Wageningen University - Department of Social Sciences

MSc Thesis Protocol

Rules and Regulations

For the
MSc Applied Communication Science (MCS)
MSc International Development Studies (MID)
MSc Development and Rural Innovation (MDR)
MSc Management, Economics and Consumer Studies (MME)
(including Health and Society)

February 2011

MSc programs

WAGENINGEN UNIVERSITY
WAGENINGEN UR

TABLE OF CONTENTS

Page

APPENDICES

The Protocol can be downloaded from:
http://www.intranet.wur.nl/NL/RESEARCH-EDUCATION/ONDERWIJS/ONDERWIJS-A-Z/Pages/SSG-onderwijs-a-z.aspx

Appendices I, IIa and IIb can be downloaded from:
the Educational Institute Reference Site.
https://portal2.wur.nl/sites/owi/diversen/owi%20reference%20site.aspx

1. Introduction

This protocol describes the rules and procedures for the thesis supervision and writing process of the different chair groups involved in the MSc programs of the Social Sciences Group of Wageningen University. The thesis evaluation form is also in use for the BSc thesis. The implementation of the rules and procedures by all chair groups contributes to the internal quality assurance system of the MSc programs involved and makes them externally accountable. The protocol applies in the first place to the major—the final thesis of the MSc programs—and will, with the exception of the admission requirements, also be used for minor theses.

The protocol is meant for students and staff. It includes information on the goal of the thesis, the role of the thesis agreement, the admission requirements, the responsibilities of the key actors, the assessment procedure, plagiarism and the submission requirements of the final thesis. The appendices contain an example of the thesis agreement, the thesis evaluation form, a rubric for assessment of the MSc thesis and a format for the cover page of the thesis.

Revised version February 2011

Wageningen University and Research Centre
Social Sciences Group
Hollandseweg 1
6706 KN Wageningen
http://www.wageningenuniversity.nl/UK/

Comments are welcome at Mieke.Peters@wur.nl

2. Goal of the thesis

The overall goal of the thesis is the development of research skills and the ability to analyze and present research results in a systematic and clear way. The thesis is the culmination of the MSc study program in which the student will have to show that he/she is able to design and conduct social science research at an academic level and is able to theoretically reflect on a particular field of research relevant to the MSc program at hand.

The thesis process, in which a student independently addresses a topic approved by the relevant chair group, is an individual learning process that can be started and finished at any time during the academic year. Upon completion of the MSc thesis, the master student will be capable of independently conducting social science research. Hence, the main responsibility for a successful thesis process rests with the student, who is expected to take an active role and to display growing independence and maturity, but has to consult regularly with the assigned supervisor regarding progress.

The writing of a thesis is a process during which the student is expected to become competent in:

- Carrying out the different phases of research in an independent manner within a previously agreed time span;
- Evaluating relevant theories and applying these theories to a relevant scientific problem;
- Applying a work ethic appropriate to the performance of scientific research, the development of scientific understanding and its application;
- Writing and editing a well-structured thesis.

The thesis process, and thus the acquisition of specific research skills, generally relates to proposal writing, data collection and data analysis and the writing of the thesis. In detail, the following aspects can be distinguished:

Proposal writing

- The selection and justification of a scientifically and, if desired, socially relevant research problem***,*** possibly but not necessarily with the potential for further research.
- The formulation of clearly defined research questions;
- The identification and selection of appropriate research methods;
- The selection and review of appropriate literature relevant to the specific research problem ('state of the art');
- The explication of the underlying theoretical assumptions of the research approach and/or the establishment of an adequate analytical or conceptual framework;
- Clear delineation of the results;
- The written presentation of a clear research proposal, including time schedule and budget/financial plan.

Data collection [1]

- The collection of data (the required information) by applying appropriate research methods and techniques;
- Interim review of the collected data.

[1] This may be empirical data collection and /or literature research.

Data analysis and the writing of the thesis

- The processing, analysis and interpretation of the collected data in relation to the theory used;
- The selection and review of additional literature as new insights emerge;
- The writing of a well-structured and scientifically sound report, the thesis.

It has to be emphasized that in reality the research phases may not be so clear-cut.
The size of the major thesis varies between 30 and 39 credits. The actual size depends on the student's study program and is agreed upon between student and study adviser.

3. Supervision and thesis agreement

The thesis process is to be supervised by a specific chair group (depending on the student's specialization and the subject) and the main supervisor will be a qualified staff member of this chair group. All scientific staff with a PhD degree or with other relevant research experience qualify for thesis supervision. A PhD student may be involved in the supervision, but not as the main supervisor. A supervisor from an external organization can not have a formal role, and can not be involved in the marking. If more supervisors and chair groups are involved each role should be explained under item 5 in the Thesis Agreement in appendix |. WUR employees outside the university section (e.g. researchers) can be regarded as supervisor like a WU lecturer.
The ultimate responsibility for supervision and examination remains with the supervising chair group expressed in the three-letter code of the thesis. The thesis coordinator of the chair group is typically involved in the selection of the thesis supervisor.

The thesis agreement formalizes the agreements made between the student and the thesis supervisor (expected date of completion, frequency of meetings, absences, co-supervision, etc.). In this sense, it is a supplement to and elaboration of the rights and obligations of the parties, based on the Higher Education and Research Act, the Education and Exam Regulations and the Student Charter. The establishment and signing of the agreement involves the student, the supervisor and the study adviser:

- Before a student can actually commence the thesis process and the thesis agreement can be prepared, the intended supervisor has to check with the study adviser whether the student has permission to start thesis writing.
- It is the student's responsibility to ensure that the study adviser receives a copy of the signed thesis agreement within one week of signing the agreement.
- Without a signed thesis agreement and a research proposal approved by the supervisor, students are not allowed to start data collection.

4. Prerequisites for admission to major thesis

With respect to the starting of the thesis, the Examining Board of the Social Sciences Group has decided that the individual student must satisfy the following requirements in order to obtain definite admission to the thesis (cf. article 4.5.3 of the Student Charter 2010/2011, p. 39):

- Successful completion of two prerequisite courses (according to the study program);
- Successful completion of the research methodology courses and other supporting courses (if included in the individual study agreement and in agreement with the study adviser);
- Satisfactory overall study progress.

The Examining Board has delegated the implementation of the admission procedures to the study advisers.

5. Responsibilities of key actors

The MSc thesis project involves several key actors. The distribution of responsibilities in this process is as follows:

- **Student's responsibilities:** The student is owner of his/her own thesis project and thus responsible for its successful completion. These responsibilities include proper planning of the thesis within his/her study program, finding a thesis topic, place for fieldwork, etc. The student is also responsible for the establishment of the thesis agreement in which, amongst others, agreements regarding the intensity and nature of supervision are specified. It is the student's responsibility to inform the supervisor and the study adviser of deviations from the agreement and of any delays in the thesis process, and for determining the consequences of any such delay (informing the sponsor of the scholarship, the student, dean, etc.). The student must submit a clean copy of the final thesis to the supervisor. A pdf-file version of the thesis should be sent to the study adviser.
  The student is responsible for filling in the electronic evaluation course form that will be sent to him/her after the thesis is finalized and the mark is given.
- **Study adviser's responsibilities:** The study adviser is responsible for monitoring the overall study progress of the individual student. The study adviser must determine whether or not the student meets the requirements for starting the writing of the master thesis under supervision and inform the thesis supervisor upon his/her request.
- **Thesis coordinator's responsibilities:** The thesis coordinator of the chair group where the student wants to do his/her thesis is responsible for finding a suitable thesis supervisor and for filing the thesis agreement, the final assessment forms and for keeping clean copies of the final thesis. The thesis coordinator can be called in to submit the assessment forms and a list with the theses titles.
- **Thesis supervisor's responsibilities**: The thesis supervisor is responsible for providing adequate supervision of the thesis for a student assigned to him or her. The (main) supervisor must be from the chair group in which the student is doing his/her thesis. In addition, another supervisor either from within the university or outside it may be involved in the supervision, but the responsibility for primary supervision rests with the main supervisor. Before accepting to supervise a student, the supervisor has to check overall study progress of the student concerned with the study adviser of the MSc program. The supervisor has to give explicit permission to the student to start the data collection (fieldwork). The supervisor determines how many copies of the thesis are required and is responsible for providing at least one copy of the final thesis *and* the completed final assessment form to the chair's thesis coordinator for filing purposes, in view of, amongst other things, the visitation and accreditation processes.

- **Examiner's responsibilities**. The head of the supervising chair group, or his/her delegate, is responsible for the final assessment of the thesis.

  An examination involves at least two persons, preferably the head of the chair group and the supervisor. A PhD student cannot be a formal examiner.
- **The chair group's responsibilities.** Since October 2009 all master theses have to be uploaded to the Wageningen UR Digital Library through the AIR (Administration Enrolment data and Results). It is up to the involved chair group and student to decide whether the thesis will be made public or not in the Digital Library. It is the chair group's responsibility to upload the thesis.

The chair group can adjust the weight (percentages) of the assessment criteria, within the indicated ranges on the excel-form. The student should be informed on this (item 9 of this agreement).

6. Stages of thesis process

The following table summarizes the different stages of the thesis process.

When?	What?	Who?	How?	Conclusion?
Proposal writing and admission to the thesis	Topic and Supervisor identification First draft research proposal	Thesis coordinator Potential supervisor Study adviser (permission) Supervisor and Student	Informal contacts Sufficient study progress Signing of the Thesis Agreement	Continue with the agreed supervisor on the identified topic
Permission to start data collection	Final research proposal	Student Supervisor	Progress meetings and approval of proposal Research proposal Presentation (seminar)	Green light for data collection or adjust proposal
Data Collection: Conducting the study (implementation phase)	Interim reports (monthly) to supervisor on progress of research	Student Supervisor	By e-mail or face-to-face progress Discussions	Continue or adjust No formal decision-making
Data analysis and thesis writing	Preliminary findings reports and provisional Table of Contents	Supervisor Student	Feedback and Progress meeting Presentation (seminar)	Continue or adjust weak/strong points
Final Assessment	Thesis	Head of chair group Examiner Supervisor(s) Student	Final assessment and defense	Grading
Submission of thesis	Upload thesis to the Wageningen UR Digital Library	Supervisor (chair group)	Upload it through the AIR and decide if the thesis should be public	Thesis available at the Wageningen UR Digital Library
Evaluation	Evaluation of the Thesis Process and its Supervision	Student supervisor/(s)	Evaluation course form (electronically)	Feedback to staff and program directors

7. Assessment procedure

Grading

The head of the supervising chair group (professor) is responsible for the examination of the thesis and is expected to conduct its final assessment together with the supervisor. The head may delegate this task to another knowledgeable staff member. In the case of co-supervision, all supervisors

should be present at the final evaluation. When the head is the supervisor, an independent examiner has to be nominated.

The final assessment, or defense, typically lasts one hour to discuss the quality of the thesis. The student is given the opportunity to answer specific questions raised by the examiner or supervisor(s) in order to show to what extent he/she masters the research topic and to what extent he/she is able to participate in academic debate.

The supervisor(s) and the examiner jointly agree on the final mark using the criteria specified below and by filling in the evaluation form contained in Appendix II. If no agreement is reached, the head casts the last vote. Appeal procedures exist via the Examination Board for all involved.

Assessment criteria

In order to make the assessment procedure as transparent and as objective as possible, an evaluation form will be used for grading. The form (see Appendix IIa and IIb) consists of two major and two minor clusters and each cluster contains a number of aspects that should be taken into account. This evaluation form that is used throughout the university also serves as a quality maintenance device to be used for external evaluation and accreditation purposes. To make grading as objective as possible an instrument called Rubric for assessment of MSc-thesis (see appendix III) has been developed for use in combination with the thesis evaluation form. Rubric defines for each item on the thesis evaluation form the requirements that belong to each possible score. Finally appendix IV contains a short manual for use of the thesis evaluation form in combination with Rubric. The general orientation of the clusters on the thesis evaluation form is as follows:

I. Research competence

This part assesses the research competences of the student. So it is an evaluation of the student as a researcher. This evaluation is based on the experience of the supervisor(s) with the student during the process of doing research and writing the thesis report. The learning process and the degree of manifested professionalism as a prospective independent researcher will be taken into consideration, just as the attitude of the student in terms of enthusiasm, commitment, effort and initiative, independency, originality and creativity.

II. The thesis report

The product of the scientific work of the student is the thesis report. This is a piece of scientific work that can be evaluated in the same way as any other written scientific work (like a journal article or a report). Based on the classical contents of a scientific report (Introduction-Materials and Methods-Results-Discussion-Conclusions) the aspects in this cluster assess the level of these different parts of the report. It is important that the person who evaluates the thesis report is not biased by positive or negative experiences with the student as the thesis report should be evaluated as a piece of work as such. This means that the examiner is the most important person to evaluate the thesis report.

III. Colloquium
During the colloquium the student presents the work to an audience consisting of fellow students and staff members. Both the quality of the slides (graphical presentation) and the verbal presentation and defense, based on critical questions from the audience, are evaluated. The colloquium is at the same time also part of the Seminar course and MDR Thesis Path: see also paragraph 8.

IV. Examination
During the examination the student has to defend the thesis against critical comments of the examiner and the supervisor(s). In defending the thesis, the student should show that he/she has knowledge of the study domain. This means that the student should not only defend what he/she did, but also why it was done in this particular way and not in another way.

Final assessment and special considerations
At the end of the defense, the final assessment is made with the help of the evaluation form contained in Appendix II. The form is an EXCEL-spreadsheet, which means that once all the aspects of each cluster have been graded, the final grade is shown at the lower part of the form. The relative weight of each cluster is up to the chair group to decide. Depending on the general character of the thesis research in a particular chair group, the chair group can give a higher or lower weight to a particular cluster (within the indicated ranges) as long as the weights sum up to 100. In Appendix II the ranges are indicated: the clusters Research competence and Thesis report have a weight between 30 and 60% each. The clusters Colloquium and Examination have a weight of 5% each.
For the final assessment, the following restrictions exist:

- For a final pass (=6) the minimum score of the first two clusters (Research competence and Thesis report) should be 5.5.
- Only one 5 is acceptable for the other two clusters (Colloquium and Examination).
- None of the clusters should be less than 5.

The meaning of the final grades is shown in the following table:

		Definition
10	**Excellent**	Outstanding performance in all respects without any errors. The highest proficiency in ability and application. The thesis is of PhD quality and has the potential of at least one publishable article. The thesis has a solid theoretical basis and contributes to the advancement of theory.
9	**Very Good**	Outstanding, exceptional and extraordinary performance with just some minor errors. Slightly less than the highest proficiency in ability and application. Superior mastery of subject matter, with evidence of independence and originality of thought. The thesis has a solid theoretical basis and contributes to the advancement of theory. The thesis may result in a publishable article.
8	**Good**	Generally sound work with a limited number of minor errors. Outstanding proficiency of research competencies and clear above-average mastery of subject matter. No major weaknesses.
7	**Satisfactory**	Thesis fair, acceptable and adequate. Acceptable mastery of research skills, but with some significant shortcomings. Satisfactory ability and achievement of a high but second order.
6	**Sufficient**	Performance meets the minimum criteria but below average. Limited mastery of subject matter.
5	**Fail**	Some more work required to be sufficient; poor but with pass potential.
<5	**Fail**	Considerable further work is required; unacceptable.

8. The major thesis, Seminar and Thesis Path

The major thesis trajectory is narrowly linked with the course 'Seminar' (YSS-30803) in the MSc Programs MID, MCS and MME (including Health and Society) and in MDR with the course 'MDR Thesis Path' (YSS-31306). These two courses basically aim at the acquisition of research-related competencies like presentation and peer review skills. By means of presenting one's own research proposal and findings and by attending and participating in the discussion on the research of other students and researchers, the academic and research competencies of the students are further developed. For more detailed information see the study guides for these courses.

9. Plagiarism

The fact that all research is directly or indirectly based on the intellectual work of others, on their theories, their models or research findings, makes scientific writing a risky process, especially in an era in which 'cut and paste' possibilities are overwhelming. Plagiarism, or using the work of someone else without acknowledging it, is considered theft of intellectual property. A charge of plagiarism can have severe consequences.

Wageningen University heavily insists on documenting sources. In order to avoid plagiarism, staff is expected to screen all writings carefully and the University has made software available for this purpose. "If a lecturer or Examiner ascertains plagiarism, he immediately informs the Examining Board as well as the student(s) involved. After providing a hearing to the student(s) involved, the Examining Board decides if fraud has actually occurred and can punish the student(s) involved by preventing them from taking the interim examination(s) or submitting the paper(s) or project(s) for up to one year." (Source: WU Student Charter 2010/2011, section 5.3.3, pp 46

Students are expected to be familiar with proper referencing techniques and to have consulted one of these sites before they start writing the thesis:

- http://www.enp.wur.nl/UK/education/Plagiarism
- http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml
- http://www.lib.monash.edu.au/tutorials/citing

An interesting book on referencing techniques is suggested by Reena Bakker-Dhaliwal who is the lecture of the MOS-module Scientific Writing (ECS 65600): Pears, Richard and Shields, Graham. *Cite Them Right: the essential referencing guide*. Durham, England: Pear Tree Books, 2009.

10. Submission requirements and procedures

A copy of the thesis must be available for each person who takes part in the final examination. The copies must be submitted to these persons at least one week before the date of the final assessment (defense). The supervisor decides how many clean copies of the final thesis the student needs to submit and has to make sure that the chair's thesis coordinator receives one clean copy of every final thesis for filing purposes. The chair's thesis coordinator is responsible for filing both the theses and the theses evaluation forms for further use.

The expenses for printing and copying of a maximum of three copies of the thesis can be submitted for reimbursement to the relevant chair group (see also article 8.4.2, page 64 of the Student Charter 2010 /2011). If the student decides to spend more than is absolutely necessary, for example to improve the appearance of the report, the student must pay these additional expenses.

The thesis is public and can be used by third parties. A study can be carried out for a third party and the results may be undisclosed and treated as confidential for a maximum period of 5 years. However a review committee must have access even to the confidential reports. This has to be specified in a special agreement (Appendix to the thesis agreement). Even if data have to be treated confidentially, the oral presentation remains mandatory. In the case of a confidential study the oral presentation can be given at the company's place (in presence of the supervisor(s)).

Since October 2009 all master theses have to be uploaded to the Wageningen UR Digital Library through the AIR (Administration Enrolment data and Results). It is up to the involved chair group and student to decide whether the thesis will be made public or not in the Digital Library.

No standard index for the thesis is available since the index depends on the character of the research done. Appendix V contains the standard format for the cover page of the thesis.

The study adviser would like to receive a pdf-file version of the thesis. The thesis can be used for illustrative purposes for prospective and current students of the program.

Appendix I Thesis agreement

Wageningen University Master Thesis Agreement

This Wageningen University (WU) master thesis agreement serves to lay down agreements between a master student and a chair group. The agreement registers rights and duties of both parties and is a further supplementation and elaboration of the Higher Education and Research Act (WHW), Education and Examining Regulations and the Student Charter.

The form has to be completed for each master thesis by the student and a representative of the chair group before the start of the study activities. Without a signed thesis agreement, students are not allowed to start data collection.

Student and representative sign three copies of the form. Both receive a copy. A third one is send to a representative of the program: the study advisor mentioned below.

When the agreement is modified the student will receive a copy of the adjusted form.

For complaints on the supervision or assessment the student can appeal to:
- The study adviser for advice and support
- The Examining Board for advice on procedures or an official complaint.
- The Examination Appeals Board.
- A dean or a Confidential advisor for students

For additional information see the explanation on page 4.

1. Information on student and chair group

Student: .....
Study program: .....
Registration number: .....
Study adviser: .....

Chair group: .....
Supervisor(s): .....
Examiner b[1]: .....
Course code: .....
Examiner a[2]: .....

The student is informed upon the (written) guidelines and rules of the chair group for thesis students: yes/no

2. Prerequisite course(s)

Course code:	_____	Passed:	yes/no
Course code:	.....	Passed:	yes/no

[1]This name can be entered later.
[2] This can be the supervisor.

3. Admission to the thesis

Study adviser _____ has stated that the Student is qualified[3] for a master thesis and that the thesis is optional for the program of the student.

4. Title and planning

Title of the thesis project: .....

Date of completion parts of thesis: .....

Date of start: .....

Date of finish: .....

Special arrangements for planning: .....

5. Arrangements on supervision

(Arrangements on the type and intensity of meetings of student and supervisor on role and responsibilities when more supervisors or more chair groups are involved)

6. Arrangements on facilities

(Work place (office/lab), access to buildings and locations. Availability and use of equipment, materials and facilities)

7. Arrangements on report

(Language and lay out, time and format of transfer of results and data, agreements on secrecy of results and publicity of the thesis report)

8. Arrangements for individual situations.

(Circumstances beyond one's control, disability, absence for special reasons)

[3] This means that the student has completed all requirements for starting with this master thesis.

9. Assessment

The assessment form[4] for theses of WU has to be used.

The percentages in the assessment form that will be used are:

Learning outcomes (assessment criteria)	**percentage**
A. Research competence	
B. Thesis report	
C. Colloquium	
D. Examination	

The assessment will be done in week
(on) .....

10. Signature

The student agrees to report any relevant change in circumstances which may affect the results of the project to the supervisor.
The student declares to be acquainted with rules and procedures of the chair group and with the assessment form. The chair group declares to have provided the student with all relevant information (including rules, regulations, safety issues).

Wageningen,

	Name	Date	Signature
Student:	.....	.....	_____
Supervisor(s):	.....	.....	_____
Examiner a:	.....	.....	_____
Examiner b:	.....	.....	.....

[4] https://portal.wur.nl/sites/owi/kwaliteitszorg/Policy Documents and Forms/Thesis assessment form WU UK v9.xls

Appendix IIa Thesis evaluation form

Assessment thesis Wageningen University			
Fill out the single lined fields. Use a comma or a point as decimal sign, depending on the language chosen.			
Name chair group			
Name student			
Registration number			
Study programme			
Specialisation			
Code thesis			
Short title thesis			
Date examination		**Signature**	
Supervisor chair group			
Supervisor outside chair group (if so)			
Second reviewer/examiner			
		grading mark 1-10	relative weight *
Research competence (30-60%) *			
1 Commitment and perseverance			
2 Initiative and creativity			
3 Independence			0.00
4 Efficiency in working with data			
5 Handling supervisor's comments and development of research skills			
6 Keeping to the time schedule			
Thesis report (30-60%) *			
1 Relevance research, clearness goals, delineation research			
2 Theoretical underpinning, use of literature			
3 Use of methods and data			0.00
4 Critical reflection on the research performed (discussion)			
5 Clarity of conclusions and recommendations			
6 Writing skills			
Colloquium (5%) *			
1 Graphical presentation			
2 Verbal presentation and defence			0.00
Examination (5%) *			
1 Defence of the thesis			
2 Knowledge of study domain			0.00
* please choose weights such that their sum is 100.	**TOTAL**		0.00
	FINAL GRADE		**0.0**
Comment by supervisor			
Comment by 2nd reviewer/examiner			

Appendix IIb Thesis evaluation form (in Dutch)

Beoordeling thesis Wageningen Universiteit

Vul de enkel omlijnde velden in (gebruik komma of punt als decimaalteken, afhankelijk van de taalinstelling)

Naam leerstoelgroep		
Naam student		
Registratienummer		
Studieprogramma		
Specialisatie		
Code thesis		
Korte titel thesis		
Datum eindgesprek		**Handtekening**
Begeleider LSG		
Begeleider buiten LSG (evt.)		
Tweede beoordelaar/examinator		

	beoordeling cijfer 1-10	relatief gewicht *
Onderzoeksvaardigheden student (30-60%)		
1 Inzet en doorzettingsvermogen		
2 Initiatief en creativiteit		
3 Zelfstandigheid van werken		0.00
4 Efficiency in werken met data		
5 Verwerking voortgangsgesprekken en ontwikkeling onderzoeksvaardigheden		
6 Werken volgens de tijdplanning		
Thesisrapport (30-60%) *		
1 Relevantie onderzoek, helderheid doelstelling, afbakening onderzoek		
2 Theoretische onderbouwing, gebruik van literatuur		
3 Gebruik van methode en data		0.00
4 Kritische reflectie op eigen onderzoek (discussie)		
5 Helderheid conclusies en aanbevelingen		
6 Taalkundige vaardigheid en uitvoering		
Colloquium (5%) *		
1 Grafische presentatie		
2 Mondelinge presentatie en verdediging		0.00
Eindgesprek (5%) *		
1 Verdediging van de thesis		
2 Kennis van het vakgebied		0.00
* Svp relatieve gewichten kiezen zodat ze samen 100 zijn.	**TOTAAL**	0.00
	EINDCIJFER	**0.0**

Commentaar begeleider

Commentaar 2e beoordelaar/examinator

Appendix III Rubric for assessment of MSc thesis

Author: Arnold F. Moene, Meteorology and Air Quality Group, Wageningen University
Version: 1.1 (December 15, 2010)

Item	Mark for item					
	2-3	**4-5**	**6**	**7**	**8**	**9-10**
1. Research competence (30-60%) *						
1.1. 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 as an extra motivation.
1.2. 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 data-analysis methods developed. Possibly the scientific problem has been formulated by the student.
1.3. 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.
	No critical self-reflection at all.	No critical self-reflection at all.	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

Item	Mark for item					
	2-3	**4-5**	**6**	**7**	**8**	**9-10**
						performance.
1.4. Efficiency in working with data Note: depending on the characteristics of the thesis work, not all three aspects (experimental work, data analysis and model development) may be relevant and some may be omitted	**Experimental work** Student is not able to setup and/or execute an experiment.	Student is able to execute detailed instructions to some extent, but errors are made often, invalidating (part of) the experiment.	Student is able to execute an experiment that has been designed by someone else (without critical assessment of sources of error and uncertainty).	Student is able to execute an experiment that has been designed by someone else. Takes sources of error and uncertainty into account in a qualitative sense.	Student is able to judge the setup of an existing experiment and to include modifications if needed. Takes into account sources of error and uncertainty quantitatively.	Student is able to setup or modify an experiment exactly tailored to answering the research questions. Quantitative consideration of sources of error and uncertainty. Execution of the experiment is flawless.
	Data analysis Student is lost when using data. Is not able to use a spread sheet program or any other appropriate data-processing program.	Student is able to organize the data, but is not able to perform checks and/or simple analyses	Student is able to organize data 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 organize the data, perform some basic checks and perform basic analyses that contribute to the research question	Student is able to organize the data, perform commonly used checks and perform some advanced analyses on the data	Student is able to organize the data, perform thorough checks and perform advanced and original analyses on the data.
	Model development Student is not able to make any modification/addition to an existing model .	Student modifies an existing model, but errors occur and persist. No validation.	Student is able to make minor modifications (say a single formula) to an existing model. Superficial validation or no validation at all.	Student is able to make major modifications to an existing model, based on literature. Validation using some basic measures of quality.	Student is able to make major modifications to an existing model, based on literature or own analyses. Validation using appropriate statistical measures.	Student is able to develop a model from scratch, or add an important new part to an existing model. Excellent theoretical basis for modelling as well as use of advanced validation methods.

Item	Mark for item					
	2-3	**4-5**	**6**	**7**	**8**	**9-10**
1.5. Handling supervisor's comments and development of research skills	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.
	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.
1.6. Keeping to the time schedule	Final version of thesis or colloquium more than 50% of the nominal period overdue without a valid reason (force majeure)	Final version of thesis or colloquium at most 50% of the nominal period overdue (without a valid reason).	Final version of thesis or colloquium at most 25% of nominal period overdue (without valid reason)	Final version of thesis or colloquium at most 10% of nominal period overdue (without valid reasons)	Final version of thesis or colloquium at most 5% of nominal period overdue (without good reasons)	Final version of thesis and colloquium 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.

Item	Mark for item					
	2-3	**4-5**	**6**	**7**	**8**	**9-10**
2. Thesis report (30-60%) *						
2.1. Relevance research, 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-the-point. 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-the-point and limits of the research are well-defined.
2.2. Theoretical underpinning, 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.
2.3. Use of methods and data	No description of methods and/or data.	Research is not reproducible due to insufficient information on data (collection and/or treatment) and analysis methods	Some aspects of the research regarding data-collection, data-treatment, models or the analysis methods are described insufficiently so that that particular aspect of the research is not reproducible.	Description of the data (collection, treatment) or models as well as the analysis methods used is lacking in a number of places so that at most a more or less similar research could be performed.	Description of the data (collection, treatment) or models as well as the analysis methods used is mostly complete, but exact reproduction of the research is not possible due to lack of some details.	Description of the data (collection, treatment) or models as well as the analysis methods is complete and clear so that exact reproduction of the research is possible.

Item	Mark for item					
	2-3	**4-5**	**6**	**7**	**8**	**9-10**
2.4. 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 non-existent 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.
	No confrontation with existing literature.	Confrontation with irrelevant existing literature.	Only trivial reflection vis-a-vis existing literature.	Only most obvious conflicts and correspondences with existing literature are identified. The value of the study is described, but it is not related to existing research.	Minor and major conflicts and correspondences with literature are shown. The added value of the research relative to existing literature is identified.	Results are critically confronted with existing literature. In case of conflicts, the relative weight of own results and existing literature is assessed. The contribution of his work to the development of scientific concepts is identified.
2.5. Clarity of conclusions and recommenda-tions	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.

Item	Mark for item					
	2-3	**4-5**	**6**	**7**	**8**	**9-10**
2.6. 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.
	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.
3. Colloquium (5%) *						
3.1. 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 side-steps.	Presentation clearly structured, concise and to-the-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.

Item	Mark for item					
	2-3	**4-5**	**6**	**7**	**8**	**9-10**
3.2. Verbal presentation and defence	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 well-targeted 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.	Presentation finished well in time.
	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-the-point in some cases.	Student is able to give appropriate, clear and to-the-point answers to all questions.
4. Examination (5%) *						
4.1. Defence of the thesis	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.

Item	Mark for item					
	2-3	**4-5**	**6**	**7**	**8**	**9-10**
4.2. Knowledge of study domain	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.

Appendix IV Manual for use of the thesis evaluation form and the MSc thesis assessment rubric (version 1.1) of Wageningen University

User instructions

- Grading the thesis work is generally done by two persons, the daily supervisor and the second reviewer/examiner. For the sake of grading uniformity, it is highly recommended by the Exam Boards that the second reviewer within a hair group is always the same person. Preferably it is the head of the group.

- The thesis evaluation form has four categories. The research competence category can only be filled in by the daily supervisor as this person has worked with the student. The Thesis report category can most objectively be filled in by the second reviewer who was not involved in the thesis process, as grading the thesis report should not be biased by positive or negative experiences with the student. The daily supervisor who has these experiences can take these into account when grading the research competence.

- Use of the comment fields on the thesis evaluation form is highly recommended. It is an extra feedback for the student.

- The assessment rubric has the form of an analytic rubric (see e.g. Andrade (2005), Reynolds *et al.* (2009), URL1, URL2). Each line discusses one **criterion** for assessment. Each column gives a **level** for the grading. Each cell contains the **descriptor** of the level for that criterion.

- The criteria in the rubric exactly follow the items presented in the Excel worksheet "Thesis evaluation Wageningen University" constructed by the Exam Boards. In a few cases the criteria in the original thesis evaluation document were split into two or more parts because the description of the criteria clearly covered different subjects.

- Since the final mark is composed of so many criteria, the scores on individual criteria should be discriminative. Not all levels are equally broad in marks. Since the final marks of theses usually range between 6 and 9, in the rubric individual levels have been established for the marks of 6, 7 and 8. When performance is at the 9-10 level, 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 2-3 on one criterion and a 9-10 on another.

- Always start at the lowest mark in the rubric, and test if the student should be awarded the next higher mark. In some cases achievements of a next lower level are not repeated at the higher level (i.e. the lower level achievements are implicit in the higher levels). Furthermore, 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).

- Wherever the student is indicated as ´he´, one can also read ´she´.

Remarks

This rubric has been validated by a number of supervisors by comparing the original grade of a number of theses to the grade resulting from this rubric. The main intention of using a rubric is enhance 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.
Although the intention is to homogenize the process of assessment, it should be noted that even with the use of a rubric some arbitrariness will remain.
The two main categories on the thesis evaluation form (research competence and thesis report) should have an assessment of 'sufficient' (i.e. ≥ 5.5) before the total thesis work can be considered as sufficient. So, no compensation between these main categories is possible to obtain the lowest final mark of 6.0.
Please report any positive or negative experiences with and suggestions for the rubric to arnold.moene@wur.nl.

Author of the rubric: Arnold F. Moene (Meteorology and Air Quality Group, Wageningen University), with valuable contributions from Ellis Hofland, Edwin Peeters, Tamar Nieuwenhuizen, Maarten Holtslag, George Bier, Gerard Ros, Lijbert Brussaard, Judith Gulikers and Paul Berentsen.

References

Andrade, H.G, 2005. Teaching With Rubrics: The Good, the Bad, and the Ugly. *College Teaching* **53**, p. 27-31.

Reynolds, J., R. Smith, C. Moskovitz and A. Sayle, 2009. BioTAP: A Systematic Approach to Teaching Scientific Writing and Evaluating Undergraduate Theses. *Bioscience* **59**, p. 896-903.

URL1: http://jonathan.mueller.faculty.noctrl.edu/toolbox/rubrics.htm (last visited November 17, 2009).

URL2: http://en.wikipedia.org/wiki/Rubric_(academic) (last visited November 17, 2009).

Appendix V Format for the MSc- thesis cover page

Wageningen University - Department of Social Sciences

MSc Thesis Chair Group …

Title

Subtitle

Month + year:

MSc program

(if applicable)
Specialisation

Name of student

Name of Supervisor(s)

Thesis code:

WAGENINGEN UNIVERSITY
WAGENINGEN UR