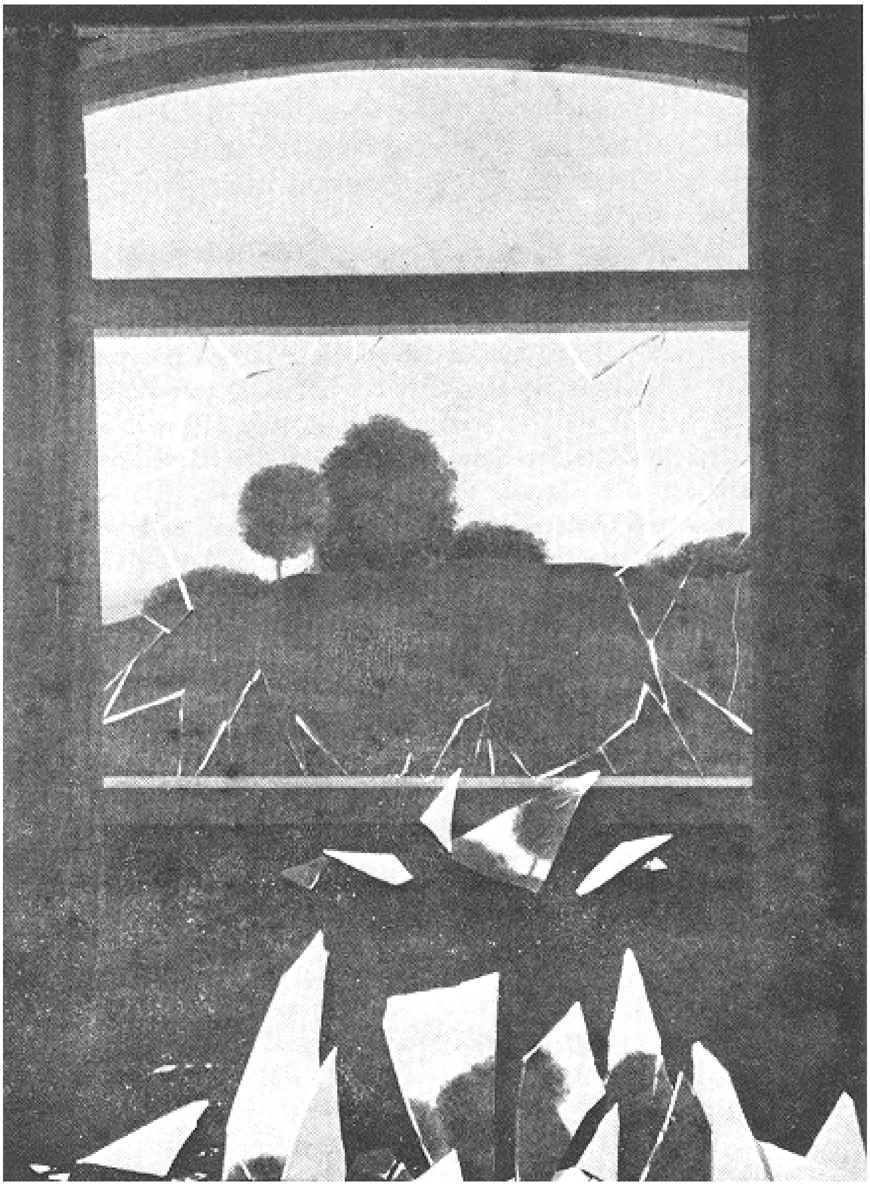
UNIVERSITÄT HOHENHEIM

Department of
Rural Sociology



# How to draw up a research paper: Information for students

November 2012

# Foreword

Most of the recommendations in this booklet are relevant to all types of empirical research such as scientific articles, and BSc, MSc, or PhD theses alike. However, the details in this booklet focus on empirical social research and on writing a master thesis.

The master thesis shows that a student is able to work independently, applying scientific methods to a problem in the field of the respective course within a predetermined timeframe. The thesis consists of a written part (paper) and an oral part (justification / defence) (also see § 16 of the examination regulations of the Tropenmaster and ENVIROFOOD). The research work is the final part of the study and forms an important part of the overall result.

A six-month period is reserved for this work, (4th semester). This relatively restricted period requires thorough reflection and strict planning; this brochure is meant to be helpful during this process. The booklet addresses master students in our department "Rural Sociology" and others who are interested. The **objective** is to provide the necessary information and guidelines to enable a student to write a thesis according to our criteria.

If you are interested in doing your thesis at our department, you are advised to first go through this booklet **before** meeting with our department staff members.

**How to draw up a research paper: information for students**

Version E-5, November 2012

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Cover picture: RENÉ MARGRITTE – The key to the fields, 1933.
Back picture: RENÉ MARGRITTE – The human condition, 1933.

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# 1 How to start

For students in the master courses, the $4^{th}$ semester is scheduled to elaborate a master thesis. Yet, we advise starting as early as possible since you might need some time to decide upon a topic and eventually seek financial support, which depends on a sound elaborated proposal.

## 1.1 Looking for a topic

If you have an idea, a possible topic or an interesting issue, please approach a staff member of our department. We will help you to figure out whether a research theme can be formulated, and how it should be formulated.

If you don't have an idea yet about a suitable research theme, we are also happy to be of assistance in choosing a possible topic. Topics of interest provided by external organisations – if available – can be found on the wooden notice board in the corridor. It can also be helpful to go through completed theses. There is a list of theses and a file with summaries available in room 122. Full copies, which can also be borrowed, can be found in the department library.

There are three important aspects in choosing a research theme:

- **Referring to a problem**: the research process should contribute to clarification and possibly solutions of concrete issues. In our philosophy, this is part of applied research with a focus on theory-based empirical studies.
- **Personal interest**: the more a person is interested or experienced in a certain area, the easier the research work will seem. Personal experience and involvement, in combination with personal preferences will contribute to selecting and clearly defining and delimiting a suitable research theme in agreement with the supervisor.
- **Department's capacity for assisting and supervising**: supervision is likely to be most effective if the research theme is in line with the existing fields of interest to the department, or if the supervisor is interested in it for other reasons.

## 1.2 Following the examination regulations

The master thesis shall show that the candidate is able to work independently on a problem in the field of his/her course, using scientific methods and within a fixed period of time. The thesis consists of a written part (paper) and an oral part (justification, defence). The head of the department decides whether a topic is accepted for a master thesis. After approval, the head of the department, or another staff member, will ensure the supervision until the thesis is delivered. (See also next chapter "Supervision").

The thesis has to be registered within the timeframe as mentioned in the examination regulations. The form is to be completed jointly by the student (personal data) and the head of the department (research theme, starting date, name of the second examiner) (Figure 1). The thesis has to be completed within 6 months after registration.

A master thesis can also be carried out together with fellow-students. This is even recommendable in the case of a relatively extensive topic, which then can be divided among the different participants. To enable individual marking, the division of tasks has to be defined clearly and mentioned in the foreword.

From time to time, organisations approach us with issues on communication and extension they would like to have elaborated in the framework of a thesis. Sometimes financial sup-port is offered. Such proposals are announced on the black notice board opposite the secretary's office.

## 1.3 Supervision

Each student working on an assignment has a supervisor. When choosing the supervisor, both student's preferences and staff members' workloads and specialisations are taken into account. Generally, supervision tasks are divided during the periodic staff meetings. Changing a supervisor can only happen in exceptional cases (on valid grounds). The supervision is specifically aimed at helping to delineate the exact theme, providing information on relevant literature, assisting in selecting the research methodology with regard to the objectives and giving advice on data processing.

## 1.4 Funding

Funding is generally not available. For research in developing countries, students can apply for a research grant to the Fiat Panis Foundation (more information available at the "Tropenzentrum") or other external funding programmes. From time to time, organisations address the department requesting that an issue be investigated, and offering to take over the costs. In this case, financial matters are arranged among the partners. Contributions are generally in the range between 1.000 and 2.500 Euro. The department has no available funds.

**Figure 1:** Application Form for the Master Thesis

Universität Hohenheim Prüfungsamt
*University of Hohenheim Examination Office*

## Antrag auf Vergabe einer Master-Thesis
*Application for Allocation of a Master Thesis*

Matrikel-Nr. *Registration Number* | Geburtsdatum *Date of Birth* | gewählte Fach- und ggf. Vertiefungsrichtung *Elected Graduate Major*

Name, Vorname / *Name, First Name*

Straße, Hausnummer, c/o / *Street, No., c/o*

Postleitzahl / *Postcode* Ort / *City*

Telefon-Nr. (Angaben freiwillig) *Telephone Number (voluntary information)*

e-mail-Adresse (Angaben freiwillig) *e-mail-address (voluntary information)*

**1.** Ich beantrage die Vergabe einer Master-Thesis aus dem von mir im Master-Studiengang belegten und im Studien- und Prüfungsplan aufgeführten
*Herewith I apply for the Allocation of a Master Thesis related to the*

❑ Pflichtmodul / *Compulsory Module* ❑ Wahlpflichtmodul / *Optional Module*

(Kennung und Name des Moduls) / *(Code and Module Title)*
*which I attended in the Master Degree Programme and listed on the binding Study Plan.*

**2.** Thema der Master-Thesis: / *Topic of Master Thesis:*

**3.** Betreuer/-in der Master-Thesis: / *Supervisor:* Zweitgutachter/-in: / *Second Supervisor:*

Bearbeitungsbeginn des Master-Thesis:
*Date of Assignment of Master-Thesis:*

Ende der **6-monatigen** Bearbeitungszeit:
*Closing Date for Submission* ***(six months later):***

tatsächliches Abgabedatum:
*Actual Date of Submission:*

Datum, Unterschrift des/der Studierenden
*Date, Student's Signature*

Datum, Unterschrift des Betreuers/der Betreuerin
*Date, Supervisor's Signature*

Bearbeitungsvermerke des Prüfungsamts:
AN/POS:___ WV: ___ KK: ___ Abgabe/POS: ___

# 2 Some hints for the conception and assessment of empirical research

Perhaps you have already undergone some training in empirical research before. In that case, you might already be aware of some of the aspects mentioned in this chapter. If not, the following hints will be even more useful.

## 2.1 Most difficult task: definition of the topic and delimitation of the task

If you have little experience with research methodologies and the theme you want to work on, you might have quite some difficulty at the beginning of your work to define and delimit the topic. Empirical research is like an expedition into the unknown. You have to go step by step and continuous reorientation is necessary. Therefore, at the beginning you should not determine the whole methodology up to the smallest detail. Planning is done in phases and the intermediate results are used for the planning of the next steps. Nevertheless, you should always keep in mind the total available time for your work.

Empirical research can be compared to a small path in the mountains, which runs like a spiral up to the peak. Only when you arrive at the top of the mountain and look downwards you will see whether or not the chosen path was the right one: the objective can only be described definitely when it is achieved. In the final report you should describe how you finally arrived at the topic, the problem statement, the objectives, the results, the conclusions and the recommendations. Only this transparency makes it possible for others to evaluate the process and the results and to use them appropriately.

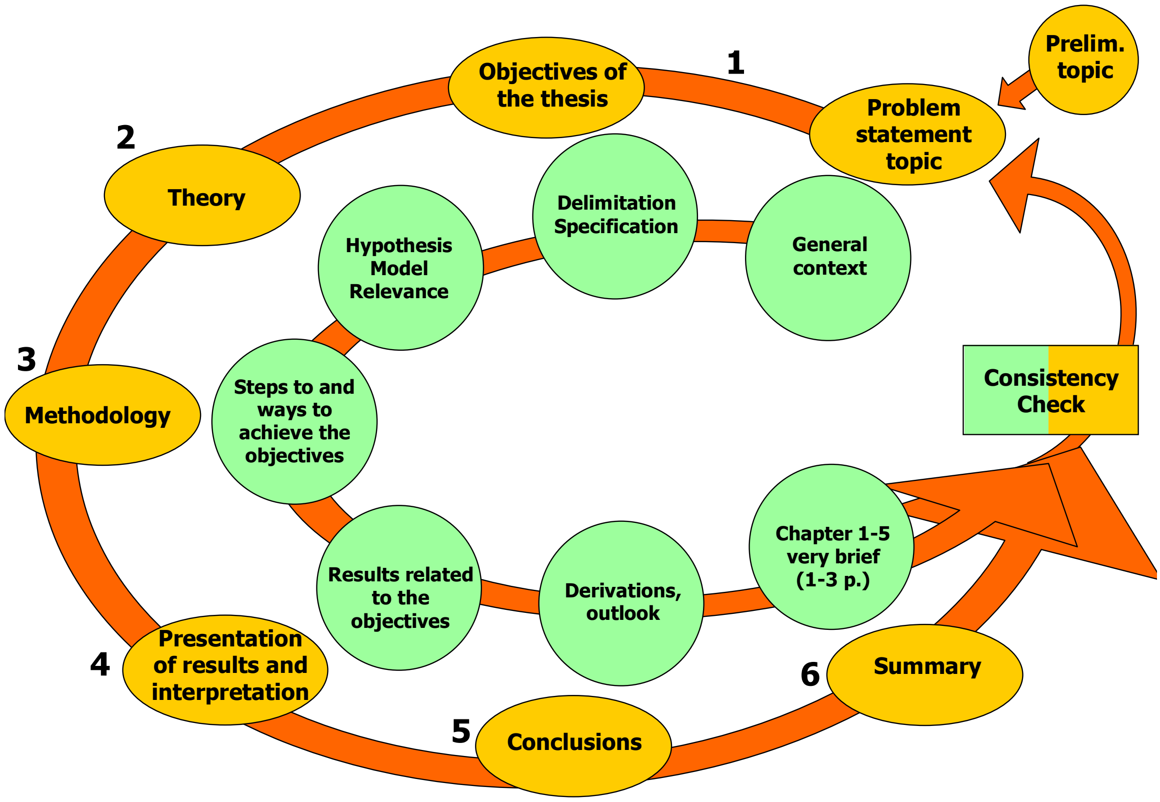
Fruitful progress of this kind of research – especially at the beginning – depends very much on which of the upcoming uncertainties are merely wishes (what we would like to achieve) and which are actually feasible (what we can achieve). Therefore, it has been proven useful to clearly formulate the topic, the problem statement, the objective(s) and the planned methodology of the research at a very early stage. This helps a great deal when asking other people for advice and it is a precondition to making necessary corrections while gathering more and more insight on the matter.

## 2.2 Content of the different chapters

A consistent and logic research report consists of a clear problem description, from which the objectives are derived. These objectives have to be targeted using a well-defined methodology, guided by theory and leading to the intended results. These results must allow logical conclusions that contribute to the general problem context and provide new elements for solutions.

Overview 1 gives a graphical description of the process mentioned above. The outer circle describes the structure and the inner circle describes the elements of the content. The process starts with a description of the "general context" and leads to a concept which is then checked for consistency. After this check (leading to adaptations to the concept, if necessary), the different chapters of the thesis are written. At the end of the writing process, the consistency is checked again (for instance at a predetermined date) and modifications are made if necessary. The following subchapters explain more in detail what the various parts of the research work should include.

**Overview 1:** The emerging and structure of an empirical research work




## 2.2.1 Problem statement and objective of the research

The problem statement describes the general context of the topic, historical trends and the various elements to be considered. It explains how and why the topic was chosen, the stakeholders and its importance for the society. The theoretical and practical challenges should be pointed out, i.e. the contribution to research on the one hand (theory, model, methods, facts), and the practical implications on the other hand (insight into problems, recommendations).

All aspects described in the problem statement cannot be tackled in one single research project. Therefore, specific research objectives are formulated as clearly as possible and described separately. They are a compromise between the research interest and feasibility considerations. Objectives can be made more specific by selecting a key problem, using only a limited number of cases, or limiting oneself to a certain region or period.

The objective should describe in a short and a clear way the aim of research, to what end the results will be used and what kind of conclusions are expected.

## 2.2.2 Theory

Empirical research has to be guided by theory. Theories that are used have to be explicitly mentioned, as well as the author's assumptions. Perception and data collection are determined by theoretical assumptions. For the selection of adequate research models your supervisor or other persons with knowledge about the topic might be consulted for specific hints. Sometimes only some literature and no theories are available; in which case you should develop your "own" by writing down your ideas, clustering them in a "model of investigation context" and using this as a research concept.

If several theories are available (from different disciplines) it is advisable to give a brief overview and decide on one. Give reasons for your decision. In order to position your own scientific contribution, it is also helpful to describe the state of the art of ongoing research on your theme. The research results have to be interpreted in relation to the theory described before. Theoretical considerations (partly) determine the selection of methods; therefore, the methodology chapter is usually preceded by the theoretical part.

### 2.2.3 Research methodology

The research methodology chapter describes the procedure as a series of steps leading to the objectives: what information is needed, how, where, when and by whom can this information be obtained?

The following methods are most common:

- Literature review
- Evaluation of statistical material and of existing documents (secondary data)
- Small experiments
- Observation techniques
- Interviews of experts and subject matter specialists
- Interviews of people who are directly involved (formal, informal)
- Group discussions, Participatory Rural Appraisal tools, etc.

Key issues are bound to people and sources, as well as the reliability and validity of the data. The phenomena in which we are interested are usually not directly observable or easily obtainable. Therefore, indicators and criteria must be identified; in interviews, topics and areas of interest, and must be translated into operational questions. Since the development of standardised interviews normally demands quite a bit of input for preparation and testing, M.Sc. students rarely use them. Usually, interview guidelines with keywords (informal surveys) are used and gradually adapted and improved.

The choice of the used procedures has to be explained; alternatives have to be developed if necessary.

### 2.2.4 Results

In this chapter, the results are presented in a well-structured way, and as a logical outcome using the described methodology. In the presentation of the results we distinguish observation, interpretation and assessment, leading often to sub-chapters.

### 2.2.5 Conclusions

The conclusions interpret the results in terms of their consequences. What is the significance of what I found out and for whom is it important? What are possible practical implications? The conclusions are deducted from the results and do not include new facts. They validate the results in other application contexts, and discuss their implications for the various stakeholders (decision makers, users, etc.).

Apart from these implications "for the field", it is also common to formulate "recommendations for further research" and, especially relevant for our department, "recommendations for activities on information, training and extension".

### 2.2.6 Summary

The next step after completing the first draft of the main chapters is to write a summary. This summary should be as short as possible (1-3 pages) and present the whole work. All main chapters should be represented at least in one sentence or paragraph, including not only the results, but also the problem statement, objectives, theory, methodology and conclusions.

The limited size forces the author to concentrate on only the main elements. The essence of the whole work will become visible and its **consistency** can be examined easily. Do the parts fit together logically? Is the relationship between problem statement and objectives clearly described? Do main results address the objectives? Are the results interpreted critically enough with regard to the methods used? Do interpretations and conclusions refer to the mentioned theories or models? A summary in the (official) language of the country where the research took place has to be included as well.

## 2.3 Evaluation criteria

Guidelines on research quality are essential for both students and supervisors/evaluators. Depending on the topic, perception, theoretical approach and the applied methods, empirical research work can lead to highly variable results and their quality cannot be assessed using "only" a fixed set of criteria.

Assessments depend on the quality of their arguments. Science is not a standardised enterprise relying on a fixed set of quality criteria. Criteria used in assessments are also themselves subject to discussion. Therefore, criteria have to be transparent from the very beginning and it should be clear which ones are relevant for the respective thesis.

The table on the following page shows the actual assessment criteria we use to evaluate research papers. Some of them might need further explanation.

### 2.3.1 Problem statement and objectives

Uninteresting and irrelevant topics are a waste of time for both the author and the reader. When selecting a topic, criteria based on personal preferences and the opinion of the author play an important role. However, their validity cannot be taken for granted. Therefore, it is important to present, in the framework of a problem statement, the theoretical

**Assessment form for empirical research papers**

| Name | Title | | | | | |
|---|---|---|---|---|---|---|
| Comments, relevant pages | | Assessment | | | | |
| | | ++ | + | o | - | - - |
| **1. Problem statement and objectives** | | | | | | |
| Context and specification of the problem / topic | | | | | | |
| Presentation of theoretical and practical importance of the study | | | | | | |
| Clarity of objectives | | | | | | |
| Derivation of intended conclusions | | | | | | |
| **2. Methodology** | | | | | | |
| Presentation of methodology alternatives to achieve the set objectives | | | | | | |
| Explanation and appropriateness of used methods | | | | | | |
| Transparency of procedures | | | | | | |
| Discussion of own experiences made during the study | | | | | | |
| **3. Quality assessment** | | | | | | |
| Overall view of theory, knowledge of literature | | | | | | |
| Presentation of the state of the art | | | | | | |
| Proportion theory – empirical work and reference to theory | | | | | | |
| Authentic reproduction (view of involved persons) | | | | | | |
| Structure, order, logic, train of thought | | | | | | |
| Clarity of formulations | | | | | | |
| Precision, clearness, tables, graphs, quotations | | | | | | |
| Separation of presentation and interpretation of results | | | | | | |
| Plausibility of interpretations and conclusions | | | | | | |
| **4. Format** | | | | | | |
| Apparence, sources, quotations | | | | | | |
| Faultlessness | | | | | | |
| **5. Extraordinary performance** | | | | | | |
| Difficulty of the task, existing examples? New ground? | | | | | | |
| Independent, self-reliant | | | | | | |
| Commitment, work load | | | | | | |
| Specific scientific contribution | | | | | | |
| **6. Further remarks** | | | | | | |
| Suggested points: | Date | Signature | | | | |

and practical importance of the research in a logical and understandable way. Your objectives should not only present the results to be achieved, but also discuss the kind of conclusions the study aims at achieving. The practical importance of research very often lays in the possible implications.

In complex problems it is advisable to narrow down the research topic. For instance, in some cases just a part of the problem can be dealt with, or just with the theoretical basis or methodology alternatives. This leaves room for others to continue with the other aspects.

### 2.3.2 Methodology

"Many roads lead to Rome." No question has a single answer. Therefore, the selection of the method to be used is a very important decision which greatly influences quality of the results and conclusions. Reasons should be given for the choices made and alternatives need to be considered. Only in very rare cases in which empirical phenomena cannot be researched at all, a research based on pure literature review is possible, but this has then to be made plausible. In cases where the issue can be researched directly it would be unwise to exclude personal observations and experiences and direct contact with involved people. Even knowledge from only one case would improve interpreting third person experiences and scientific reports. Besides, it is much more difficult to focus on a literature review than on personal empirical research.

Assessing the reliability and validity of scientific research (which should be included in a literature review) requires personal experience in empirical research. Personal empirical research includes also a literature review in which the state of the art of the research theme and the underlying theory is presented.

### 2.3.3 Quality assessment

As mentioned previously, no research can be done without a theory or hypothesis. While assessing the quality of a research, the question arises whether the selected theory was useful in dealing with the problem. Theory and practice should be visibly linked with each other.

If interpretations of results do not refer to a theory described earlier, the question arises about what the interpretation was based on, and what was the objective of the theoretical part in the first place.

Facts are easier to prove than their interpretation. In scientific argumentations the facts are presented first, then their interpretation together with related evidence and finally, if useful a value-judgement with respective reasons. Only in this order is the reader able to assess the plausibility of interpretations and conclusions.

As far as other people are concerned, one can easily state lots of things, but we can only approach reality if we first try to take other people's reality seriously and describe it as "authentically" as possible. The perception and opinion of involved persons is crucial in developing solutions to problems and they should, therefore, be included in the research.

In quotation, use (if possible) the original or mention the original source. Indirect quotations from an often unknown context increase the likelihood of misunderstanding. In any case, the distinction between direct and indirect quotations must be obvious to the reader and the sources must be easily recognizable and be mentioned as closely as possible to the quotations: no reader likes to turn pages continuously (See also 4.2.4.2).

Special attention needs the use of web sources and their right citation. Today, almost everything is accessible through the internet; especially the use of internet-encyclopaedia like Wikipedia is very common. This type of information helps to get an overview, but it will not be enough for a scientific thesis. It is therefore recommended to have a look into further literature which you find at the end of a certain definition, term or paragraph. Studying the original source will help to get a deeper understanding and finally, quotations must be done from the original sources. Also, numerous articles, discussion papers, reports and PhD-theses can be found in the internet. Some journals have e-publications additionally to the print-version. For all quotations add: the author, the title of the (pdf-)document, the complete internet-address and the date of the download.

### 2.3.4 Format

Since the start of our series on "Communication and Extension – Social Science Publications on Land Use and Rural Development" it became necessary to adopt a common format with regard to presentation and layout of texts. All documents produced within our department are subject to these guidelines (See chapter 4).

We presume that the prescribed formats are respected and a reader friendly document is presented. Therefore, this aspect is not taken into account in your evaluation. However, neglecting our rules is assessed negatively.

### 2.3.5 Extraordinary achievements

Extraordinary achievements such as working on a highly complex topic or on an unexplored research area, showing a high degree of independence or engagement, or obtaining exceptional scientific results may be assessed as an extra bonus.

## 2.4 Concluding remarks

We hope this chapter has brought some clarity. It should provide some orientation at an early stage for "users" conducting empirical research. The criteria and their clarification should contribute to a better understanding between supervisors and facilitate the evaluation of students. If you still have questions, please come and see one of the department staff members.

Let us have more courage for conducting empirical research and come closer to reality![1]

[1] It is not really possible to assess or describe reality. We can only draft a picture of reality-meaning a specifically human one. The ideas about what is real are imaginations in our brains, but shared with other people by symbolic communication. If others confirm it, gradually those beliefs gains objectivity. This understanding of reality is the theme of MAGRITTES paintings on the cover of this booklet.

# 3 Recommendations for literature on empirical social research

The literature references mentioned below can provide a basis and some additional orientation for the use of methods on empirical social research. Please consult one of our staff members before going deeper into this.

### General literature


BERG, Bruce Lawrence 2007: Qualitative research methods for the social sciences, 6th ed., Pearson, Boston. UB: 7010/100(6)

BERNARD, H.R. 2005: Social research methods : qualitative and quantitative approaches, Sage, UB: 7120/90B

BRYMAN, ALAN 2008: Social Research Methods, 3. Edition, Oxford Univ. Pr., Oxford.

FINK, Arlene 2009: How to conduct surveys: a step-by-step guide. 4th edition. Sage, Los Angeles, UB: 7120/285.

FISHER, R. A. 1990: Statistical methods, experimental design, and scientific inference. Oxford Univ. Pr., Oxford, UB[2]: SF 2710.991.

FOWLER, Floyd J. 1996: Survey research methods. 2. ed., Sage, Newbury Park, 156 p. (Applied social research methods series), UB: 7010/51(2).

MIKKELSEN, Britha 1995: Methods for development work and research: a guide for practitioners. Sage, New Delhi, 296 p. FGB[3]: 430A/4349.

YIN, Robert K. 2009: Case study research: design and methods. 4th edition. Sage, Los Angeles, UB: 7120/37(4).


### Qualitative social research


CROTTY, Michael 1998: The foundations of social research: meaning and perspective in the research process. Sage, London, 248 p. FGB: 430A 4783.

DENZIN, Norman K. (ed.) 1994: Handbook of qualitative research. Sage Publication, Thousand Oaks, California, UB: 7120/222.

MORGAN, David L. 1990: Focus groups as qualitative research. Sage Publication, Newbury Park, California, FGB: 430A 4722.

SYMON, Gillian (ed.) 1998: Qualitative methods and analysis in organizational research: a practical guide, Sage, London, FGB: 430A 4781.


### Statistics and SPSS-related literature


BRYMAN, Alan, CRAMER Duncan 2011: Quantitative data analysis with IBM SPSS 17, 18 & 19: A Guide for Social Scientists Routledge, London (not available at University of Hohenheim).

FIELD, Andy P. 2009: Discovering statistics using SPSS: (and sex and drugs and rock ‘n’ roll). 3rd edition. Sage, Los Angeles, UB: 1202/5(3).

FIELDING, Nigel G.; LEE Raymond M. 1998: Computer analysis and qualitative research Sage, London, 204 p., FGB: 430A/4782.

VOELKL FINN, K.; GERBER, S. B. 2005: Using SPSS for Windows: data analysis and graphics. Springer, New York, UB: ST 601 S69 G3(2).


[2] UB = Central University Library

[3] FGB = Department Library

# 4 Guidelines on lay-out and design of research reports

## 4.1 Introductory remarks

For many years good quality documents had been produced within our department without the need for strict guidelines on their layout and design. However, in 1993 together with our colleagues from Berlin and Gießen, we decided to publish the so-called "Green Series" (Kommunikation und Beratung. Sozialwissenschaftliche Schriften zur Landnutzung und zur ländlichen Entwicklung), in which apart from PhD theses also Master theses of exceptional quality can be published. A common document format was adopted. To avoid the tedious work of having to entirely reformat completed documents, we request all students to follow the guidelines explained in this chapter. Furthermore it is a core part of all scientific work to keep to rules and conventions, therefore early training is useful.

A document series should bring together different documents under one roof. To achieve this, a uniform appearance is desired, but there is "no rule without exceptions". Authors with valid reasons are allowed to deviate from our recommendations, but considerable deviations should be discussed with the supervisor, for instance with one of the publishers of the series.

Furthermore, it is considerably easier to apply these guidelines from the very first page, than to reformat a finished document. Our recommendations have been developed with great care, are well founded and have been applied successfully in over 100 books so far.

## 4.2 Recommendations for the lay-out

In this booklet we practice congruency; all our guidelines are used to demonstrate how the text should look like. Unless mentioned otherwise, the guidelines refer to Microsoft Word 2007. However, all efforts were taken to make these guidelines also applicable to other word processing software. In the next paragraphs, the following topics will be discussed: basics (4.2.1), page format (4.2.2), paragraph format (4.2.3) and other aspects of text design (4.2.4).

### 4.2.1 Some basic remarks on word processing with computers

We assume that you are trained in dealing with computers. Nevertheless, you should still read the following paragraphs as the use of templates is not a very common routine when working with computers. The handling of such templates is an important tool for scientific publishing.

#### What does this mean for your work?

1. Do the final layout only **at the very end** (incl. hyphenation) **and then check** with
   a) the operating system
   b) the version of your word processing software
   c) the printer driver to be used for printing the final version.

2. **Use templates** (for headings, footnotes, etc.), this enables changes to be carried through easily. Templates also save a lot of work on formatting while writing. If you don't know how to work with templates we strongly advise you to learn this.

   A template file with the recommended formats is available at the institute. You can get the file from your supervisor.

   A text with a different format can be copied into the newly opened dot file using the commands: *insert* → *unformatted text*. This avoids two formats competing with each other leading to an uncertain outcome.

3. **Never** use spaces to create distances in the text, **never** use tabs to create indents.

Small or bigger distances in the text are used frequently. Some examples are given in the box: hanging indents in lists where the second line has to start at the same position as the first one; headings, in which the second line should start right under the first word and not under the number; tables, in which the text, number or decimal points should be positioned at a particular place; directories in which both text and page number should always start at a specific position.

- hanging indents in lists, the second line starts at the same position

**5.2 Hanging indent, second line starts under the text**

| | Green | Yellow |
|---|---|---|
| Here | 5.01 | 12.13 |
| There | 16.85 | 4.36 |

2.2 Begin............................................1
2.3 Centre ..........................................2
2.4 End...............................................3

Spacing adjusts automatically around the text when using proportional fonts (like Helvetica, Arial, Times (New) Roman), making it difficult to always arrive at the same position when using spaces. However, everything can be mixed up when font, font size, margins, operating system, version of word processing software or printer (driver) are changed. The same happens when the tab key is used to indent lines.

In order to avoid this, **tab stops** are used to create distances between characters; second and following lines of a paragraph are indented by formatting **hanging indents**.

When making lists, single line spacing (as used in normal text) is often preferred. This can be obtained by using manual **line breaks** (Word: Shift + Enter) in which case no automatic hyphenation occurs. The distance between bullets (list items) can be reduced in Format Paragraph by putting Spacing Before as well as Spacing After at zero.

Foot notes, lists and headings are generally not justified; in these cases the text can be aligned to the left using Align Left. To maintain narrow line spacing, manual line breaks can be applied here as well.

### 4.2.2 Page setup

#### 4.2.2.1 Paper size

DIN A4 (in case the thesis will be published in our scientific series, the paper size will be reduced to A5 in final printing).

#### 4.2.2.2 Margins

Top 2,0 cm; bottom 2,5 cm; inside and outside both 1,7 cm. Gutter: 1 cm. This setting ensures, when printed, an extra 1 cm margin left on the front page and right on the back page. The footers are positioned 1,3 cm from the lower edge. In *Word*, the page number is found on the outside of the footer, about 1,3 cm above the edge, and appears alternately at the right and left side. Headers are positioned 1,25 cm from the upper edge, but they are not utilized in our recommendations.

#### 4.2.2.3 Page numbers

Bottom of the page, outside, the odd page numbers always at the right side. **Page numbering** starts either from the beginning of the text (variant 1) or from the half title (variant 2). The book consists of the cover, the preliminary part, the actual text, the (literature) references and the annexes. The actual text starts with the introduction. The preliminary part consists generally of the following parts: Outside title (blank), half title (page 1), imprint (2), foreword of the publisher (3,4), possibly foreword of the supervisor (5,6), possibly foreword and acknowledgements of the author (7,8), table of contents including summaries (English, German, in some cases a third language), and annexes, lists of tables, figures and photographs, abbreviations, possibly a glossary of technical terms or expressions in the local language(s). Then the **actual text** starts with an introduction on an odd (right) page. In variant 1 page numbers continue from the half title onwards until the end including biography and annexes.

In variant 2, the preliminary part from the half title onwards is numbered using Roman numerals and the first text page starts with the Arabic number 1. The advantage of variant 2 is that the pages can already be numbered without having to await the number and length of forewords, etc. (normally written at the last moment).

### 4.2.3 Line format, paragraphs and page breaks

Use single line spacing. A spacing of 9 pt is added after each paragraph. Alignment is justified. In order to avoid large “empty spaces” it is recommended to put the hyphenation zone (Tools → Language → Hyphenation) at 0.3 cm, to hyphenate “narrowly” using manual hyphenation (Tools → Language → Hyphenation → Manual) or entering a hyphen in combination with a Ctrl-key (“conditional hyphen”, the hyphen remains “permanently” when it is inserted, even when the word appears in the middle of a line after rearranging).

**Headings** are preceded by a distance of 21 pt (added to the 9 pt from the previous paragraph). Headings start on top at the beginning of a page, without any preceding space. Various headings following each other should be avoided when possible, for instance by giving a brief introduction to the next part(s) on the same level. If this cannot be avoided, the distances should be decreased (Format Paragraph, Spacing before 12 pt, after 0 pt). Headings are aligned left, because hyphenation in headings hinders a rapid absorption of the text and justified alignment without hyphenation causes unnaturally big distances between words. Readers must be able to grab the headers’ essence at once and the use of hyphens should, therefore, be restricted to a minimum.

Right: **3 Formatting of headings in this Extension and Communication Series**

Wrong: **3 Formatting of headings in this Extension and Communication Series**

The paragraph has to be formatted with a hanging indent to let the second line start right under the first word and not under the number. Instead of the additional distance of 9 pt between paragraphs or 21+9 pt for headings, also one or two returns can be inserted. This causes a somewhat bigger distance between lines and more text on one line, but the overall picture remains balanced.

Solitary lines caused by **page breaks** at the top or bottom of the page (widows resp. orphans) can be avoided automatically by using (in Word) Format-Paragraph-Pagination-Widow/Orphan control. If this doesn't lead to satisfactory results, a page break can be inserted manually using a so-called manual page break (Ctrl. Return).

Also other pieces of text that belong to each other should not be separated by page breaks. Avoid leaving headings at the bottom of the page, separating the announcement of a list with ":" from the list itself, etc. Separation between a back page and a subsequent front page is less bothersome than the other way around (in an opened book a back page is situated next to a subsequent front page).

New chapters (Heading 1) always start on a new page (often, but not forcibly a front page).

### 4.2.4 Formatting of text

#### 4.2.4.1 Fonts and font sizes

Print on a laser printer, resolution at least 300 DPI, if possible Postscript fonts. **In normal text** a Serif[4] font with size 13 is used. (Postscript: Times Roman, otherwise for instance Times New Roman).

**Headings** are always formatted with a bold sans serif font (Postscript: Helvetica, otherwise for instance Arial). Since in very small font sizes sans serif fonts are more readable than fonts with serifs, we also use them at locations with little available space, like footnotes, inside tables and outlines, and for the bibliography where the use of normal font would be a waste of space. The usual size is 11.5, only smaller in tables when there is no other option: first try narrow fonts like Helvetica Narrow or Arial Narrow before choosing fonts smaller than 10.5.

The heading fonts are as follows: first level Arial 18 bold, second level Arial 16 bold, third level Arial 14 bold, from the fourth level onwards Arial 12 bold. This last font (or Times Roman 13 bold) can also be used for in-between headings, and as a last resort Times New Roman 13 normal. Instead of using further intermediate headings, important

[4] Serifs are small decorative lines added as embellishment to the basic form of characters, keeping the reader's eye focused by giving the impression that they are written between two horizontal lines. Fonts are often described as being serif or sans serif (without serifs). Longer texts in serif fonts are considered more reader-friendly. However, this font is Arial 10.5, a font without serifs.

keywords in the beginning of a new part can be emphasized in **bold**. Chapter numbers exceeding 4 or 5 levels should be avoided where possible.

Example:

| | |
|---|---|
| **1 Introduction** | **Arial bold 18** (21 pt above, 9 pt below) |
| **1.1 Problem statement** | **Arial bold 16** (21 pt above, 9 pt below) |
| **1.1.2 Historical context** | **Arial bold 14** (21 pt above, 9 pt below) |
| **1.1.2.1 Influences of the colonial era** | **Arial bold 12** (12 pt above, 9 pt below) |
| **The period of the discoveries** | **Arial bold 12** (12 pt above, 9 pt below) |
| **First discoveries** | **Times New Roman bold 13**<br>(12 pt above, 9 pt below) |

**Headings of figures, tables and outlines or captions** have the same font as the main text with a somewhat smaller size (Times New Roman 12). The part before including the colon is written in **bold** (**Table 123:** or **Figure 33:** or **Outline 5:** etc.).

In the **table of contents**, the first order chapters have to stand out clearly (for instance in Arial 13 or 14 bold, rest in Times New Roman 13). An example is shown in 4.2.4.4. Page numbers are inserted using right aligned tab stops (Format-Paragraph-Tabs) with pointed leaders (Leaders-Option 2), both using Times Roman normal 13.

**Page numbers**: Font Arial 12; Position: Bottom of page; Alignment: outside.

**Footnotes**: Font Arial 10.5.

#### 4.2.4.2 Literature references and citations in the text

Consulted sources must always be verifiable and authentic. Citations must for instance be directly traceable to the referred sources. The details should be precise, i.e. author(s), year of publication and relevant pages should be mentioned (between parentheses) as close as possible to the appropriate place. Names of authors are put in small caps[5], the year separated from the name of the author(s) by a single space only and the relevant pages separated from the year by only a comma, without space. Example: (CLEVELAND 1991,237). If two or three authors are mentioned in the same order as in the original title, then they are separated by semicolons (;). In the case of more than three authors only the first author is mentioned and “et al.” is added. Publications of the same author in the same year obtain a, b, c…. additionally to the year. Example: (HEINZE et al. 1993a,33). In the case of authors with the same family name the first initial is added. Example: (WERNER, J. 1998).

Apart from verifiability another important issue is **authorship**. Plagiarism is dishonest and even punishable. Therefore, quotations have to be marked with inverted commas

[5] Small caps are somewhat smaller than capitals, the latter being very overwhelming in the text: compare HEINRICHSMEYER (1984,27) with HEINRICHSMEYER (1984,27).

(“quotation marks”), if possible in addition to *italics* and **a page reference is obligatory**. The latter is also required when referring to statements or results, even if they are not cited literally (see MAIER 1900,30). Page references can be omitted when more general sources are mentioned, like a whole document instead of specific parts. **Non-conformance to this citation rules is plagiarism. Can it be proven, the whole thesis has to be graded with “fail”.**

Indirect citing can be applied if the original source cannot be located: (original source, cited in: secondary source) (MAUPOIL 1920,11; cited in: HERSKOVITS 1937,179). Three cases can be distinguished with regard to **reprints of earlier publications**:

- If the entire book is a reprint, the citation is for instance: (author year,page) and the entry in the (literature) references is as follows: author, year of publication of the original, title, publisher and city of publisher, reprint from year, publisher and city of publisher.
- If the book is a revised version, the citation is: (author year of revised version,page) and the (literature) references entry is as follows: author, year of revised version, title, publisher and city of publisher of revised version, followed by the publication’s reprint year, publisher and city of publisher. In citations from second or later editions the year of publication of the edition used is mentioned, whereas in the bibliography the edition ($x^{th}$ edition) is mentioned after the city of publisher.
- In the case of a reprint of a publication from a compilation the citation is: author year of original publication, page: ALBRECHT 1990,129. In the bibliography (see also 4.2.4.5):

  ALBRECHT, Hartmut 1990: Nachdenken über Beratung. Einsichten und Erfahrungen mit dem “Training & Visit”-Ansatz der Weltbank. In: *Berichte über Landwirtschaft*, 68, 382-392. Cited from: HOFFMANN, Volker (Ed.) 1992: Beratung als Lebenshilfe. Humane Konzepte für eine ländliche Entwicklung. Margraf, Weikersheim, 129-142.

If something is cited from our **course readers,** it should be checked whether a source of the part used is mentioned, in which case the citation is: author, source, cited from; otherwise the persons mentioned on the top right of the title page can be considered as the authors.

If **internet** is used as a source, not only the internet address but also the date the site was accessed should be mentioned since websites can change quickly. Often the author information is not listed at the top of a document. Check the bottom or follow any links to the website´s home page to search for author information. Authors can also be organisations or government agencies, or the owners of the site can be cited as editor (ed.). Your reference must include the author, title, the date of downloading the document and the fully internet-address.

Simple references are mentioned in the text between parentheses. **Footnotes** are used when several authors or sources are cited, or when comments are given (see also 4.2.4.5, References).

References to other parts of the documents are made by mentioning numbers of chapters, annexes, tables, figures or overviews. Page numbers are usually not specified (very labour intensive, the reader can use the directories to find the appropriate pages).

#### 4.2.4.3 Pictures, tables and overviews

**Pictures, tables, overviews**, etc. (usually depicted in "boxes") are located as close as possible to the text in which they are referred to. In case of shortage of space, the box is positioned right on top of the next page, **the resulting space is filled with text from behind the box**.

The titles have the same font as the main text, but are somewhat smaller (font size 12) and their number including the colon are in bold typeface. They are usually positioned on top of the table, picture or overview, but the title of the pictures can also be placed beneath. Hanging indents are applied to ensure that the second line of (longer) titles starts under the text and not under the number. The distance between the title and the box is 6 pt, a little less than the usual distance between paragraphs. Sources are mentioned underneath, also with a distance of 6 pt, in Arial with size 11 or 10.5.

Inside tables and outlines usually Arial 11 or 10.5 is used. If necessary, somewhat smaller sizes or Arial Narrow are also possible. Footnotes belonging to the table are integrated at the bottom of the table. When using the % character no space is inserted between the number and the character (100% instead of 100 %).

With regard to the table arrangement: in tables with one column only a single line is inserted between heading and data rows. Another single line can be added to separate a (last) row with totals from the others. Inside the table double lines have to be avoided. Only in the case of tables with two or more columns the title or total row can be separated from the rest with a double line, but it is preferable to use a line with a larger width instead. The use of vertical lines is up to the author. In all cases tables, as well as figures and outlines, should be framed with a single line border. The headline can be emphasized by bold script, as in Table 1.

**Over the whole page width**

**Table 1:** Illiteracy rates in the **research villages** by sex and age group, 1988 (in %)

| **Age (years)** | **Atotinga** | | **Houeto** | |
|---|---|---|---|---|
| | **female** | **male** | **female** | **male** |
| 6 - 9 | 85 | 68 | 64 | 50 |
| 10 – 19 | 84 | 54 | 40 | 20 |
| 20 – 29 | 88 | 63 | 72 | 38 |
| > 30 | 98 | 86 | 88 | 59 |
| Σ | 90 | 69 | 68 | 48 |

Tables, figures or outlines exceeding the width of half a page are centred horizontally and the space on both sides of the table is left empty. In the other cases the box is either left or right aligned and the main text continues resp. at the right or left side. Table 1 is an example of a wide table.

**Within the text**

The same format as in normal tables is applied (see Table 2). The distance between the surrounding text and the frame should be approx. 0.5 cm, between table lines and content approx. 0.15 cm or 3 pt.

**Acknowledgement of sources**

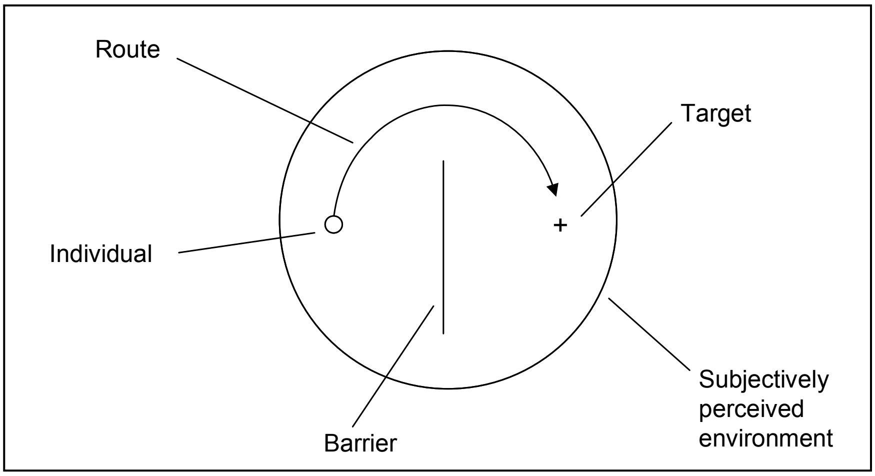
If the contents of the table, figure or outline are not or only partly based on the author's own research, acknowledgement is required of the consulted sources, usually at the bottom of the box (see for example Table 2). In figures or graphs one often adds: after…., based on.., adapted from…., etc. Also legends, comments, etc., are placed directly below or at the bottom of the box, not in the footnotes.

**Table 2**: Distribution of religions on national and village level

| Religion | Benin in % | Atotinga in % | Houeto in % |
|---|---|---|---|
| Voodoo | 61.0 | 82.5 | 60.7 |
| Catholic | 17.0 | 16.9 | 32.0 |
| Protestant | 5.0 | - | - |
| Islam | 15.0 | 0.1 | 1.9 |
| Free church and sects | 2.0 | 0.5 | 5.4 |
| Σ | 100.0 | 100.0 | 100.0 |

Source: FEDERAL STATISTICAL OFFICE (1988,20) and own data

**Figure 1:** Model of the psychological field




Source: ALBRECHT et al. (1987,70) after LEWIN (1963)

#### 4.2.4.4 Table of contents

Only in very voluminous documents an overview of the content limited to the main chapters (up to three levels) is given prior to the comprehensive table of contents, which in that case starts at the backside of the overview.

An example of a table of contents follows on the next page.

# Table of contents



The sub-chapters can be slightly indented to stronger emphasize the different chapter levels.

#### 4.2.4.5 References / Bibliography

The (literature) references start on a new page. The recommended font is Arial 10.5, line spacing is single. After the first line the subsequent lines are indented approx. 0,5 cm (hanging indent). The distance to the next paragraph is 3pt.

Author names are written in small caps, not only in the references, but also in the main text (EINSTEIN) and in footnotes, tables, etc. (EINSTEIN). Names of publishers or publishing organisations are dealt with similarly. Other persons and organisations are entered in normal text. In given names uppercase and lowercase are used as usual. Several author names are separated by semicolons or commas. Up to three authors or publishers are mentioned fully by name, in the case of more than three, only the first person is mentioned and "et al." is added.

**Books** are cited as follows: surname, given name or initials, year: title and subtitle. Publisher and publisher city, number of pages (optional).

**Publications from compilations, proceedings, commemorative publications**, etc.: the title is followed by a full stop and "In:", followed by the author (mostly the editor) or publisher: title of the compilation. Publisher and publisher city, number of pages.

In **journals** the author and title (of for instance the article) are followed by a full stop and "In:", followed by the journal name or its abbreviation (use only the journal's own-abbreviation), year (volume), issue (if applicable), number of pages. It is recommended to italicise the journal name.

In citations from **documents in other languages** the corresponding terms and abbreviations can be used, but the other details should be in the same language as the manuscript.

In citations from **documents in less common languages**, a translation can be used adding a footnote: own translation, sometimes followed by the original citation. The source is mentioned in the text at the end of the citation. In the case of languages with other characters (e.g. Arabic, Chinese, Japanese) the details in the references have to be translated as well; an "*" is added in front of the author name and in a foot note the following: original text in Arabic, author's translation.

Examples:

BARBER, K. 1989: How Man makes God in West Africa: Yoruba attitude towards the Orisha. In: *Africa*, 51(3), 724-745.

BIERSCHENK, Thomas; ELWERT, Georg; KOHNERT, Dirk 1991: Langzeitfolgen der Entwicklungshilfe: Empirische Untersuchung im ländlichen Westafrika. In: *Afrika Spectrum*, 91/2, 155-181.

HOFFMANN, Volker (Hrsg.) 1992: Beratung als Lebenshilfe. Humane Konzepte für eine ländliche Entwicklung. Margraf, Weikersheim.

SCHÄFERS, B. 1989: Gesellschaft. In: Schäfers, B. (Ed.): Grundbegriffe der Soziologie. Westdeutscher Verlag, Opladen 110-114.

WISWEDE, Günther 1991: Soziologie. Verlag Moderne Industrie, Landsberg am Lech.

Further guidelines on citations and acknowledgement of sources were already given in 4.2.4.2.

#### 4.2.4.6 Abbreviations

To keep texts understandable, the use of abbreviations should be minimized. Common acronyms like e.g. ("exempli gratii" = for instance) and etc. ("et cetera" = and so on) are acceptable. Abbreviations that are used, including uncommon units of measurement are mentioned in a glossary. Spaces are not used in abbreviations, and for abbreviations at the end of a sentence no (second) full stop is added.

#### 4.2.4.7 Bold, italics and other effects

A wide availability of different style effects, as also used in this document, allow a broad diverse format. Old-fashioned effects like underlining are avoided. A style should have only one function where possible, for instance *italics* characterize quotations, special expressions, or foreign words. For other accentuations **bold** is used. For quotation marks one style is sufficient, for instance " ". Quotations within quotations are then expressed using single quotes: 'and'. USE OF CAPITALS is ugly, only small caps are used for AUTHORS and EDITORS.

**Shading** of text (even in tables and outlines) is not recommended, and only applied to serve a specific didactical objective that cannot be accomplished using other style effects. In pictures and graphs, shades can be useful when they are clearly distinguishable (also in the legend), like white, grey, or black. Hatching (shading consisting of multiple crossing lines) and other black-white patterns are strongly recommended. They should be as distinct as possible with a maximum of 50 lpi (lines per inch). The effect should be tested by printing (half size, on the printer that will be be used for the final version) or making a half size copy of the full page. To avoid disturbing overlaps "moiré" or blotchy grey shades, line drawings and text should be scanned at 600 dpi or more, graphs with surfaces at 240 dpi.

## 4.3 Language and style

How do I write a scientific text, which is clear, comprehensive, interesting, concise and understandable? Different language styles provide varied expressions in a language. In a text nothing should be coincidental: transitions, connections, punctuations, choice of tenses, words, word order and terms. In the following some stylistic guidelines that need attention are summarized (see also NICOLINI 2001,60-99)[6]:

**Definition of terms**: As the reader generally doesn't have the same background knowledge as the author, everything should be formulated clearly and explained well. Uncommon terms, mostly subject specific, should be defined (usually in a footnote, never in a separate chapter on definitions of terms!).

**Abbreviations** must be used consistently and with care; it is preferable that they are avoided altogether.

**Pompous use of language**: often words or expressions like "regarding", "concerning", can be replaced with "about", "on", etc. Also needless words should be omitted, some ex-

[6] http://abacus.bates.edu/~ganderso/biology/resources/writing/HTWgeneral.html#style (14.10.2008)

amples: “this subject” instead of “this is a subject that”, “because” instead of “the reason why is that”, “though” instead of “in spite of the fact that”.

Scientific writing is not synonymous with the use of inflated jargon, characterized by a fashionable imposing vocabulary.

**Sentence construction**: avoid long complicated sentences that hinder understanding content of the text. Break up sentences where possible, do not use too many subordinate clauses.

**Paragraphs**: give structure to the text and point out the line of thought. Make sure that every paragraph has a clear topic sentence and that the paragraph content supports the topic. Paragraph and sentence sequence should be logical, avoid the use of meaningless conjunctions.

**Use Active Verbs**: Use active verbs whenever possible; writing that uses passive verbs too much (is, was, has, have, had) is deadly to read and almost always results in more words than necessary to say the same thing:

> Active: “the mouse consumed oxygen at a higher rate...”
> Passive: “oxygen was consumed by the mouse at a higher rate..”

The clarity and effectiveness of your writing will improve dramatically as you increase the use of the active voice.

**Use of the first person** should not be avoided when applicable: use of “the author” or the passive forms often suggest an objectivity that is not there. It is important to distinguish clearly between opinions, facts, interpretations, assessments and observations. Facts have to be proven, assessments have to be argued.

**Adjectives** should be used sparingly to avoid platitudes caused by embellishment of (often imprecise) nouns.

**Gender** in language usage: using the same agent-noun for both sexes is often possible and the simplest way to avoid linguistic sexism. More important is the use of pronouns. One solution is to announce at the beginning of the document that the male form is valid for both sexes and that no discrimination is intended. Another alternative is to use a slash between the pronouns (he/she, his/her). For more information, see for instance http://archive.idrc.ca/books/edit/sg05e.html#femine.

## 4.4 Checking the text

- Checking should not only be done on-screen, but also in the printed form because it shows the final picture that the reader will see.
- Start with examining the overall text and checking its **consistency**: for instance by scrutinizing the headings as a whole and ensuring that the order is logical and no essential parts are missing.
- Delete everything (superfluous words, not relevant ideas) what is not really necessary for the text.

- Weak points are often only evident when the text is **read aloud**. In the course of the proofreading the text should be read aloud several times the slightest disruption the concerning section should be checked whether it can be deleted or modified (especially not fitting prepositions are more obvious when emphasized).
- Watch **spelling, grammar and syntax**. Typographic errors are often difficult to find, therefore, we recommend using spell check, or having a third party proofread the document.
- Do the verbs refer to the correct nouns? Are the active/passive forms used in the correct way?
- Check the consistency of the **tenses**: research work has been completed, therefore, the past tense is generally used throughout most of the document when referring to the actual work, including statements about expectations or hypotheses. Use the past tense, as well, when referring to cited work of others.
- Take care of a balanced syntax (proportion between verbs, nouns, etc.).
- Delete **superfluous adjectives**.
- Identify **stereotypes** and replace them by precise words and exactly defined terms.
- Replace nouns with active verbs where possible: "because it became darker" instead of "because of increasing darkness".
- Remove undefined, vague statements.
- Carefully check punctuation marks (hyphens, periods, parentheses, symbols) and remove whatever is unnecessary.
- Check the **sentence structure**, especially the word arrangement, with special attention to long sentences. Where possible, eliminate run-on sentences, and compound sentences; if it is not possible, then carefully check the sentence construction.
- Apply the "naked sentence" method to check if subject and predicate fit together by eliminating all unessential parts.
- Read individual **paragraphs**: check the content: is the message clear? Form clear paragraphs consisting of several sentences, otherwise the text decomposes completely. Watch the transitions from one idea to the next.
- **Headings** should be short, clear and highlight the ensuing text.
- The **message** "what I want to convey" should be an integral part of the read-through.

## 4.5 Design of the title page

The title page is the "billboard" of your work and should contain the following information: university, institute name, department name, head of department, subject, title, student name, place, date (month + year), demanding/financing institution (if applicable). An example is shown on the next page.

The **title** should be short, catchy and appeal to the reader. *Farmers, snails and ducks*. Necessary additional information can be presented in the **subtitle**, which can be some-

**Figure 2:** Template for the title page

# Universität Hohenheim

## Institute for Social Sciences in Agriculture

**Department of Rural Sociology**

**Master Thesis related to the module**

## <Title of the module>

**Head of the department**

# Main title

## Subtitle

**submitted by**

**Name, given name**
**street**
**place**

**Hohenheim, date**

**This work was financially supported by the**
**<name of organisation / place>**

what longer than the title. *Farmers' reactions in a Philippine village on the emergence of the harmful Golden Apple Snail*. Clichés like "with special regard to" are not appealing. At the beginning of the research a working title can be used that can be changed upon registering, handing over the final result (please advise the examination office) or even at printing.

## 4.6 Declaration

A Master Thesis is a performance assessment. Therefore you have to declare under oath that the thesis was accomplished independently, using only the literature mentioned in the thesis and without submitting the thesis to another institution. Since it is important that other students and interested persons have access to your work, your signature permits the exploring and lending of your work in the institute's library (Figure 3).

## 4.7 Handing in the document

Print your document double sided and on white paper. We would also like to receive a separate copy of your document and summary. To facilitate further editing of your material, you are also requested to hand over an electronic copy. The text is saved in Word and pdf format, graphs and pictures in PNG (Portable Network Graphics) format. Any use of your material will be requested in advance.

# 5 Evaluation and marking

### Written part

On or before the established date, two bound copies of the master thesis have to be submitted to the examination office (including the statement on the authenticity). From there, it will be sent to the first and second assessor. After that, you can already agree on the date of the defence of the thesis. It will then take two to four weeks to mark the work (the criteria are mentioned in Chapter 4).

Even if you chose a second assessor from another institute, we still request you to hand in two copies of your thesis. One copy is kept for corrections and demonstration purposes in the professor's office; the other one is put on display in the library. Your signature under "Declarations" allows third parties to have a look at your thesis.

### Oral part

The date for defending your thesis is determined by both assessors in consultation with you. The duration of the colloquium is 30-45 minutes and consists of the presentation of your work (15 minutes, in which you present a summary of your research: problem statement, objectives, theory, methodology, results, conclusions, for small audience the presentation is just orally, if visualization is crucial with PowerPoint), followed by questions from the assessors. If the colloquium is held in the form of a seminar in which several people participate, it is advisable to prepare a PowerPoint presentation. After the colloquium, the assessors establish the final mark together.

**Figure 3:** Declaration

**Declaration***

I,

Name, First name ______________________________________________

Born on ______________________________________________

Matriculation number ______________________________________,

hereby declare on my honour that the attached declaration,

□ Homework/Presentation

□ Bachelor Thesis

□ Master Thesis

□ Diploma Thesis,

has been independently prepared, solely with the support of the listed literature references, and that no information has been presented that has not been officially acknowledged.

Supervisor
Lecturer ______________________________________________

Thesis topic ______________________________________________

Semester ______________________________________________

I declare, here within, that I have transferred the final digital text document (in the format doc, docx, odt, pdf, or rtf) to my mentoring supervisor and that the content and wording is entirely my own work. I am aware that the digital version of my document can and/or will be checked for plagiarism with the help of an analyses software program.

______________________________________________

City, Date, Signature

* This declaration is an independent compilation and attachment to your final document. Work without this declaration will not be accepted.

If the thesis was written together with fellow-students, the examination takes place collectively. For each additional person the duration is extended 10-15 minutes (including the presentation, of which each group member should be assigned an equal part).

# 6 Publishing of articles

In general, research results should be made accessible to a larger public. Therefore, we encourage you to publish selected results in relevant journals. This requires a supplementary effort, because it is not simple to preserve the essential content by reducing 80-120 pages to only 10 or less. Concerning formatting, citations, etc., the guidelines of the journal have to be followed. If your work is deemed publishable in total, our book series also offers possibilities.