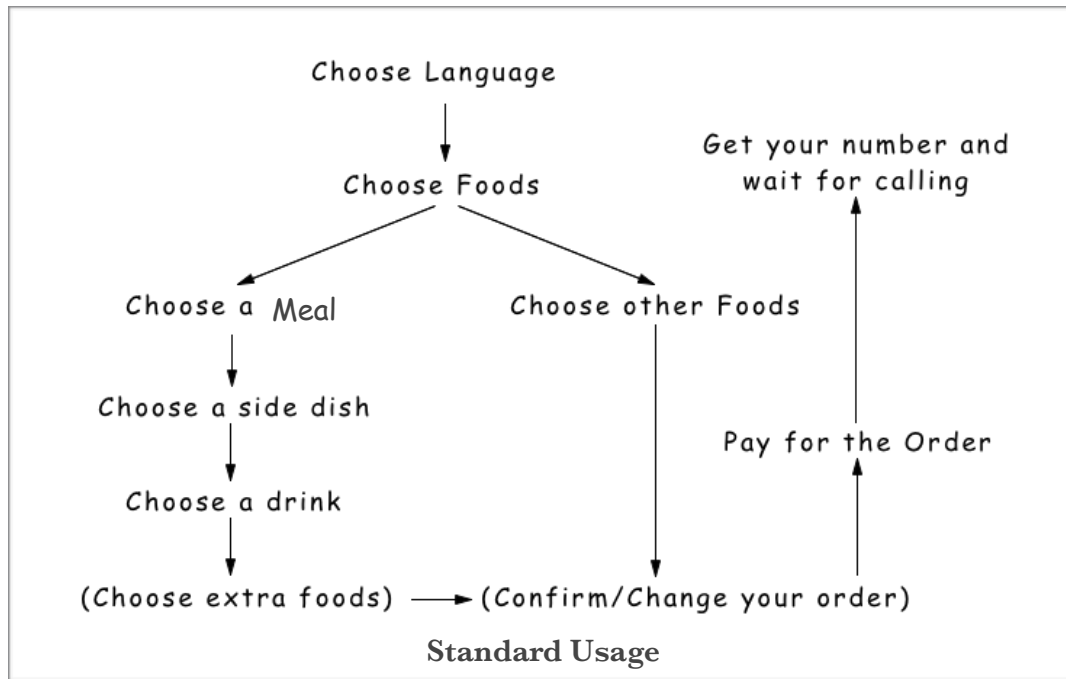
2. Choose the user: It is not easy to find a user that worth to observe, because most of them are Swedish and have used the system many times. I have found 5 my friends(none of them are Swedish) who have never used the system before to involve the research but just tell them that we have lunch in MAX instead of telling them I was doing an observation. After that I also observed 20 users and 8 of them who were not so familiar with the system.

3. Observe other users' operation: When observe other users' operation on the system, I stand in front of another machine nearby, simulating I am also ordering something. It truly helped in avoiding being noticed, only 2 of 25 users noticed that I was observing.

4. Collect feedbacks: After the observation, I told my friends and 5 other users that I was just doing the observation for a research in my course in university and asked them could they provide some feedback about the use of the system.

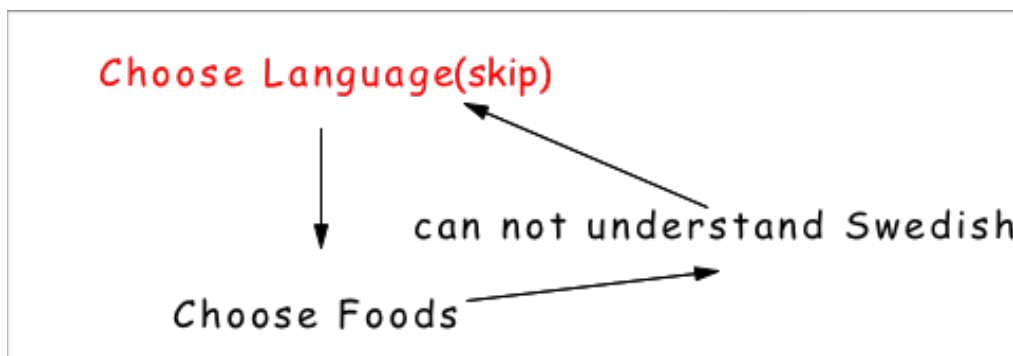
## Results:

The standard usage of the ordering system in MAX is not complex.

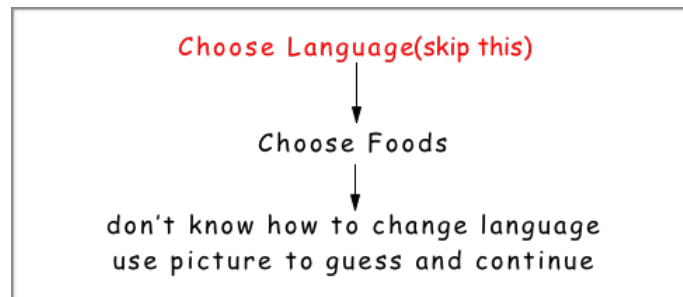


However, not all of the users could perfectly finished the whole process. Here I will list 5 different usage patterns. Some of them just waste some time, some of them are incidents, and some of them will lead to a higher cost.

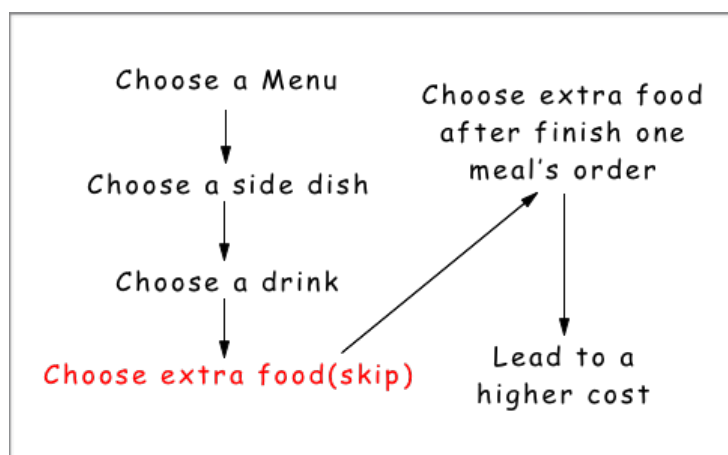
1. The user didn't notice the 'Change Language' button and enter directly into the system in Swedish. Finally go back to change the language.



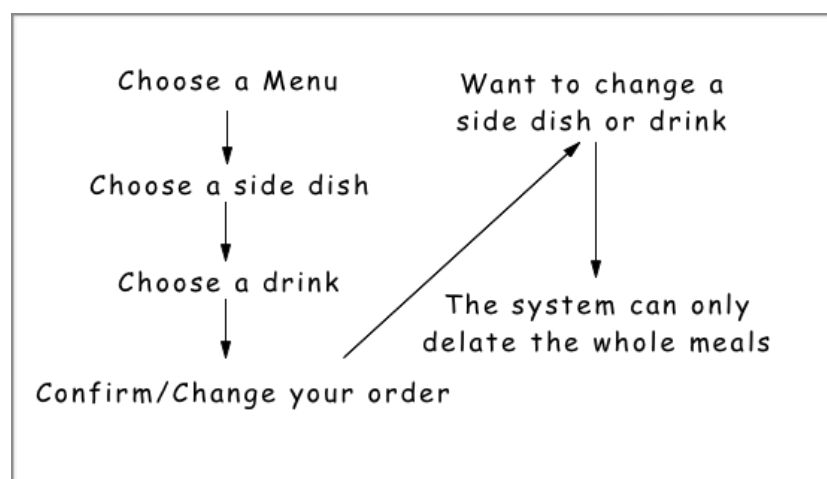
2. The user didn't notice the 'Change Language' button and enter directly into the system in Swedish and didn't know how to change language. He then can just go through the system with the picture and guess by limited information.



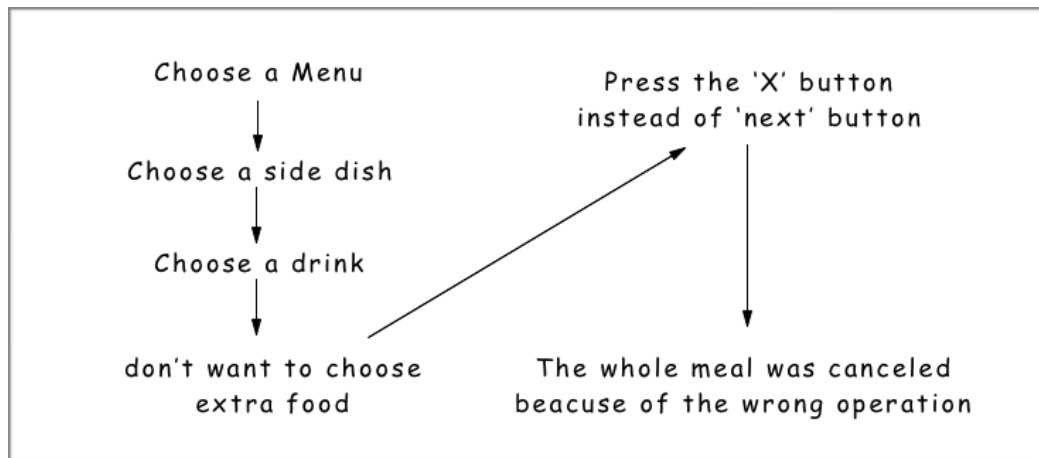
3. The user didn't choose a extra food for the meal he just ordered, but choose a food which was also on the list of extra food in main menu after finished the order of the meal. This will lead to a higher cost of money at last.



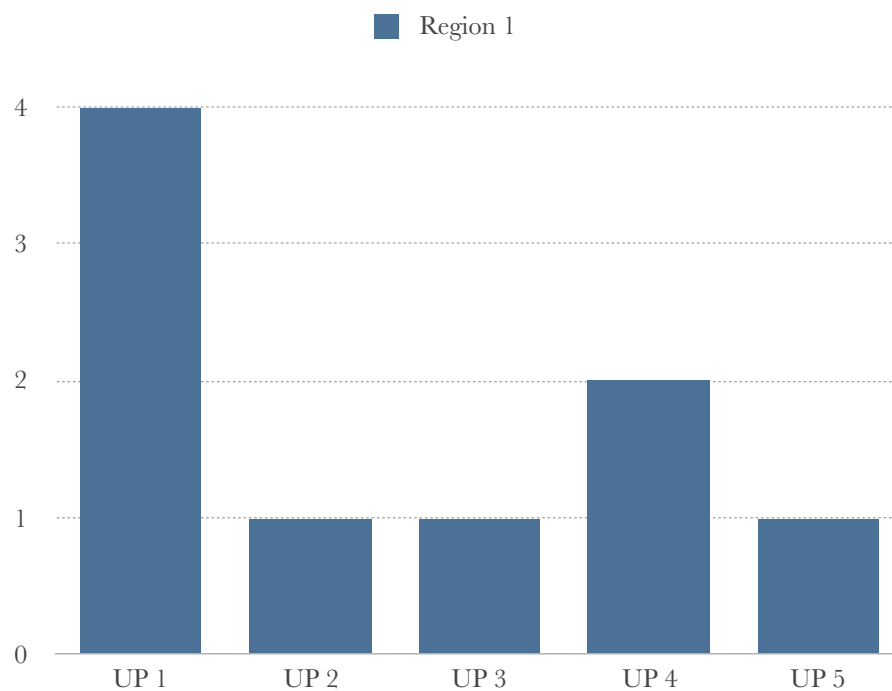
4. The user want to change the drink or side dish in the meal he just ordered, he then press the change button on the right side, but he find that it is only possible for him to delate the meal he ordered.



5. The user don't want to choose extra food for his meal. However, he press the 'X' button on the top instead of the 'Next' button. This lead to a terrible result that he canceled his meal accidentally.



The portion of different usage patterns in the observation of my research.



Note that some users have several usage patterns in his operation, especially for those who have never used this kind of system, for example, most of my friends.

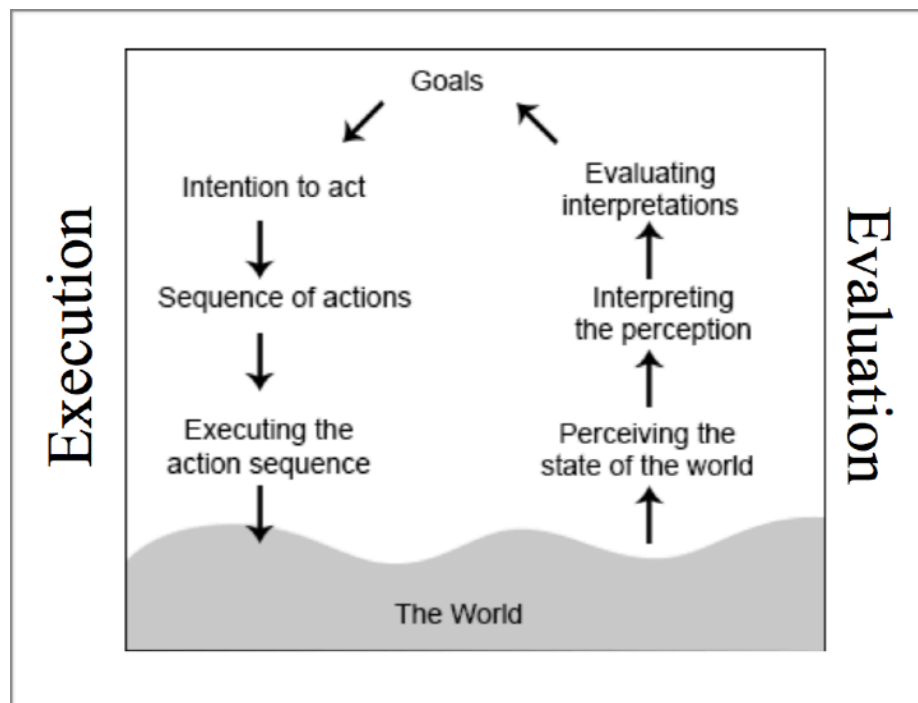
The result is that only 1 of my friends did the standard usage. So it is not hard to estimate that for the first time user, there are more than 80% of them will deviate from the standard usage by misunderstanding or wrong operation which will be discussed later. For the common user like those who have eaten in MAX many times before and understand Swedish

well, it is not hard to finish the standard usage and only one of them have UP 4. So it seems that this system is not so friendly for the foreign users and non-experience users.

## Analysis:

From the results of my observations, we can easily get the problems happened when the customers use the system. Now it's time to figure out what are the reason of these problems, in other words, what cause the users deviating from the standard usage.

In order to deeply understand the problems in these usage patterns, I will introduce the Norman's Seven Stages of Action. This graph will help us better explain how and where the problem happens, and also can make us find the solution easily.



Usage Pattern 1 is an incident that belong generally more to the gulf of execution. It caused by the user executing the wrong action sequence('skip the change language'). However, this also have some relation with the evaluation part, while the user ignore the 'Change Language' button because it is not obvious.

Usage Pattern 2 is just same as Usage pattern 1. It also caused by the user ignore the button and lead to the wrong sequence of actions.

Usage Pattern 3 is totally belong to the gulf of execution. Maybe the user change his mind after ordered one meal and decided to add something more, or maybe he just think he

should add an extra food after finished one thing and arrange this wrong action sequence. Unfortunately, this makes him spent some unnecessary money.

Usage Pattern 4 is an incident that belong generally more to the gulf of evaluation. The user misunderstand the button because of the name of the button can not precisely describe the true function of it, which makes the user unable to reach his goal.

Usage Pattern 5 has relation with both the gulf of evaluation and execution. The user firstly misunderstand the button 'X' and 'Next', so that he make a wrong action which lead to a bad result and makes him restart the whole process. In my opinion, this problem will belong more to the gulf of evaluation.

## Discussion:

Through this field study which include the observation and the analysis of the result, I have learned so much tips in designing a system. According to the usage patterns found in the observation, I conclude some solutions to fix these problems and let users avoid those incidents. For example, change the button name to make it better explain the function, add some tips on the screen to make the user understand the standard usage better and remove some unnecessary button in case of some wrong operation caused by misunderstanding.

Generally speaking, the ordering system in MAX is a good example, even if it has some shortcomings according to my observation. The UI is user-friendly, and even you can not understand Swedish, you can still finish the whole process with the help of pictures. The operation is not hard for a child or old man, and easy to get familiar with it after a few times trying. The layout is excellent, it fully used almost every space of the screen, and try to give your as much as information in one page. These are some good point that could also used in the design of my own system.

However, based on the observation and analysis, I can still do some improvement on my system, like marking the 'Change Language' button more obvious, so that the foreign user could easily find it and avoid the chaos in the sequence of actions which happened in the observation. Second, we could introduce a starter mode into our system, when the user is first using the system he can choose to enter this mode, the system will helps him finish the order step by step. After that the user can remember the correct standard usage and will avoid most of the wrong operation. A well beginning is half done.

## Reference:

1. *"The Design of Everyday Things"*. By Norman, Donald A
2. *"About Face: The Essentials of Interaction Design, 4th Edition"*. By Christopher Noessel,  
Alan Cooper, Robert Reimann, David Cronin