

Instructions for the evaluation of project reports, student research projects, and bachelor's theses

Principle

The evaluation of project reports, student research projects, and bachelor's theses is done in two steps:

1. Step: Schematic Evaluation

(Excel-File: 2012_evaluation_project_studies_bachelor.xls)

2. Step: Explanation of the Evaluation, Review

(Word-File: 2012_evaluation_text-project_studies_bachelor.doc)

These two steps are to be carried out with the forms provided. They are, in any case, to be documented in such a way that an external person or a student can reconstruct the grading using these criteria.

Utilization of a PC is helpful, in particular with the schematic evaluation for determining the recommended grade using the evaluation score.

These instructions help the reviewer in developing the content of these two review steps as well as in using the tools on the PC.

Schematic Evaluation

The schematic evaluation is divided into two areas, each of which is evaluated by the reviewer with a score in several criteria.

Area	Criteria	Weighting
Content development	Technical development Use of technical knowledge Application of methods and tools Practicability of results Creativity Economical evaluation	55%
Problem-oriented exposition	Independence, initiative Systematic approach Documentation Literature research	45%

For each of the criteria there are five verbal performance levels (failed, sufficient, satisfactory, good, very good), that help the reviewer to assign an adequate score for each criterion.

The following aspects need to be considered in the evaluation of the specific criteria:

Content Development	
Technical development	How was the topic treated (empirically/theoretically/reporting, comparing, evaluating (literature study)/own investigations, experimental inquiry)? Are results or partial results, in relation to the problem, reached? Is it, if applicable, shown that the problem is not solvable? Do the results of the work lead to a clear statement? Are these justified, evaluated and critically reflected? Are alternatives shown? Are different solution approaches analyzed? Is the choice of the solution approach justified? How far has the state of technology and knowledge been elaborated? Have additional aspects been worked on?
Use of technical knowledge	What technical knowledge does the author show in developing a solution approach? Was theoretical knowledge from his/her studies and from literature implemented or applied in practice? How broadly varied are the solution approaches presented? How technically substantiated is the solution?
Application of methods and tools	Are engineering methods and tools for problem analysis and for finding a solution consciously chosen, and are they adequately applied, as applicable? Are the methods and tools utilized in a systematic and valid manner?
Practicability of result	Can the results be implemented or have the results been implemented in practice? Are the positive and negative effects of the results described and evaluated? Are difficulties in the implementation mentioned and approaches to a solution presented?
Creativity	Are we looking, in general or in their particular combination, at new results? Are these sufficiently justified, proven, reliably determined? Have individual solution strategies been developed? What is the degree of originality of the solutions proposed? Have unusual solution approaches been presented? How are known solutions transferred to new situations?
Economical evaluation	Is the student able to illustrate the economical benefit of his/her work? Are proposed solutions and alternatives not only analyzed and evaluated technically but also economically? What are the non-financial benefits of their work?

	Fortsetzung
Scientific Work	
Independence, Initiative	Are own solutions or solution strategies found? Are own decisions made? Is information acquired independently? Are own suggestions made for the approach? Does the student identify with the tasks? Can an interest in the work be detected?
Systematic approach	Are methods applied systematically? Are priorities applied reasonably? Is there a focus on the essential? Are thoughts consistently followed and elaborated? Does a clear structure of the content of the report emerge? Is the task approached in a structured way (set goals, plan, do, check)?
Documentation	Is the outline logical and well-balanced? Is the development of thought clear and reasonably structured? Are the texts concise, precise and comprehensible? Is there a short, to-the-point and comprehensible summary of the report that is limited to the essential? Is the comprehensibility supported by illustrative examples, figures, graphics and tables? Is the terminology technically correct? Is the written expression adequate/colloquial/artificial? Are sentence structure, orthography and punctuation correct? Are company specific terms and terms outside of the subject area explained?
Literature research	Are all relevant and current sources included in the literature used? How comprehensively was the literature researched? Are partial problems / aspects of the problem also probed by a deep literature search? Are all sources used in the text cited completely and correctly in the bibliography ?
Use of literature	Were the citations quoted exhaustively discussed and critically thought through? How completely were the sources evaluated and processed? Were statements supported and further developed by literature cited?

The weighting of the areas is preserved even when the weighting of the criteria is changed, by a change in the maximal score.

For the criteria there is a standard distribution of the maximal scores (recommended maximal score) that can be changed by the reviewer in case there are good reasons for this. Depending on the character of a report it may be sensible that certain criteria deserve a lower weighting or are completely omitted. In such cases the reasons for changing the maximal scores need to be specifically explained in the review.

Using the spreadsheet is easy:

1. If needed: Setting the maximal scores per criterion by overwriting the default value of the second to the last column.
2. Evaluation of the criteria by entering the scores per criterion in the last column.
3. Recommended grade is calculated and shown.

The result of the schematic evaluation is a recommended grade that serves as a basis for the grades. In the explanation of the review, however, specific circumstances can be illustrated that necessitate a grade different from the recommended one.

Explanation of the evaluation, review

The review is aligned with the structure of the schematic evaluation. For each area, the performance of the student is explained in two or three sentences. In doing so, if possible, key passages of the report should directly be pointed to.

Furthermore, if applicable, in the report reasons have to be explained for deviating from the standard distribution of maximal scores.

In conclusion, if applicable, in the review an explanation should be given why the final grade deviates from the recommended grade of the schematic evaluation.

Using the tools on the PC

Using the schematic evaluation

The schematic evaluation is presented in the form of a spreadsheet. A reviewer gets this file from the student, the **department head**, or as a download from the DHBW internet pages.

Certain cells in this spreadsheet are colored. The specific colors mean the following:

light yellow	optional input field
light green	mandatory input field
blue	field has to be explained in the evaluation
red	error, not a consistent evaluation
magenta	recommended grade worse than 4.0 !

1. Determining the maximal score per criterion

The weighting of individual criteria can be changed by overwriting the maximal scores in the column "maximal score for this report" (background color changes to blue). In order to preserve the relative weighting of the three areas, the scores might be recalculated according to the modified weighting.

Changes of the maximal scores need to be justified in the explanations of the evaluation.

2. Evaluation of individual criteria

For each relevant criterion the reviewer needs to assign a score between "0" [Zero] and the maximal score. For this, the written explanations of the five performance levels per criterion should be used as a reference. (The scores shown in the explanations change in case of a change of the maximal score.)

Based on the scores assigned and on the relative weighting, a score for the evaluation is calculated that results in a recommended grade.

If the background of a cell in the table turns red upon entering a score, a higher score was assigned than defined in the column maximal score.

The spreadsheet functions are protected to make the application as easy to use as possible. You will receive the file as ExcelXP (.xlt). Please open the file by double clicking or via the command NEU, so that you will not change the template.

3. Using the explanation of the evaluation

The schematic evaluation of a project report, a student research project, or bachelor's thesis is only the first step of a review. In the second step, the schematic evaluation needs to be complemented by a written review in the form of an explanation of the evaluation!

To this end, for each criterion of the schematic evaluation, the assigned score needs to be explained in two or three sentences. In doing this, if possible, refer to concrete paragraphs in the report that are critical for the evaluation.

If certain criteria are not used for the report or if there is a deviation from the recommended weighting, please explain.

If due to special circumstances your final grade deviates from the grade recommended by the spreadsheet, please explain which further criteria are decisive for this, or which special properties of the report have to be considered.

4. Miscellaneous

- Each reviewer needs to turn in a print-out of both parts of the evaluation at the DHBW (three pages – the print area is preset), where the final grade should be entered handwritten on the explanation of the evaluation, together with the signature.
- For second reviewers, the criteria “creativity” and “independence, initiative” are often difficult to judge on. For this reason, they can be omitted from the evaluation.
- Second reviewers are advised to visit the training place at least twice, in order to be able to get a valid picture of the circumstances around the work from conversations with the student and his/her adviser. In doing this, a visit around two weeks after starting the work and another visit close to the end of the work have proven effective.
- If, for a very application-oriented or very special topic, little literature can be found that is directly relevant, the corresponding basic literature needs to be especially thoroughly reviewed. A sound literature research is necessary for a qualified bachelor's thesis in this case as well.