How to use the Rubric for the BSc thesis (YAS-80312) assessment form

In the assessment form the student is evaluated on 3 main categories: Research competence, BSc Thesis report, and Colloquium and defence of thesis. The corresponding rubric is used as a tool to determine the appropriate mark for each criterion of the main category.

For supervisors/examiners: Please keep in mind that the difference between a BSc and MSc thesis is that a BSc thesis is more intensively supervised, has a smaller size (12 ECTS) and is a less complex project than a MSc thesis (in most programmes 30-36 ECTS).

In the rubric, which has the form of a table, each line discusses one criterion for assessment, each column gives a level for the grading, and each cell contains the descriptor of the level for that criterion. The criteria in the rubric follow the order of the criteria in the assessment form for the BSc thesis of the BAS bachelor programme of Wageningen University. The main intention of using a rubric is to enhance the homogeneity of assessments and the ability to communicate about assessments both with students and with colleagues. Furthermore, it clarifies to students the expectations of the supervisor and helps the supervisor to structure feedback during the process of thesis research. However, it should be noted that even with the use of a rubric some arbitrariness will remain. In a few cases the criteria were split into two or more parts because the description of the criteria clearly covered different subjects. The mark for the criterion should in such a case consist of the average mark for the different subjects or if one criterion is far more important for that particular thesis, that criterion should be weighted more. When determining the mark of a certain criterion, always start at the lowest level and test if the student should be awarded the next higher mark. Note that in some cases achievements of a lower level are not repeated at the higher level because the lower level achievements are implicit in the higher levels. If a level has a range of marks, choose the most appropriate one (consider the description of the level of performance as a continuum, rather than a discrete description). Since the final marks of a thesis usually range between 6 and 9, individual levels have been established for the marks of 6, 7 and 8. When performance is at the 9-10 level, it is necessary to decide whether the student is on the low edge (9) or high edge (10) of this level. Descriptions at the 9-10 level tend to describe the ultimate performance (10). Hence, if a student performs well above 8, but below the description at the 9-10 level, a 9 would be the appropriate mark. Keep in mind that each line in the rubric should be read independently: it could be that a student scores a 1-3 on one criterion and a 9-10 on another. The final mark of the thesis is determined using the BSc-thesis assessment form (version August 2020). The main categories: Research competence, BSc Thesis report, and Colloquium and Defence should have an assessment of 'sufficient' (≥5.5) before the total thesis work can be considered as sufficient. So, no compensation between main categories is possible to obtain a final mark of 5.5.

Rubric for assessment form of BSc Thesis Animal Sciences (YAS-80312)

Item	Mark for item					
	1-3	**4-5**	**6**	**7**	**8**	**9-10**
Research competence						
1. Commitment and perseverance	Student is not motivated. Student escapes work and gives up regularly.	Student has little motivation. Tends to be distracted easily. Has given up once or twice.	Student is motivated at times, but often sees the work as a compulsory task. Is distracted from thesis work now and then.	The student is motivated. Overcomes an occasional setback with help of the supervisor	The student is motivated and/or overcomes an occasional setback on his own and considers the work as his "own" project.	The student is very motivated, goes at length to get the most out of the project. Takes complete control of his own project. Considers setbacks a an extra motivation.
2. Initiative and creativity	Student shows no initiative or new ideas at all.	Student picks up some initiatives and/or new ideas suggested by others (e.g. supervisor), but the selection is not motivated.	Student shows some initiative and/or together with the supervisor develops one or two new ideas on minor parts of the research.	Student initiates discussions on new ideas with supervisor and develops one or two own ideas on minor parts of the research.	Student has his own creative ideas on hypothesis formulation, design or data processing.	Innovative research methods and/or dataanalysis methods developed. Possibly the scientific problem has been formulated by the student.
3. Independence	The student can only perform the project properly after repeated detailed instructions and with direct help from the supervisor.	The student needs frequent instructions and well-defined tasks from the supervisor and the supervisor needs careful checks to see if all tasks have been performed.	The supervisor is the main responsible for setting out the tasks, but the student is able to perform them mostly independently.	Student selects and plans the tasks together with the supervisor and performs these tasks on his own.	Student plans and performs tasks mostly independently, asks for help from the supervisor when needed.	Student plans and performs tasks independently and organizes his sources of help independently.
4. Managing own research & and development of research skills	No critical self-reflection at all.	Very limited self-reflection.	Student is able to reflect on his functioning with the help of the supervisor only.	The student occasionally shows critical self-reflection.	Student actively performs critical self-reflection on some aspects of his functioning.	Student actively performs critical self-reflection on various aspects of his own functioning and performance.
	Knowledge and insight of the student (in relation to the prerequisites) is insufficient and the student is not able to take appropriate action to remedy this.	There is some progress in the research skills of the student, but suggestions of the supervisor are also ignored occasionally.	The student is able to adopt some skills as they are presented during supervision.	The student is able to adopt skills as they are presented during supervision and develops some skills independently as well.	The student is able to adopt new skills mostly independently, and asks for assistance from the supervisor if needed.	The student has knowledge and insight on a scientific level, i.e. he explores solutions on his own, increases skills and knowledge where necessary.
5. Handling supervisor's comments	Student does not pick up suggestions and ideas of the supervisor.	The supervisor needs to act as an instructor and/or supervisor needs to suggest solutions for problems.	Student incorporates some of the comments of the supervisor, but ignores others without arguments.	Student incorporates most or all of the supervisor's comments.	Supervisor's comments are weighed by the student and asked for when needed.	Supervisor's comments are critically weighed by the student and asked for when needed, also from other staff members or students.

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6. Efficiency in working with literature/data/experimental work	Student is not able to setup and/or execute a literature study. Student is lost when using data. Is not able to use a spreadsheet program or any other appropriate data-processing program.	Student is able to execute detailed instructions to some extent, but errors are made often. Student is able to organize the data/literature, but is not able to perform checks and/or simple analyses.	Student is able to execute a study but without critical assessment of sources of error and uncertainty. Student is able to organize data/literature and perform some simple checks; but the way the data are used does not clearly contribute to answering of the research questions and/or he is unable to analyse the data independently.	Student is able to execute the study, and takes sources of error and uncertainty into account in a qualitative sense. Student is able to organize the data/literature, perform some basic checks and perform basic analyses that contribute to the research question.	Student is able to judge and perform the study and to include modifications if needed. Takes into account sources of error and uncertainty quantitatively. Student is able to organize the data/literature, perform commonly used checks and perform some advanced analyses on the data.	Student is able to setup or modify the study exactly tailored to answering the research questions. Quantitative consideration of sources of error and uncertainty. Execution of the study is flawless. Student is able to organize the data/literature, perform thorough checks and perform advanced and original analyses on the data.
7.Time management	Final version of thesis more than 50% of the nominal period overdue without a valid reason (force majeure)	Final version of thesis at most 50% of the nominal period overdue (without a valid reason).	Final version of thesis at most 25% of nominal period overdue (without valid reason).	Final version of thesis most 10% of nominal period overdue (without valid reasons).	Final version of thesis at most 5% of nominal period overdue (without good reasons).	Final version of thesis finished within planned period (or overdue but with good reason).
	No time schedule made.	No realistic time schedule.	Mostly realistic time schedule, but no timely adjustment of time schedule.	Realistic time schedule, with some adjustments (but not enough or not all in time) in times only	Realistic time schedule, with timely adjustments. of times only.	Realistic time schedule, with timely adjustments of both time and tasks.
BSc Thesis report						
1 .Problem analysis, clearness goals, delineation research	No link is made to existing research on the topic. No research context is described.	The context of the topic at hand is described in broad terms but there is no link between what is known and what will be researched.	The link between the thesis research and existing research does not go beyond the information provided by the supervisor	Context of the research is defined well, with input from the student. There is a link between the context and research questions.	Context of the research is defined sharply and to-thepoint. Research questions emerge directly from the described context.	Thesis research is positioned sharply in the relevant scientific field. Novelty and innovation of the research are indicated.
	There is no researchable research question and the delineation of the research is absent.	Most research questions are unclear, or not researchable and the delineation of the research is weak.	At least either the research questions or the delineation of the research are clear.	The research questions and the delineation are mostly clear but could have been defined sharper at some points.	The research questions are clear and researchable and the delineation is clear.	The research questions are clear and formulated to-thepoint and limits of the research are well-defined.

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2. Theoretical underpinning of goals, use of literature	No discussion of underlying theory.	There is some discussion of underlying theory, but the description shows serious errors.	The relevant theory is used, but the description has not been tailored to the research at hand or shows occasional errors.	The relevant theory is used, and the description has been tailored partially successful to the research at hand. Few errors occur.	The relevant theory is used, it is nicely synthesized, and it is successfully tailored to the research at hand.	Clear, complete and coherent overview of relevant theory on the level of an up-to-date review paper. Exactly tailored to the research at hand.
	No peer-reviewed/primary scientific papers in reference list except for those already suggested by the supervisor.	Only a couple of peer-reviewed papers in reference list.	Some peer-reviewed papers in reference list but also a significant body of grey literature.	Relevant peer-reviewed papers in reference list but also some grey literature or text books. Some included references less relevant.	Mostly peer-reviewed papers or specialized monographs in reference list. An occasional reference may be less relevant.	Almost exclusively peer-reviewed papers in reference list or specialized monographs (not text books). All papers included are relevant.
3. Critical reflection on the research performed (discussion)	No discussion and/or reflection on the research. Discussion only touches trivial or very general points of criticism.	Only some possible weaknesses and/or weaknesses which are in reality irrelevant or nonexistent have been identified.	Most weaknesses in the research are indicated, but impacts on the main results are not weighed relative to each other.	Most weaknesses in the research are indicated and impacts on the main results are weighed relative to each other.	All weaknesses in the research are indicated and weighed relative to each other. Furthermore, (better) alternatives for the methods used are indicated.	Not only all possible weaknesses in the research are indicated, but also it is indicated which weaknesses affect the conclusions most.
4. Adequate conclusions and recommendations	No link between research questions, results and conclusions.	Conclusions are drawn, but in many cases these are only partial answers to the research question. Conclusions merely repeat results.	Conclusions are linked to the research questions, but not all questions are addressed. Some conclusions are not substantiated by results or merely repeat results.	Most conclusions well-linked to research questions and substantiated by results. Conclusions are mostly formulated clearly but with some vagueness in wording.	Clear link between research questions and conclusions. All conclusions substantiated by results. Conclusions are formulated exact.	Clear link between research questions and conclusions. Conclusions substantiated by results. Conclusions are formulated exact and concise. Conclusions are grouped/ordered in a logical way.
	No recommendations given.	Recommendations are absent or trivial.	Some recommendations are given, but the link of those to the conclusions is not always clear.	Recommendations are well-linked to the conclusions.	Recommendations are to-the-point, well-linked to the conclusions and original.	Recommendations are to-the-point, well-linked to the conclusions, original and are extensive enough to serve as project description for a new thesis project.

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5. Length and clarity of reporting (structure text, processing information, writing skills)	Thesis is badly structured. In many cases information appears in wrong locations. Level of detail is inappropriate throughout.	Main structure incorrect in some places, and placement of material in different chapters illogical in many places. Level of detail varies widely (information missing, or irrelevant information given).	Main structure is correct, but lower level hierarchy of sections is not logical in places. Some sections have overlapping functions leading to ambiguity in placement of information. Level of detail varies widely (information missing, or irrelevant information given).	Main structure correct, but placement of material in different chapters illogical in places. Level of detail inappropriate in a number of places (irrelevant information given).	Most sections have a clear and unique function. Hierarchy of sections is mostly correct. Ordering of sections is mostly logical. All information occurs at the correct place, with few exceptions. In most places level of detail is appropriate.	Well-structured: each section has a clear and unique function. Hierarchy of sections is correct. Ordering of sections is logical. All information occurs at the correct place. Level of detail is appropriate throughout.
	Most paragraphs do not have one specific topic or the order of paragraphs is not logical. Transitions between paragraphs are not clear or illogical. Some paragraphs are redundant.	Not all paragraphs have one specific topic or the order of paragraphs is not always logical. Transitions between paragraphs are not clear, or some paragraphs are redundant.	Most paragraphs have one specific topic, and the order of paragraphs within a chapter or section is often logical. Transitions are not always clear, or some paragraphs are redundant.	Paragraphs have a topic sentence and contain only information related to that topic. The order of paragraphs is mostly logical. Student sometimes uses transition words and sentences to enhance coherence between paragraphs.	Paragraphs have a topic sentence and contain only information related to that topic. The order of paragraphs is logical. Student often uses transition words and sentences to enhance coherence between paragraphs.	Each paragraph fulfils a specific function. Paragraphs are presented in a logical order, with clear and appropriate transitions between paragraphs.
	Title and/or abstract are missing or do not represent the contents. Abstract is not clear without reading the rest of the document, and important information is missing. Irrelevant information is included in the abstract.	Title and/or abstract do not fully represent the contents. Abstract is not clear and some relevant information is missing.	Title and abstract represent the contents of the thesis. Some information is missing or should not have been included, but the abstract is somewhat clear.	Title captures the contents but could be more concise. Abstract is quite clear. There is some information missing, but the most important information is included. Abstract could be more concise.	Title is concise and captures the contents. Abstract is quite clear and concise. Some information is missing or should not have been included, but the most important information is included.	Title is concise and captures the contents. Abstract is clear, complete, and concise.
	Formulations in the text are often incorrect/inexact inhibiting a correct interpretation of the text.	Vagueness and/or inexactness in wording occur regularly and it affects the interpretation of the text.	The text is ambiguous in some places but this does not always inhibit a correct interpretation of the text.	Formulations in text are predominantly clear and exact. Thesis could have been written more concisely.	Formulations in text are clear and exact, as well as concise.	Textual quality of thesis (or manuscript in the form of a journal paper) is such that it could be acceptable for a peer-reviewed journal.

Rubric for assessment form of BSc Thesis Animal Sciences (YAS-80312)

Item	Mark for item					
	1-3	4-5	6	7	8	9-10
	English incorrect and unreadable. Spelling and grammar errors too many to count.	English incorrect and very hard to read. Spelling and grammar errors so numerous that they make the thesis almost impossible to understand.	English somehow correct but not pleasant to read. Spelling and grammar errors numerous.	English basically correct and readable. Spelling and grammar errors present but at acceptable quantities.	English correct and pleasant to read. Some spelling and grammar errors.	English fluent and pleasant to read. Few spelling and grammar errors. English is (almost) at the level of what is written in peer-reviewed journals.
6. Reporting conventions (figures, tables, references etc.)	Inappropriate use of tables and figures (irrelevant information presented in tables or figures, relevant information not presented, or table/figure type is not optimal for the information that is presented); or tables and figures are not clear. Titles/legends, footnotes, headings and descriptions are missing or inaccurate. Not self-explanatory	Some inappropriate use of tables and figures, or some tables and figures are not clear. Titles/legends are incomplete, unclear, or in the wrong location. Footnotes are missing or inaccurate. Tables and figures are too large or too small. Tables and figures are not numbered and are not described in the text; or the contents of tables and figures is repeated in the main text. Lacking some headings, unclear/wrong axes, legend missing/very unclear, irrelevant type of figure, not self-explanatory.	Mainly appropriate use of tables and figures and most tables are clear. Most titles/legends are accurate and in the correct location (above a table, below a figure). Footnotes are sometimes incomplete. Tables and figures occupying more than one printed page are avoided if possible. Hard to read without explanation.	Mostly appropriate use of tables and figures and most tables and figures are clear. Most titles/legends, footnotes, and descriptions are clear and in the correct location. Tables and figures occupying more than one printed page are avoided if possible. Tables and figures are correctly numbered and are mentioned in the text. Not completely self-explanatory.	Generally appropriate use of tables and figures, and most tables and figures are clear. Most titles/legends are accurate, clear, concise, and in the correct location. Citations are indicated using the same style as in the rest of the article. Tables and figures occupying more than one printed page are avoided if possible. Tables and figures are correctly numbered and are mentioned in the text. Completely self-explanatory.	Appropriate use of tables and figures, and tables and figures are clear. Titles/legends are accurate, clear, concise, and in the correct location. Citations are indicated using the same style as in the rest of the article. Tables and figures occupying more than one printed page are avoided if possible. Tables and figures are correctly numbered and are mentioned in the text.
	Student is often inconsequent in reference format in text and/or reference list. Student does not know when to cite and when not to cite; often references are lacking. Many references in text are not mentioned in the list, or vice versa.	Student is often inconsequent in reference format in text and/or reference list. Student does not know when to cite and when not to cite; sometimes references are lacking. Some references in text are not mentioned in the list, or vice versa.	Student is sometimes inconsequent in reference format in text and/or reference list; or sometimes references are lacking. There is almost total agreement between references in text and list.	Student is sometimes inconsequent in reference format in the text and/or reference list. There are no references lacking, but sometimes the student cites information that should not be cited. There is almost total agreement between references in text and list.	Student uses one format for references in the text and reference list, with very few errors. There is total agreement between references in text and list.	Student uses one format for references in the text and reference list. There is total agreement between references in text and list.

Rubric for assessment form of BSc Thesis Animal Sciences (YAS-80312)

Item	Mark for item					
	1-3	**4-5**	**6**	**7**	**8**	**9-10**
	No peer-reviewed/primary scientific papers in reference list except for those already suggested by the supervisor.	Only a couple of peer-reviewed papers in reference list.	Some peer-reviewed papers in reference list but also a significant body of gray literature.	Relevant peer-reviewed papers in reference list but also some gray literature or text books. Some included references less relevant.	Mostly peer-reviewed papers or specialized monographs in reference list. An occasional reference may be less relevant.	Almost exclusively peer-reviewed papers in reference list or specialized monographs All papers included are relevant.
Colloquium and Defence of thesis						
1. Graphical presentation	Presentation has no structure.	Presentation has unclear structure.	Presentation is structured, though the audience gets lost in some places.	Presentation has a clear structure with only few exceptions.	Presentation has a clear structure. Mostly a good separation between the main message and sidesteps.	Presentation clearly structured, concise and tothe-point. Good separation between the main message and side-steps.
	Unclear lay-out. Unbalanced use of text, graphs, tables or graphics throughout. Too small font size, too many or too few slides.	Lay-out in many places insufficient: too much text and too few graphics (or graphs, tables) or vice versa.	Quality of the layout of the slides is mixed. Inappropriate use of text, tables, graphs and graphics in some places.	Lay-out is mostly clear, with unbalanced use of text, tables, graphs and graphics in few places only	Lay-out is clear. Appropriate use of text, tables, graphs and graphics.	Lay-out is functional and clear. Clever use of graphs and graphics.
2. Verbal presentation	Spoken in such a way that majority of audience could not follow the presentation.	Presentation is uninspired and/or monotonous and/or student reads from slides: attention of audience not captured.	Quality of presentation is mixed: sometimes clear, sometimes hard to follow.	Mostly clearly spoken. Perhaps monotonous in some places.	Clearly spoken.	Relaxed and lively though concentrated presentation. Clearly spoken.
	Level of audience not taken into consideration at all.	Level of audience hardly taken into consideration.	Presentation not at appropriate level of audience.	Level of presentation mostly targeted at audience.	Level of presentation welltargeted at audience. Student is able to adjust to some extent to signals from audience that certain parts are not understood.	Clear take-home message. Level well-targeted at audience. Student is able to adjust to signals from audience that certain parts are not understood.
	Bad timing (way too short or too long).	Timing not well kept (at most 30% deviation from planned time).	Timing not well kept (at most 20% deviation from planned time).	Timing is OK (at most 10% deviation from planned time).	Timing is OK (at most 5% of deviation from planned time).	Presentation finished well in time.

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3. Handling of questions at colloquium	Student is not able to answer questions.	Student is able to answer only the simplest questions	Student answers at least half of the questions appropriately.	Student is able to answer nearly all questions in an appropriate way.	Student is able to answer all questions in an appropriate way, although not to-thepoint in some cases.	Student is able to give appropriate, clear and tothe-point answers to all questions.
4. Defence of the thesis and knowledge of study domain	Student is not able to defend/discuss his thesis. He does not master the contents.	The student has difficulty to explain the subject matter of the thesis.	Student is able to defend his thesis. He mostly masters the contents of what he wrote, but for a limited number of items he is not able to explain what he did, or why.	Student is able to defend his thesis. He masters the contents of what he wrote, but not beyond that. Is not able to place thesis in scientific or practical context.	Student is able to defend his thesis, including indications where the work could have been done better. Student is able to place thesis in either scientific or practical context.	Student is able to freely discuss the contents of the thesis and to place the thesis in the context of current scientific literature and practical contexts.
	Student does not master the most basic knowledge (even below the starting level for the thesis).	The student does not understand all of the subject matter discussed in the thesis.	The student understands the subject matter of the thesis on a textbook level.	The student understands the subject matter of the thesis including the literature used in the thesis.	Student is well on top of subjects discussed in thesis: not only does he understand but he is also aware of current discussions in the literature related to the thesis topic.	Student is well on top of subjects discussed in thesis: not only does he understand, but he is also aware of discussions in the literature beyond the topic (but related to) of the thesis.