

Appendix 1

Stage 2: Evaluation of Usability

The assessment of usability will be based on ISO-standards described below and the maximum achieved points is 525.

Usability is defined as "the extent to which a specified user can use a product to achieve specified goals with effectiveness, efficiency and satisfaction, in a given context of use" (ISO 9241-11 Guidelines for usability).

The evaluation of usability of the system will cover the following roles of Users (test subjects):

- Teacher
- Course Administrator
- Course Assistant
- Student

KTH's evaluation of usability delivered by a service is divided in three different areas using three different methods described below.

Area I: Usability test (refer to ISO 9241-11)

- A. Usability effectiveness - maximum 260 points
- B. Usability efficiency - maximum 80 points

In the *usability test*, a representative number of users use the service (perform a number of different scenarios representative for the user's work situation) under as realistic conditions as possible. The fulfillment of effectiveness and efficiency are separately valued as follows:

- Applies a solution that optimally supports the user's use of the LMS, i.e. that contains no lack of importance for usability – 100 % of the maximum points above
- Applies a solution in a good way and endorses usage of the LMS, i.e. that has a useful function, but which in some respects can be improved – 60 % of the maximum points above
- Applies a solution that supports the user's use of the LMS, but which in many respects can be improved – 20 % of the maximum points above

Note: if the user can't complete a scenario, the result is set to 0%.

Area II: System Usability Scale (SUS) (refer to ISO 9241-11)

Usability satisfaction - maximum 45 points

In connection to the usability test, the users will answer the questionnaire *System Usability Scale (SUS)*¹ individually. The fulfillment of satisfaction is valued² as follows:

Comment [F1]:

Detta dokument är ett appendix till FFU.

Delar av dokumentet är kopierat från dokumentet "Description of Usability evaluation at KTH LMS_master"

Syftet med dokumentet är att informera om:

- Att utvärderingen bygger på ISO-standarder
- Att den är indelad i tre områden
- För varje område kort beskriva:
 - vad man utvärderar,
 - hur man utvärderar,
 - hur man fördelar poäng
 - Hur poängen ska tolkas

¹ Brooke, John. SUS - A quick and dirty usability scale (1986)

² Bangor, Aaron, Kortum, Philip & Miller, James. Determining What Individual SUS Scores Mean: Adding an Adjective Rating Scale, Journal of Usability Studies, Vol. 4, Issue 3, May 2009, pp. 114-123

- The service applies a solution with the best imaginable user experience, i.e. that contains no lack of importance for usability – 100 % of the maximum points above
- The service applies a solution with good user experience, i.e. which in some respects can be improved - 70 % of the maximum points above
- The service applies a solution with poor user experience, i.e. which in many respects can be improved – 40 % of the maximum points above

Area III: Expert evaluation (refer to ISO 9241-110³)
 Fulfillment of dialog principles– maximum 140 points

An *expert evaluation* of the service is to be performed on the basis of the dialogue principles of ISO 9241-110. The fulfilment of dialog principles is valued as follows:

- Applies a solution that optimally supports the user's use of the LMS, i.e. that contains no lack of importance for usability – 100 % of the maximum points above
- Applies a solution in a good way and endorses usage of the LMS, i.e. that has a useful function, but which in some respects can be improved – 60 % of the maximum points above
- Applies a solution that supports the user's use of the LMS, but which in many respects can be improved – 20 % of the maximum points above

³ SS-EN ISO 9241-110:2006