

Career Planning no. 6



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PACKAGE SCIENTIFIC WORK THROUGH PLAGIARISM- FREE DEDUCTION

Homework (by students), seminar, bachelor's, master's and doctoral theses (by students and doctoral candidates) with success
– also methodological –

Scientific work through plagiarism-free deduction

Exercise book Scientific work through
plagiarism-free deduction

Career Planning no. 4



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SCIENTIFIC WORK THROUGH PLAGIARISM- FREE DEDUCTION

Homework (by students), seminar, bachelor's,
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doctoral candidates) with success
– also methodological –

Abstract

After many decades of scientific writing and years of lectures on scientific writing, the author of this work (textbook and exercise book) sees his task in presenting a guide to plagiarism-free scientific work by deduction (= reasoning), which is written in the style of a scientific work for illustration purposes. Because there are many books on scientific work, but only this one on scientific work through plagiarism-free deduction. The nine special features of this book (unique selling points) are:

1. teaching of a deductive style of writing,
2. teaching of methodological work,
3. teaching of plagiarism-free writing,
4. teaching of IT implementation of the scientific work,
5. teaching of the (German) tax deductibility of training costs,
6. teaching of Albert Einstein as a ingenious example,
7. teaching the aim of scientific work,
8. teaching the creation of scientific attention and
9. exercise book.

Therefore, the central question arises as to how through plagiarism-free deduction (= reasoning) it can be written scientifically. The danger of realizing plagiarism is greatest when someone produces a purely text-scientific work and is not guided by their own red thread, but by someone else's texts. However, if scientific methods are used, the risk of plagiarism is minimal, because the red thread is determined by these methods.

The scientific work is characterized in particular by a scientific-deductive structure and style of writing, in which each statement is deducted (= reasoned) from the previous one. With respect to plagiarism-free quotation, it is particularly important to note that direct (literal) quotations are started and ended with quotation marks and the footnote begins – without the prefix “Cf.” or “S.” – directly with the surname of the quoted author, while indirect (corresponding) quotations are started and ended without quotation marks and the footnote begins with “Cf.” or “S.”. In the case of tables and figures in the text, the reference to the source begins with “Source ...”. In this way, through plagiarism-free deduction (= reasoning) it can be written scientifically, by either following one's own red thread scientifically in compliance with the citation rules or by following a scientific methodology of one's own subject area.

November 2022

Prof. Dr Rainer Zielke

1. Introduction

Plagiarism is the **unlawful appropriation of someone else's thoughts**, ideas, etc. in a scientific or artistic field **and their publication without citing them**. This constitutes theft of intellectual property. **Plagiarism usually violates examination regulations and employment contracts**.

In the Merkel era, numerous ministers fell **victim to so-called plagiarism hunters**. Plagiarism hunters are appraisers who go in search of plagiarism – **often for a fee from interested parties**.

The **loss of the doctoral degree due to plagiarism** often means the **immediate end of one's career**, because the position as a minister, the honorary professorship, the public reputation and thus re-election as a member of parliament are often lost with the doctoral degree.

But that's just the tip of the iceberg. **Anyone who acquires academic degrees through plagiarism** and later acquires a prominent professional position **makes themselves vulnerable to plagiarism hunters**.

Many blame the author of the scientific work for plagiarism. According to the view represented here, the **supervising professors are at least partly to blame**, because they should have taught **the avoidance of plagiarism and controlled plagiarism better**.

After many decades of scientific writing and years of lectures on scientific writing, the author of this work (textbook and exercise book) sees his task in presenting a **guide to plagiarism-free scientific work by deduction** (= reasoning), which is written in the style of a scientific work for illustration purposes. Because there are many books on scientific work, **but only this one on scientific work through plagiarism-free deduction**. **The nine special features of this book (unique selling points) are:**

1. teaching of a deductive style of writing,
2. teaching of methodological work,
3. teaching of plagiarism-free writing,
4. teaching of IT implementation of the scientific work,
5. teaching of the (German) tax deductibility of training costs,
6. teaching of Albert Einstein as a ingenious example,
7. teaching the aim of scientific work,
8. teaching the creation of scientific attention and
9. exercise book.

The following Fig. 4 illustrates the nine special features (unique selling points) of this work:

<p>1. Teaching of a deductive style of writing</p> <ul style="list-style-type: none"> • The scientific work is strictly logical. Each statement is deducted (= reasoned) from the previous one. The structure is deducted from the topic of the work. • The structure basically consists of five sections, an introduction, a basic part, two main parts and a summary. The structure is not fixed over time, but is dynamically adjusted as knowledge advances. • 8 wording examples are given. 	<p>2. Teaching of methodological work</p> <ul style="list-style-type: none"> • 123 definitions for branch of science and scientific • Because the right scientific method is the surest way to avoid plagiarism and to find your own creative and imaginative approach to the topic – this should encourage scientific work with scientific methodology and at the same time to define.
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<p>3. Teaching of plagiarism-free writing</p> <ul style="list-style-type: none"> • Avoiding plagiarism by following your own red thread, not someone else's texts • Avoiding plagiarism by following your own scientific methodology 	<p>4. Teaching of IT implementation of the scientific work</p> <ul style="list-style-type: none"> • 18 IT notes on the implementation of the scientific work • for the word processing program Microsoft Word
<p>5. Teaching of the (German) tax deductibility of training costs</p> <ul style="list-style-type: none"> • Training costs are tax-deductible as expenses for your own professional training as part of the special expenses up to € 6,000 per calendar year (§ 10 Para. 1 No. 7 EStG). • Training costs, if they occur within the scope of the seven types of income, are tax-deductible without limit as income-related expenses or operating expenses. 	<p>6. Teaching of Albert Einstein as ingenious example</p> <ul style="list-style-type: none"> • Albert Einstein is considered the epitome of the researcher and genius. This book is dedicated to Albert Einstein, the creative, imaginative and brilliant example of all scientific work.
<p>7. Teaching of the aim of scientific work</p> <p>The aim of scientific work is the valuable knowledge that can only be gained with passionate curiosity, imagination, creativity and precise observation.</p>	<p>8. Teaching of creation of scientific attention</p> <p>Scientific attention is generated through the creation of new terms, new definitions, new (statistical) diagrams, new theories, laws or sciences as well as new (partial) sciences for one's own research.</p>
<p>9. Exercise book</p> <p>This companion volume (exercise book) to the main volume Scientific work through plagiarism-free deduction contains questions and answers on the main volume, with which the pupils students/post-graduates can decisively deepen and consolidate what they have learned/about scientific work. The respective answer follows directly after the question, so the answer should be covered first. If the question is not answered correctly according to one's own assessment, it is noted on a list and repeated in the next round.</p>	

Fig. 4: Nine special features (unique selling points) of this work

Source: own representation

Therefore, the **central question** arises as to how through **plagiarism-free deduction** (= reasoning) it can be written scientifically. This results in the following **course of the investigation**: After the introduction, the basics of plagiarism-free scientific work are to be examined first. Based on this, the scientific work is to be characterized and systematized. Building on this, the citation method is to be presented as a central component of plagiarism-free scientific work. Finally, the **results of this work are to be summarized in theses**.

But first, the **basics of plagiarism-free scientific work** are to be examined.

2. Basics of plagiarism-free scientific work

2.1 Concept of plagiarism, its consequences and how to avoid it through deduction and scientific methods

2.1.1 Overview

Plagiarism is the **unlawful appropriation of someone else's thoughts**, ideas, etc. in a scientific or artistic field **and their publication without citing them**.² This constitutes theft of intellectual property. **Plagiarism usually violates examination regulations and employment contracts.**

- **Writing note 01 text-scientific**

The danger of realizing plagiarism is greatest when someone produces a purely text-scientific work and is not guided by their own red thread, but by someone else's texts.

- **Writing note 02 methodological**

However, if scientific methods, e.g. empirical methods, mathematical-statistical forecasting methods, econometric methods or spreadsheet systems are used, the risk of plagiarism is minimal, because the red thread is determined by these methods.

- **Writing note 03 own branch of science**

Every author of a scientific work is therefore called upon to explore the possible scientific methodology in their own branch of science.

- **Writing note 04 alternative methodology:**

Problems can never be solved with the same mindset that created them.

Dr Albert Einstein

- **Writing note 05 all branches of science**

In addition, it is called upon to look through all branches of science and scientific methods of the subsequent systematization to see whether something is suitable for one's own scientific work.

The following Fig. 5 illustrates the connection between scientific work, scientific writing and scientific research:

Scientific work • generic term • scientific writing & research	
Scientific writing <ul style="list-style-type: none"> • emphasis on the formal aspects • rather text-scientifically and thus • more likely to generate plagiarism 	Scientific research <ul style="list-style-type: none"> • also, methodologically and with it • rather avoiding plagiarism • own creative and imaginative access to the topic
Aim valuable knowledge Because the aim of scientific work is the valuable knowledge that can only be gained with passionate curiosity, imagination, creativity and close observation.	

Fig. 5 Connection between scientific work, scientific writing and scientific research

Source: own representation

2.1.2 Finding the right scientific method

In addition, Wikipedia and others list numerous entries for the keywords **branch of science** and **scientific method**, which are presented here in alphabetical order, because **the right scientific method is the surest way to avoid plagiarism** and to find your **own creative and imaginative approach to the topic – this is**

² Cf. NN., Plagiarism, 2022/02.

losses. According to this, the **loss deduction** (§ 10d EStG)¹³⁶ can be applied for in assessment periods with a positive total amount of income (**loss carry-back or carry-forward**).

It follows that the risk of realizing plagiarism is greatest when someone is doing a purely textual work and is not guided by their own red thread, but by someone else's texts. However, if scientific methods are used, the risk of plagiarism is minimal, because the red thread is determined by these methods.

3. The scientific work

3.1 Aim of scientific work

Dr Albert Einstein received his doctorate with a dissertation of only 20 pages.¹³⁷

Because the quality of a book is not measured by the number of pages it contains, but by whether it is valuable or not. Because quality comes before quantity.

Because the **aim of scientific work is the valuable knowledge** that can only be gained with passionate curiosity, imagination, creativity and close observation.

Instead of the usual labeled pages, the following **nine unique selling points** are developed here:

1. teaching of a deductive style of writing,
2. teaching of methodological work,
3. teaching of plagiarism-free writing,
4. teaching of IT implementation of the scientific work,
5. teaching of the (German) tax deductibility of training costs,
6. teaching of Albert Einstein as a ingenious example,
7. teaching the aim of scientific work,
8. teaching the creation of scientific attention and
9. exercise book.

This book explains simply and clearly the **tools of scientific work through plagiarism-free deduction** (= reasoning); see the following Fig. 8:

¹³⁶ Bundesministerium der Justiz und für Verbraucherschutz/ Bundesamt für Justiz, § 10d EStG, 2021.

¹³⁷ Cf. Einstein, Albert, Moleküldimensionen, 1905.

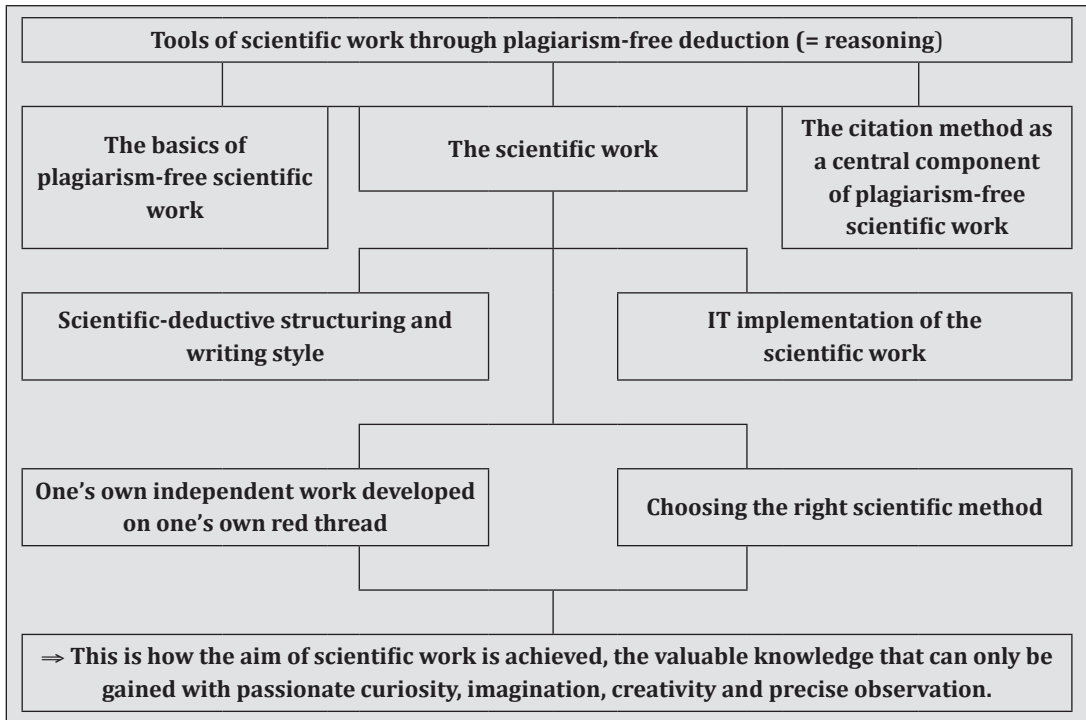


Fig. 8: Tools of scientific work through plagiarism-free deduction (= reasoning)

Source: own representation

The reader thus receives the tools for scientific work through plagiarism-free deduction (= reasoning). He learns to develop his own independent work using his own red thread. Assistance is given to select the right scientific method.

This is how the **aim of scientific work** is achieved, the **valuable knowledge** that can only be gained with passionate curiosity, imagination, creativity and precise observation.

3.2 Scientific-deductive structure and writing style

3.2.1 Overview

On the basis of the foundations of plagiarism-free scientific work, the scientific work must now be characterized and systematized.

Anyone who early on acquires a **scientific-deductive structuring and writing style**, writes **independently along the red thread that they have** developed and does not allow themselves to be guided by foreign texts. This eliminates the danger of copying and realizing plagiarism.

Therefore, the **scientific-deductive structuring and writing style** is explained as follows:

The scientific work is strictly logical. Each statement is **deducted** (= reasoned) from the previous one. The structure is **deducted** from the **topic** of the work.

The structure basically consists of five sections, an introduction, a basic part, two main parts and a summary. **The structure is not fixed** over time but is dynamically adjusted as knowledge advances.

If, for example, it turns out that a second basic part is necessary, a common heading can be found for both basic parts and these move to the next lower level.

3.2.2 Structure

3.2.2.1 Overview

The explanations in the text part are preceded by a structure in the table of contents. In this:

- the **section headings** should be worded **meaningfully**,
- sub-headings are only made according to **one classification criterion**,
- a sub-division must lead to at least **two and at most nine sub-headings**,
- should be structured **purely numerically (1.; 1.1; 1.1.1)**.

If there is a 10th sub-heading, a common heading can be found for several of these sub-headings and they move to the next lower level.

The positions of the structure are to be provided with the corresponding page references, they must match the headings of the sections in the text and their content must be briefly but precisely identified. If possible, no connecting sentences should be inserted in the text between a main heading and the subordinate sub-heading of the structure (**no intermediate text**). Intermediate texts should be preceded by a heading, an overview or general information.

3.2.2.2 Contents

The structure is part of the work and should show how the topic was understood and worked on. It must therefore reflect the logical structure (“**red thread**”) and must provide initial information about the content of the work. The structure is therefore the result of an intensive examination of one’s own problem statement. In this respect, it should also stand out from the structure of the evaluated literature in order to be able to sufficiently consider individual focal points and special features of your own topic formulation – also necessary for **plagiarism-free** writing.

3.2.2.3 Shape

A logical and **self-contained line of thought** is also reflected in a **formally and logically flawless structure** with corresponding structure points. Positions that are on the same level in the structure must have the same rank in terms of content and must start from a common, overriding problem (i.e. points 2.1.1 and 2.1.2, for example, all clarify the overriding problem area 2.1). Furthermore, points at the same level of detail should, as far as possible, be of equal material weight both among themselves (e.g. 2.1.1 and 2.1.3) and in comparison with points of the same order (e.g. 4.3.1 and 4.3.6).

When subdividing, one has to make sure that, for example, a sub-item 1.1 is followed by a sub-item 1.2, etc. This means that a **structure point of an outline level must never stand alone**. If possible, it should be **avoided that the individual sub-points represent a verbatim repetition of the superordinate points or even the topic of the work** (e.g. “3. Concept and essence ...”, “3.1 Concept”, “3.2 Essence ...”).

The **classification** of the structure points must be done **numerically**:

1. ...
 - 1.1 ...
 - 1.1.1 ...
 - 1.1.2 ...
 - 1.2 ...

A **point only follows those structure points that are ordinal numbers** (e.g. 1. = first, 2. = second, etc.). No point is added to any other outline points (e.g. 1.1, 1.2, etc.).

If necessary, it is advisable to clearly separate larger groups of topics or ideas from each other, e.g. by dividing them into parts, chapters or sections.

A clear and generous arrangement of the structure points (e.g. by indenting) facilitates insight. If the subdivisions are too deep, there is a risk that the problem will be fragmented and that the topic will

be dealt with in a self-contained manner. This should therefore be avoided as far as possible by a renewed critical revision of the structure.

It is therefore **not effective if a single section is less than ½ a page**. If the scope of a bachelor's or master's thesis is limited to 50 pages, it follows that only a structure **up to the 3rd structure level makes sense** (e.g. 1.1.1, 1.1.2, etc.).

3.2.3 Introduction

The introduction begins with a **problem statement**. In it, the **central question** contained in the **topic** must be worked out. The sub-questions or individual points to be processed to answer them are to be named and **deducted from the central question** (= reasoned). If necessary, this also includes **topic delimitations** and processing instructions.

Factual comments on the **subject, aim and methodical structure** of the work as well as any necessary definitions of terms should emerge from the problem statement.

- **Wording example 01 Problem statement**

*Identifying the problem is far more important than identifying the solution,
because accurately identifying the problem leads to the solution.*

Dr Albert Einstein

The **central question** is deducted from the problem statement.

- **Wording example 02 central question**

Therefore, the central question arises as to how through plagiarism-free deduction (= reasoning) it can be written scientifically.

Finally, the course of the investigation follows, in which the sub-questions are deducted (= reasoned) from the central question. The sub-questions correspond to the individual sections of the structure.

- **Wording example 03 Cause of the investigation**

This results in the following course of the investigation: After the introduction, the basics of plagiarism free scientific work are to be examined first. Based on this, the scientific work is to be characterized and systematized. Building on this, the citation method is to be presented as a central component of plagiarism in free academic work. Finally, the results of this work are summarized in theses.

3.2.4 Basic part, main parts and transition

The basic part deals with questions that are more fundamental to the processing of the topic, while the main parts are more concerned with deriving an answer to the **central question**.

A section heading may not be identical to the **topic** of the work.

Since a sub-question is processed in each section, the answer to the respective sub-question is deducted at the end of the section.

Then the sub-question of the **next section is deducted from the answer to the respective sub-question**, thus creating a **transition to the next section**.

- **Wording example 04 Danger text-scientifically**

The danger of realizing plagiarism is greatest when someone produces a purely text-scientific work and is not guided by their own red thread, but by someone else's texts. However, if scientific methods are used, the risk of plagiarism is minimal, because the red thread is determined by these methods.

Example:

Cf. BFH of January 26, 1970 IV R 144/66, BStBl 1970 II, p. 264 subsq. (267).

4.4 Bibliography

4.4.1 Contents

All sources referred to in footnotes in the text are listed in the bibliography. **Laws are not to be listed in the bibliography.** In order to identify the status and source of the laws used, a **reference can be made in the list of abbreviations**, e.g. KStG = Corporation Tax Act in the version published on October 15, 2002, Federal Law Gazette I, p. 4144, last amended by the Tax Reduction Act of October 24, 2000 (Federal Law Gazette I, p. 1433). The designations for the index are “bibliography” or “index of sources”.

When using the short citation method suggested here, the footnotes in the list of references include the surname and first name of the author; the **keyword selected for the short citation method or the journal** (abbreviated) and the **year**. These are placed in brackets and placed in front of the full listing of all bibliographic data.

In detail, the following information is required:

- **With books:**

Surname and first name of the author (alternatively the editor, academic degrees and titles are not mentioned here),

(Keyword, year):

Title of the work,

Volume (if necessary),

Surname¹³⁸ and first name of the editor, issuer or translator (if necessary), edition,

place of publication,

Publishing year.

- **For journals and regularly published collections:**

surname and first name of the author,

(abbreviation of the name of the journal year),

Title of the article,

in: title of journal (,)

Place of publication (for foreign journals only),

Publishing year,

first and last page number of the article.

- **For compilations**

Surname and first name of the author or editor,

(keyword, year):

Title of the article,

in: title of the compilation,

Volume,

Surname, first name of the editor,

Edition,

Place of publication,

Publishing year,

first and last page or column number of the article.

¹³⁸ Up to three authors, editors, issuers or places of publication are to be recorded. If there are more than three authors, “et al.” is to be added to the first three. In case of dissertations, the university location must always be given.

- **For series of publications**

Surname and first name of the article or the editor,

(keyword, year):

title of the work,

in: designation of the publication series,

Volume,

Surname and first name of the editor or issuer,

Edition,

Place of publication,

Publishing year.

- **For comments**

Last name, first name (abbreviated) of the Editor(s) (ed.) or the commentary,

(short title, year):

comment title,

Volume,

edited by: name of editor,

Edition,

place of publication,

Year of publication or status of the edition used (for loose-leaf collections).

In addition to recording the comments under the name of the editor, they must also be listed under the names of all quoted editors:

Surname, first name (abbreviated) of the issuer,

in: Name of editor (if available) or commentary,

then continue as above, without short title,

§ indication including marginal numbers.

- **In judgments**

Name of court,

Date,

Reference number,

Reference,

first and last page number of the judgment.

Additional information may be useful; this has to be decided on a case-by-case basis.

4.4.2 Arrangement

In the bibliography, all sources used must be listed in **alphabetical order by author** or classified under “no author” (NN.). **Several publications by an author are listed according to their year of publication.** A general order according to the year of publication can provide insights worth knowing but is usually not practical.

When structuring the bibliography, a differentiated approach is required. Books, essays and commentaries can be summarized under the generic term “monographs”. For legal material, decisions of the highest courts, guidelines, administrative instructions, Internet sources, etc., a separate display is always advisable.

A division of the bibliography according to comments, books, dissertations, essays, etc. does not have to be made. However, the decisions of the individual courts must be shown separately.

4.4.3 Use of tables, diagrams, etc.

The tables, diagrams, etc. must bear the clearest possible description of the content. Particular attention should be paid to a precise spatial, temporal and factual delimitation of what is depicted.

The symbols used in a representation are – without regard to their detailed explanation in the text – to be explained in direct connection with the representation. This applies equally to the annotations added or adopted by the author. All representations, be they tables, diagrams or other illustrations, are to be provided without exception with a reference in the form of a caption. The word “source” must always be given.

Each table or graph should be numbered. The numbered tables are recorded after the table of contents in a list of tables and/or a list of figures.

Example:

Allocation of important types of taxes to the regional authorities in 2002			
Tax type	Percentage of local authorities		
	Federation	Federal states	Communities
Wage tax and assessed income tax	42.5	42.5	15.0
Interest deduction	50.0	50.0	–
Value added tax	51.4	46.5	2.1
Trade tax	50.0	50.0	–
(Trade tax allocation)			
Source: Federal Ministry of Finance (ed.), Data collection on tax policy, 2003 edition			

Extensive material, such as larger tabular and graphic representations, photocopies, longer legal texts, etc., is to be accommodated in the appendix or in an attachment. Tables and diagrams that are folded or arranged in landscape format should be avoided as far as possible; otherwise, they should be arranged so that the work is turned clockwise for reading.

In tables, it is recommended to use the following characters when necessary:

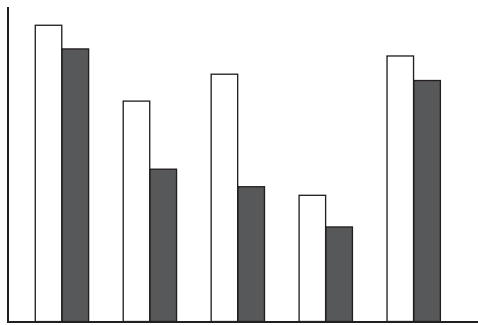
- a zero (0; 0.0, etc.) for a size less than half the count unit used;
- a dash (–) if nothing occurs (no case, no amount, etc.) or if entry is not possible for logical reasons;
- a point (.) if the number is not known or has not been collected;
- a superscript lowercase p (p) if the number was guessed.

In the case of **plagiarism-free citation**, it should be noted in particular that **direct (literal) quotations** are started and ended with **quotation marks** and the footnote begins – **without the prefix “Cf.”** – directly with the surname of the author quoted, while **indirect (corresponding) quotations** are started and ended **without quotation marks** and the **footnote begins with “Cf.”**. In the case of **tables and figures** in the text, the **reference to the source** begins with “Source ...”.

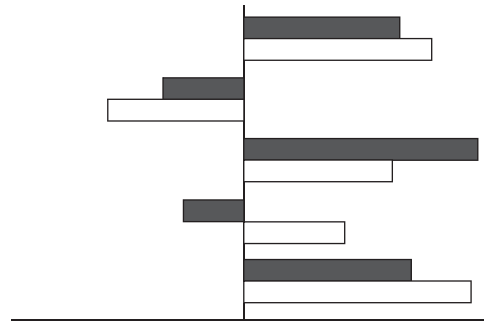
4.4.4 Examples for diagrams

In diagrams and graphics, statistical data or certain aspects of the same are graphically presented in a clear manner. However, this usually requires a summary of the data, so that information from the data is lost.

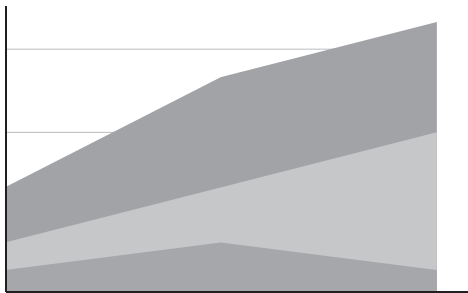
The following Fig. 12 gives an overview of conceivable diagram forms to clarify statistical data:



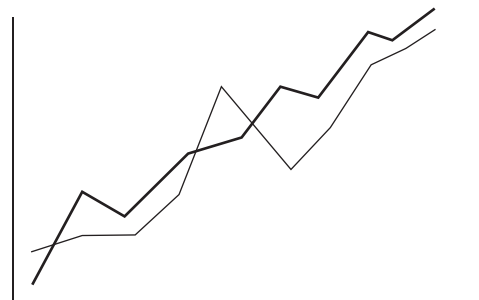
Bar or column chart



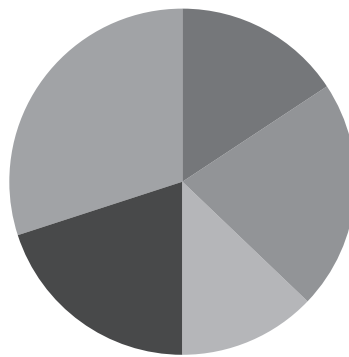
Bar chart



Area chart



Line chart



Pie chart

Fig. 12: Diagram shapes to clarify statistical data

Source: Manuel René Theisen, *Wissenschaftliches Arbeiten*, 17th ed., München 2017, p. 191

The bar or column chart, the bar chart, the area chart, the line chart and the pie chart should be mentioned in particular.

5. Summary

The results of this work can be summarized in the following theses:

- After many decades of scientific writing and years of lectures on scientific writing, the author of this work (textbook and exercise book) sees his task in presenting a **guide to plagiarism-free scientific work by deduction** (= reasoning), which is written in the style of a scientific work for illustration

Career Planning no. 5



Prof. Dr Rainer Zielke

ØSTFOLD UNIVERSITY COLLEGE, HALDEN/NORWAY

**(EXERCISE BOOK)
SCIENTIFIC WORK
THROUGH PLAGIARISM-
FREE DEDUCTION**

Homework (by students), seminar, bachelor's,
master's and doctoral theses (by students and
doctoral candidates) with success
– also methodological –

Question 1.2:

What is the central question of these two volumes on scientific work?

Answer 1.2:

How can through plagiarism-free deduction (= reasoning) be written scientifically?

Question 1.3:

What follows the central question?

Answer 1.3:

The course of the investigation.

Question 1.4:

What is the purpose of the investigation?

Answer 1.4:

In the course of the investigation, the sub-questions are deducted (= reasoned) from the central question. The sub-questions correspond to the individual sections of the structure.

2. Questions regarding: Basics of plagiarism-free scientific work

2.1 Questions regarding: Concept of plagiarism, its consequences and how to avoid it through deduction and scientific methods

2.1.1 Questions regarding: Overview

Question 2.1.1.1:

What is plagiarism?

Answer 2.1.1.1:

Plagiarism is the unlawful appropriation of someone else's thoughts, ideas, etc. in a scientific or artistic field and their publication without citing them. This constitutes theft of intellectual property. Plagiarism usually violates examination regulations and employment contracts.

Question 2.1.1.2:

When is the risk of realizing plagiarism greatest?

Answer 2.1.1.2:

The risk of realizing plagiarism is greatest when someone prepares a purely text-scientific work and is not guided by their own red thread, but by someone else's texts.

Question 2.1.1.3:

When is the risk of plagiarism minimal?

Answer 2.1.1.3:

However, if scientific methods, e.g. empirical methods, mathematical-statistical forecasting methods, econometric methods or spreadsheet systems are used, the risk of plagiarism is minimal, because the common thread is determined by these methods.

Question 2.1.1.4:

What should every author of a scientific work do to avoid plagiarism?

Answer 2.1.1.4:

To avoid plagiarism, every author of a scientific work is called upon to explore the possible scientific methodology in their own branch of science.

Question 2.1.1.5:

What should every author of a scientific work do as an alternative to avoid plagiarism?

Answer 2.1.1.5:

In addition, to avoid plagiarism, it is alternatively called upon to look through all branches of science and scientific methods to see whether something is suitable for one’s own scientific work.

Question 2.1.1.6:

What is the connection between scientific work, scientific writing and scientific research?

Answer 2.1.1.6:

<p>Scientific work</p> <ul style="list-style-type: none"> • generic term • scientific writing & research 	
<p>Scientific writing</p> <ul style="list-style-type: none"> • emphasis on the formal aspects • rather text-scientifically and thus • more likely to generate plagiarism 	<p>Scientific research</p> <ul style="list-style-type: none"> • also, methodologically and with it • rather avoiding plagiarism • own creative and imaginative access to the topic
<p>Aim valuable knowledge</p> <p>Because the aim of scientific work is the valuable knowledge that can only be gained with passionate curiosity, imagination, creativity and close observation.</p>	

Fig. 5: Connection between scientific work, scientific writing and scientific research
Source: own representation

2.1.2 Questions regarding: Finding the right scientific method

Question 2.1.2.1:

Why bother with definitions of branches of science and scientific methods?

Answer 2.1.2.1:

Chapter 2.1.2 of the main volume and Wikipedia list, among other things, numerous entries on the keywords branch of science and scientific method, which are presented in alphabetical order in the main volume, because the correct scientific method is the safest way to avoid plagiarism and to have your own creative and imaginative approach to the topic to be found - this is intended to encourage scientific work with scientific methodology and at the same time to define.

A

Question 2.1.2.2:

Define “Analysis”.

Answer 2.1.2.2:

This is the process of breaking a complex topic or substance into smaller parts in order to gain a better understanding of it. This technique has been applied in the study of **mathematics** and **logic** since before **Aristotle** (384–322 B.C.), **though analysis** as a formal concept is a relatively recent development.

And the word comes from the **ΑΓΡΚ** ἀνάλυσις (“**analysis**”, “**a breaking-up**” or “**an untying**,” from **ana-** «up, throughout» and **lysis** «a loosening»). Thus, from it also comes the words plural, analyses. And as a formal concept, the has variously been ascribed to Alhazen, René Descartes (“Discourse on the method”), and Galileo Galilei. It has been ascribed to Isaac Newton, too, in the form of a practical method of physical discovery (which he did not name). **There are two types of Analysis:**

1. Qualitative Analysis: This is concerned with which components are in a given sample or compound (example: Precipitation reaction;
2. Quantitative Analysis: This is to determine the quantity of individual component present in a given sample or compound (example: To find concentration by uv-spectrophotometer).

B

Question 2.1.2.3:

Define “Business administration”.

Answer 2.1.2.3:

This is also known as business management; it is the administration of a commercial enterprise. So, it includes all aspects of overseeing and supervising business operations. And from the point of view of management and leadership, it also covers fields that include office building administration, accounting, finance, designing, development, quality assurance, data analysis, sales, project management, information-technology management, research and development, and marketing. Thus, the administration of a business includes the performance or management of business operations and decision-making, as well as the efficient organization of people and other resources to direct activities towards common aims and objectives. So, in general, “administration” refers to the broader management function, including the associated finance, personnel and MIS services. Thus, administration can refer to the bureaucratic or operational performance of routine office tasks, usually internally oriented and reactive rather than proactive. So, administrators, broadly speaking, engage in a common set of functions to meet an organizations aims. And Henri Fayol (1841-1925) described these «functions» of the administrator as «the five elements of administration”. So, according to Fayol, the five functions of management are:

1. Planning,
2. Organizing,
3. Commanding,
4. Coordinating and
5. Controlling.

And sometimes “creating output”, which includes all of the processes that generate the product that the business sells, is added as a sixth element. But, alternatively, some analyses view management as a subset of administration, specifically associated with the technical and operational aspects of an organization, and distinct from executive or strategic functions. With regard to degrees, the Bachelor of Business Administration (BBA, B.B.A., BSBA, B.S.B.A., BS, B.S., or B.Sc.) or Bachelor of Commerce (Bcom. or BComm) is a bachelors degree in commerce and business administration. And the duration of the degree is often three years in Europe or four years in the USA. Thus, the degree is designed to give a broad knowledge of the functional aspects of a company and their interconnection, while also allowing for specialization in a particular area. Consequently, the degree also develops the students practical, managerial and communication skills, and business decision-making capability to succeed in the competitive world. Many programs incorporate training and practical experience, in the form of case projects, presentations, internships, industrial visits, and interaction with experts from industry. Furthermore, the Master of Business Administration (MBA or M.B.A.) is a masters degree in business administration with a significant focus on management. Thus, the MBA degree originated in the USA in the early-20th century, when the nation industrialized and compa-

nies sought scientific approaches to management. Consequently, the score courses in an MBA program cover various areas of business such as accounting, finance, marketing, human resources, and operations in a manner most relevant to management analysis and strategy. And most programs also include elective courses. Finally, the Doctor of Business Administration (DBA, D.B.A., DrBA, or Dr B.A.) is a research doctorate awarded on the basis of advanced study and research in the field of business administration. Thus, the D.B.A. is a terminal degree in business administration, and is equivalent to the Ph. D in Business Administration. Consequently, the PhD in Management is the highest academic degree awarded in the study of management. So, the degree is intended for those seeking academic research- and teaching-careers as faculty or professors in the study of management at business schools worldwide. And a newer form of a management doctorate is the Doctor of Management (D.M., D.Mgt., DBA, or DMan). This is a doctoral degree conferred upon an individual who is trained through advanced study and research in the applied science and professional practice of management. And this doctorate has elements of both research and practice relative to social and managerial concerns within society and organizations.

Question 2.1.2.4:

Define "Biology".

Answer 2.1.2.4:

Biology is the scientific study of life. It is a natural science with a broad scope but has several unifying themes that tie it together as a single, coherent field. For this reason, research is carried out in numerous sub-areas in the field of biology. The sub-areas that are generally geared towards understanding living things include biophysics, genetics, molecular biology, ecology, physiology, theoretical biology and cell biology. And botany (plants), zoology (animals) and microbiology (microorganisms and viruses) deal with large groups of living beings. The objects of observation in biology include molecules, organelles, cells and cell structures, tissues and organs, but also the behavior of individual organisms and their interaction with other organisms in their environment. The variety of objects to be considered means that a variety of methods, theories and models are applied and taught in the subject of biology. Biologists are trained at universities as part of a biology degree, and biology teacher training students at least temporarily also as part of biology didactics. Today, as a result of the smooth transitions to other scientific fields (e.g. medicine, psychology and nutritional sciences) and because of the interdisciplinary character of research, other designations for biological research directions and training courses have been established in addition to the designation biology, such as Biosciences, life sciences and life sciences.

Question 2.1.2.5:

Define "Case study".

Answer 2.1.2.5:

A case study primarily describes either a teaching method or a research method. As a teaching method, in a case study, the learner is presented with a "case" that describes a problematic situation (usually fictitious or historical). The task is then to work out a solution. As a research method, case studies refer to empirical research with which an object of study is to be examined in its real environment. This is used in social and medical research, for example. According to Ridder (2017), if the case study approach is chosen as a research method, four types of case studies can be distinguished: The first approach, represented by Eisenhardt, assumes that a case study does not initially require any theory, while the implementation of the case study does so is in a sense unencumbered (and unaffected) by prior knowledge. In the second approach, advocated by Yin, the case study is about filling in omissions in existing theories, in a sense "plugging the holes". A third approach, represented above all by Stake, deals explicitly with the social construction of reality. The fourth approach, represented above all by Burawoy, aims to identify anomalies. It should be noted that the methodological sequence of these four methods differs significantly from each other. The first two approaches are assigned to positivism and are increasingly viewed critically in economics and social sciences.

The assumptions about ontology and epistemology ultimately determine the choice of one of these four methods. Case studies, on the other hand, are to be distinguished from the foregoing as a teaching method.

Question 2.1.2.6:

Define "Chemistry".

Answer 2.1.2.6:

This is the scientific study of the properties and behaviour of matter. So, it is a natural science that covers the elements that make up matter to the compounds composed of atoms, molecules and ions: their composition, structure, properties, behaviour and the changes they undergo during a reaction with other substances. Thus, in the scope of its subject, chemistry occupies an intermediate position between physics and biology. Consequently, it is sometimes called the central science because it provides a foundation for understanding both basic and applied scientific disciplines at a fundamental level. Such as, chemistry explains aspects of plant growth (botany), the formation of igneous rocks (geology), how atmospheric ozone is formed and how environmental pollutants are degraded (ecology), the properties of the soil on the moon (cosmochemistry), how medications work (pharmacology), and how to collect DNA evidence at a crime scene (forensics). So, chemistry addresses topics such as how atoms and molecules interact via chemical bonds to form new chemical compounds. So, there are two types of chemical bonds:

1. primary chemical bonds - e.g., covalent bonds, in which atoms share one or more electron(s); ionic bonds, in which an atom donates one or more electrons to another atom to produce ions (cations and anions); metallic bonds - and
2. secondary chemical bonds - e.g., hydrogen bonds; Van der Waals force bonds; ion-ion interaction; ion-dipole interaction.

Thus, the current model of atomic structure is the quantum mechanical model. Consequently, traditional chemistry starts with the study of elementary particles, atoms, molecules, substances, metals, crystals and other aggregates of matter. Thus, matter can be studied in solid, liquid, gas and plasma states, in isolation or in combination. The interactions, reactions and transformations that are studied in chemistry are usually the result of interactions between atoms, leading to rearrangements of the chemical bonds which hold atoms together. So, such behaviours are studied in a chemistry laboratory. This chemistry laboratory stereotypically uses various forms of laboratory glassware. But, however glassware is not central to chemistry, and a great deal of experimental (as well as applied/industrial) chemistry is done without it. Consequently, a chemical reaction is a transformation of some substances into one or more different substances. And the basis of such a chemical transformation is the rearrangement of electrons in the chemical bonds between atoms. Thus, it can be symbolically depicted through a chemical equation, which usually involves atoms as subjects. So, the number of atoms on the left and the right in the equation for a chemical transformation is equal. (When the number of atoms on either side is unequal, the transformation is referred to as a nuclear reaction or radioactive decay.) And the type of chemical reactions a substance may undergo and the energy changes that may accompany it are constrained by certain basic rules, known as chemical laws. Thus, energy and entropy considerations are invariably important in almost all chemical studies. As chemical substances are classified in terms of their structure, phase, as well as their chemical compositions. Consequently, they can be analysed using the tools of chemical analysis, e.g. spectroscopy and chromatography. So, scientists engaged in chemical research are known as chemists. And most chemists specialize in one or more sub-disciplines.

Question 2.1.2.7:

Define "Computer science".

this Ashby-hierarchy probably coincides with Piaget's well-known theory of developmental stages. But after all, it is part of Piagetian doctrine that children learn first by "actively doing" in a more-or-less random way, and then hopefully learn from the consequences – which all has a certain resemblance to Ashby's random "trial-and-error".

2.1.3 Questions regarding: Examples for plagiarism

Question 2.1.3.1:

What is the importance of Albert Einstein?

Answer 2.1.3.1:

Albert Einstein is considered the perfect example of the researcher and genius. This book is dedicated to Albert Einstein, the creative, imaginative and brilliant example of all scientific work. Because the aim of scientific work is the valuable knowledge that can only be gained with passionate curiosity, imagination, creativity and precise observation.

Question 2.1.3.2:

What danger does the purely text-scientific "combination" of several sources into one book?

Answer 2.1.3.2:

The purely text-scientific "combination" of several sources into one book harbors the risk of plagiarism if the author is not guided by his own red thread, but by external sources. In addition, it is recommended to use scientific methodology. Here follows the red thread from the methodology.

2.2 Questions regarding: More useful basics of plagiarism-free scientific working

2.2.1 Questions regarding: Work planning versus checklist

Question 2.2.1.1:

Why is it not expedient to work with work planning in scientific work?

Answer 2.2.1.1:

The author of these books has never worked with work planning in many decades of scientific writing. Because this planned economy approach blocks the view of the essentials. The essence of a scientific work is the topic of the work or the ingenious idea that is derived along the self-developed red thread, preferably with scientific methodology.

Question 2.2.1.2:

What is the aim of scientific work?

Answer 2.2.1.2:

The aim of scientific work is the valuable knowledge that can only be gained with passionate curiosity, imagination, creativity and precise observation.

Question 2.2.1.3:

Why are general instructions for work planning not very effective?

Answer 2.2.1.3:

Every scientific work is different,
1. due to the subject area,
2. due to the topic of the work,
3. due to the author's creative and imaginative ideas,
4. due to the chosen scientific methodology and
5. due to the selected textbook on "scientific work"
⇒ For this reason, general advice on work planning is not very effective.

Fig. 6: Presentation of why general information on work planning is not very effective

Source: own representation

Question 2.2.1.4:

Why, on the other hand, can a checklist be helpful?

Answer 2.2.1.4:

On the other hand, a checklist can be helpful if ideas that arise during the processing of a topic are collected because they cannot be processed immediately.

Question 2.2.1.5:

Define "scientific work".

Answer 2.2.1.5:

Scientific work is a creative and imaginative process that must flow undisturbed and not be impeded by commonplaces about work planning. Scientific creativity and imagination cannot be planned. You must be able to express yourself freely.

2.2.2 Questions regarding: Generation of scientific attention

Question 2.2.2.1:

How can scientific attention be created for one's own scientific work?

Answer 2.2.2.1:

Creation of scientific attention by
1. Creation of new terms for your own research,
2. Creation of new definitions for your own research,
3. Creation of new (statistical) diagrams for your own research (as your own illustration)

4. Creation of new theories, laws or methods of one's own research
5. Creation of new (partial) sciences of one's own research

Fig. 7: Presentation to create scientific attention

Source: own representation

2.2.3 Questions regarding: Tax deductibility of training costs (in Germany)

Question 2.2.3.1:

Where are training costs regulated as special expenses or income-related expenses/operating expenses?

Answer 2.2.3.1:

In the Income Tax Act (EStG).

Question 2.2.3.2:

Are training costs tax deductible?

Answer 2.2.3.2:

Training costs are tax-deductible in Germany as expenses for your own professional training as part of the special expenses up to 6.000 € per calendar year (§ 10 para. 1 no. 7 EStG). These include, for example, expenses for study, course, conference and other event fees, for learning materials, specialist books, printing costs, preparation, admission and final examination costs, home office, PC purchase and use and external accommodation as well as travel expenses between research institutions.

Question 2.2.3.3:

To what extent are training costs tax-deductible?

Answer 2.2.3.3:

In the past, the legislature had ensured that expenses for the first vocational training or a “first degree”, insofar as these do not take place within the framework of an employment relationship, count as non-tax-deductible “costs of private life” (§ 12 No 5 old version EStG). Many authors of books on the subject of “scientific work”, including Manuel René Theisen, have not noticed that Section 12 No. 5 EStG has been abolished. It was repealed from January 1st, 2015. Therefore, the principle also applies here: A look at the law makes it easier to find the law. It is therefore no longer necessary to distinguish between non-deductible training costs and deductible further training costs. Instead, it is only about training costs, which are deductible as special expenses to 6.000 € per year or – if they occur within the scope of the seven types of income – as advertising costs or operating expenses – can be deducted indefinitely.

Question 2.2.3.4:

Can income-related expenses also be taken into account as part of the tax loss deduction?

Answer 2.2.3.4:

The tax deductibility of training costs basically requires positive income. However, if this is missing, the training costs can be assigned to one of the seven types of income as income-related expenses or operating expenses and a loss assessment can be applied for. Because every startup starts with losses. According to this, the loss deduction (§ 10d EStG) can be applied for in assessment periods with a positive total amount of income (loss carry-back or carry-forward). It follows that the risk of realizing plagiarism is greatest when someone is doing a purely textual work and is not guided by their own red thread, but by someone else's texts. However, if scientific methods are used, the risk of plagiarism is minimal, because the red thread is determined by these methods.

3. Questions regarding: The scientific work

3.1 Questions regarding: Aim of scientific work

Question 3.1.1:

How is the quality of a book measured?

Answer 3.1.1:

The quality of a book is not measured by the number of pages written on it, but by whether it is valuable or not. Because quality comes before quantity. Because the aim of scientific work is the valuable knowledge that can only be gained with passionate curiosity, imagination, creativity and close observation.

Question 3.1.2:

What are the nine special features (unique selling points) of these volumes (main volume & companion volume)?

Answer 3.1.2:

The nine unique selling points are:

1. teaching of a deductive style of writing,
2. teaching of methodological work,
3. teaching of plagiarism-free writing,
4. teaching of IT implementation of the scientific work,
5. teaching of the (German) tax deductibility of training costs,
6. teaching of Albert Einstein as a ingenious example,
7. teaching the aim of scientific work,
8. teaching the creation of scientific attention and
9. exercise book.

Question 3.1.3:

What are the tools of scientific work through plagiarism-free deduction (= reasoning)?

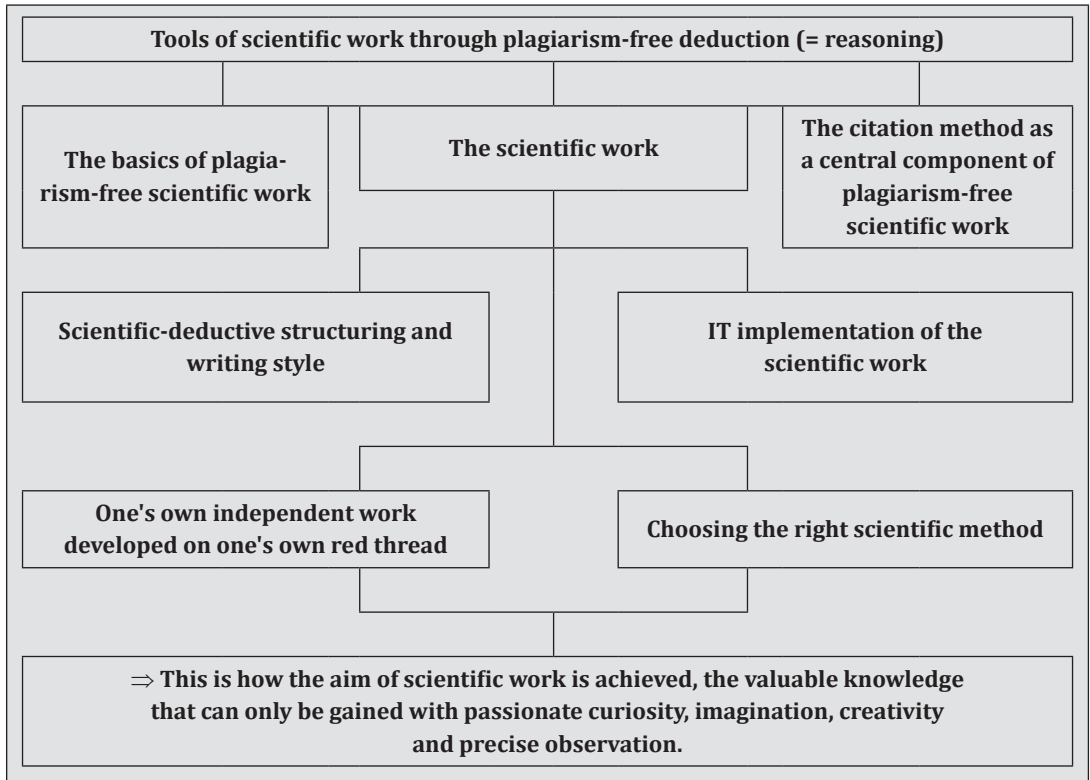
Answer 3.1.3:

Fig. 8: Tools of scientific work through plagiarism-free deduction (= reasoning)

Source: own representation

Question 3.1.4:

What is the use of the tools of scientific work through plagiarism-free deduction (= reasoning)?

Answer 3.1.4:

The reader thus receives the tools for scientific work through plagiarism-free deduction (= reasoning). He learns to develop his own independent work using his own red thread. Assistance is given to select the right scientific method. This is how the aim of scientific work is achieved, the valuable knowledge that can only be gained with passionate curiosity, imagination, creativity and precise observation.

3.2 Questions regarding: Scientific-deductive structure and writing style

3.2.1 Questions regarding: Overview

Question 3.2.1.1:

Why does it make sense to acquire a scientific-deductive style of structuring and writing at an early stage?

Answer 3.2.1.1:

Anyone who early on acquires a scientific-deductive structuring and writing style, writes independently along the red thread that they have developed and does not allow themselves to be guided by foreign texts. This eliminates the danger of copying and realizing plagiarism.

Question 3.2.1.2:

Define “Scientific-deductive structuring and writing style”.

Answer 3.2.1.2:

The scientific-deductive structuring and writing style is explained as follows:

The scientific work is strictly logical. Each statement is deduced (= reasoned) from the previous one. The structure is deduced from the topic of the work. The structure basically consists of five sections, an introduction, a basic part, two main parts and a summary. The structure is not fixed over time, but is dynamically adjusted as knowledge advances. If, for example, it turns out that a second basic part is necessary, a common heading can be found for both basic parts and these move to the next lower level.

3.2.2 Questions regarding: Structure**3.2.2.1 Questions regarding: Overview****Question 3.2.2.1.1:**

How is to be structured?

Answer 3.2.2.1.1:

The explanations in the text part are preceded by a structure in the table of contents. In this

- the section headings should be worded meaningfully,
- sub-headings are only made according to one classification criterion,
- a sub-division must lead to at least two and at most nine sub-headings,
- should be structured purely numerically (1.; 1.1; 1.1.1).

If there is a 10th sub-heading, a common heading can be found for several of these sub-headings and they move to the next lower level. The positions of the structure are to be provided with the corresponding page references, they must match the headings of the sections in the text and their content must be briefly but precisely identified. If possible, no connecting sentences should be inserted in the text between a main heading and the subordinate sub-heading of the structure (no intermediate text). Intermediate texts should be preceded by a heading, an overview or general information.

3.2.2.2 Questions regarding: Contents**Question 3.2.2.2.1:**

In which way are structure and contents connected?

Answer 3.2.2.2.1:

The structure is part of the work and should show how the topic was understood and worked on. It must therefore reflect the logical structure (“red thread”) and must provide initial information about the content of the work. The structure is therefore the result of an intensive examination of one’s own problem statement. In this respect, it should also stand out from the structure of the evaluated literature in order to be able to sufficiently consider individual focal points and special features of your own topic formulation – also necessary for plagiarism-free writing.

3.2.2.3 Questions regarding: Shape**Question 3.2.2.3.1:**

Which form should the structure have?

Answer 3.2.2.3.1:

A logical and self-contained line of thought is also reflected in a formally and logically flawless structure with corresponding structure points. Positions that are on the same level in the structure must have the same rank in terms of content and must start from a common, overriding problem (i.e. points 2.1.1 and