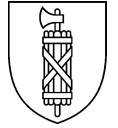


Kanton St.Gallen  
Bildungsdepartement



**Kantonsschule am Burggraben St.Gallen**  
Untergymnasium, Gymnasium

# Matura Paper

**Guidelines**

**Assessment Criteria**

**Layout**



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# Guidelines for the Matura Paper

## 1 Basis

- Maturitätsanerkennungsreglement (MAR) of 15 February 1995, Art. 10, 15 and 20
- Framework curriculum for Matura schools (Rahmenlehrplan für die Maturitätsschulen RLP) of 9 June 1994, General aims (Allgemeine Ziele)
- Regulations for the Matura exams (Reglement über die Maturitätsprüfungen des Gymnasiums) of 24 June 1998, Art. 1 ff.

## 2 Purpose and relevance of the Matura paper guidelines

These guidelines specify the scope of the Matura paper for the Kantonsschule am Burggraben St.Gallen in reference to the Swiss and cantonal regulations for Matura papers. It offers suggestions and tips for both the students and their supervisors.

Within the framework of these guidelines, departments and teachers are entitled to add further regulations. For students, these additional regulations have priority over the general provisions stated in this brochure.

## 3 Aim of the Matura paper

The completion of the Matura paper is intended to show that the student is capable of

- independently developing a topic with clear contours,
- formulation relevant lines of enquiry within a given topic,
- theoretically thinking through and structuring a chosen topic,
- dealing with independently obtained background material,
- conducting his or her own research (interpretation of source material, experiments, surveys etc.),
- making differentiated, independent assertions which are documented and understandable,
- concluding a project within a given time frame,
- presenting results in a linguistically and formally correct manner,
- assessing the working process and the achieved results independently.

Therefore, the completion of the Matura paper introduces students into the methods of scientific or artistic work and prepares them for the work done at universities and institutes. It requires a high degree of intrinsic motivation, suitable working methods, autonomous work, as well as curiosity and openness. The Matura paper is clearly of a propaedeutic nature and must not impede the necessary time requirements of standard school lessons.

## 4 Topic choice and organisation of supervision

The Matura paper may focus on topics from the range of subjects offered at the KSBG, i.e. core subjects, special subjects, supplementary subjects, mandatory subjects (incl. elective subjects), or optional subjects (incl. instrument lessons). The topic is to be agreed upon by both the student and the teacher and may be subject-specific or interdisciplinary. Students are not entitled to focus on a specific topic or to receive financial support. It is at the teacher's

discretion to decide if he or she regards him- or herself as competent enough to supervise a given topic. If no agreement can be reached, the Rektor will decide on the topic and supervision.

The Matura paper may be completed by an individual student or by a group. The size of the group is in general limited to two students; exceptions are to be approved by the Rektor. The arrangement for group work is specific to the subject and is a matter for the respective department.

Students in bilingual classes are to write their Matura papers in English. They will receive additional information from their class teacher.

Students are generally encouraged to write their Matura papers in a foreign language. This additional effort is taken into consideration in the evaluation criteria.

#### **4.1 Topic**

The Matura paper is designed to have students work independently on a precise inquiry. Excessively broad topics are therefore to be avoided. A reasonably restricted topic will give students the opportunity to conduct an in-depth analysis or to cover a topic with an appropriate degree of intensity. For this reason, the topic should open several possibilities for students to do original research and not merely require a summary of the previous literature. The topic may be subject-specific or interdisciplinary in nature.

Example 1 Topic: The Drug Problem in Switzerland – *inappropriate, too broad, too vague, too imprecise*

Topic: Which measures have the institutions of the city of St Gallen taken to deal with addiction? An attempt at a performance analysis and evaluation. – *appropriate*

Example 2 Topic: Molière, His Life and Work – *inappropriate*

Topic: The freethinking aspects of Molière's *Don Juan*: Its historical significance and an evaluation from today's perspective. – *appropriate*

Example 3 Topic: Physics in Sports – *inappropriate*

Topic: Pressure put on the body in gymnastic floor exercises: Experimental investigation of its consequences for sports performance - *appropriate*

#### **4.2 Organisation of supervision**

Students are to define the topics of their Matura paper in a consultation with their teacher. A teacher may supervise a maximum of five matura papers; exceptions are to be approved by the Rektor.

Supervision by the responsible teacher primarily includes the following points:

- Introducing students to the process of writing a larger paper (structure, layout, citation etc.) according to the framework given by the school and the subject-specific characteristics.
- Assistance in the search for literature and material resp. experimental arrangement.
- Advice in the completion of a rough concept and time schedule
- Advice in the illustration and design of the paper's results
- Discussion of progress results (at least two appointments)
- Correction and evaluation of the paper
- Discussion of the student's self-evaluation
- Organisation and evaluation of the presentation
- Keeping a protocol of discussions; Writing a final report and final evaluation.

The terms of the agreement for the completion of the Matura paper are to be recorded in a document in the school administration platform, confirmed by the supervisor and printed out and signed by the student.

### **4.3 Projects, surveys and performances**

Any survey requires the approval of the school administration. This requirement also applies to projects that are to be carried out during or outside class time with KSBG classes or parts thereof. In both cases, requests, including the appropriate documentation (e.g. aim, schedule, affected classes/people, survey, method etc.), must be submitted to the Prorektor III responsible for Matura papers by November 1 at the latest before definite arrangements can be made. A requirement for the approval of a survey request is the attendance of the statistics course during the fourth quarter of the third year, which lasts 5-6 lessons. For projects which cannot be undertaken outside of school hours, students are required to submit a request for time off well in advance.

For surveys and projects involving five or more individuals, which aim to obtain generalisable findings, particular attention should be paid to the information sheet "Umgang mit Maturaarbeiten" of the Ethikkommission Ostschweiz ([www.sg.ch/gesundheit-soziales/gesundheit/gremien](http://www.sg.ch/gesundheit-soziales/gesundheit/gremien)), the "Checklist: Research on and with Children under the age of 18" by swissethics ([www.swissethics.ch](http://www.swissethics.ch)) and the requirements for voluntariness, anonymity and data protection conformity.

In general, performances in connection with the Matura paper which take place in school, e.g. musicals, concerts, plays etc., may be performed during school days with a performance for students in the afternoon and a performance in the evening. However, room requirements for rehearsals and performances must be requested in the agreement. Additional costs will be charged, e.g. for the presence of technical staff, special installations etc.

### **4.4 Rights, sponsorship und prizes**

The completed paper, with all its associated rights, is to remain the property of the school. Publication requires the approval of the author, the supervisor, and the school administration. Payment from a company or organisation, which exceeds demonstrable expenses, is not permitted. Prizes from contests belong to the author.

## 5 Time schedule and fixed dates

The lesson plan for fourth year students includes two lessons per week for the completion of the Matura paper. This time allotment is to be used for the introduction into the process of writing a Matura paper, the student's independent work on the topic, the interim reports, and the presentation of the paper.

The completion of the Matura paper is the main focus of the first semester of the fourth year.

Fixed Dates	Activity
Until end of April 3 <sup>rd</sup> grade	<ul style="list-style-type: none"> <li>• Information session with the Rektor</li> <li>• Initial information from the supervisor</li> <li>• Topic choice</li> <li>• Matura paper application</li> </ul>
Until end of May 3 <sup>rd</sup> grade	<ul style="list-style-type: none"> <li>• Reading up on the topic</li> <li>• Agreement signed and submitted</li> <li>• Start of projects with special arrangements and those which need to begin earlier, e.g. biology topics with fieldwork</li> </ul>
Before summer vacation	<ul style="list-style-type: none"> <li>• Completion of rough concept (Template: <a href="http://www.ksbg.ch">www.ksbg.ch</a>)</li> </ul>
During summer vacation	<ul style="list-style-type: none"> <li>• Any necessary preparatory work by the student or supervisor</li> </ul>
<i>After summer vacation</i> 4 <sup>th</sup> grade	<i>Vormatura exams</i> <ul style="list-style-type: none"> <li>• Followed by the start of the paper writing process</li> </ul>
End of 1 <sup>st</sup> Semester 4 <sup>th</sup> grade	<ul style="list-style-type: none"> <li>• Submission of the paper</li> </ul>
At the latest until one week before the presentation	<ul style="list-style-type: none"> <li>• Evaluation by the supervisor</li> <li>• Second evaluation for unsatisfactory papers (appointment of the teacher by the Rektor)</li> <li>• The student receives written notification of the evaluation of the paper with explanations and is assigned to prepare the presentation</li> </ul>
Until spring break 4 <sup>th</sup> grade	<ul style="list-style-type: none"> <li>• Presentation of the paper</li> <li>• Notification of the evaluation of the presentation</li> </ul>
After spring break 4 <sup>th</sup> grade	<ul style="list-style-type: none"> <li>• Official notification of the overall evaluation</li> </ul>

The precise dates are to be found in the appointment schedule of the KSBG.

The departments for each subject arrange the details of the working procedure, in particular the deadlines for the submission of the rough concept and progress reports.

The observance of the dates set by the supervisor is compulsory for the student, e.g. the introduction into the topic, binding adherence to the rough concept, progress reports, submission of the paper etc. The fixed times are to be recorded in writing.

The supervisor is required to intervene and warn the student if it is discovered that insufficient progress is being made or if deadlines are not met.

The submission of the paper after the appointed date will have the following consequences:

- for a delay of up to one hour, a reduction of two grades,
- three grades are deducted for a delay of one to up to three hours, and
- for later delays, a rejection of the paper, which also prevents the student from being admitted to the Matura exams. The student will then have failed the fourth year and will be able to take the exams in one year at the earliest.

In certain justified cases, the deadline for the submission of the Matura paper may be extended by the Rektor upon written request – in exceptional cases retroactively. A request for a deadline extension is to be made within three days of the occurrence of the cause of delay.

In group projects, individual students may be excluded from the project by the supervisor after receiving the appropriate warning during the ongoing project if they are regarded as hindering the realisation of the project's aims or fail to comply with instructions or agreements. Such students are to complete a new project independently.

## **6 Specifications for content and form**

Besides a section dealing with the specialist literature, the Matura paper must also include an original section.

The length of the paper should conform to the topic. A written Matura paper should typically encompass 10 to 20 pages, in addition to any graphs, illustrations, tables, and the bibliography. The length of the Matura paper for group work is typically 20 to 40 pages. Exceptions must be agreed upon with the supervisor and justified in writing. The technical specifications for page layout are as follows: Arial, Book Antiqua, or a similar font; font size 11 pt; 1.5 line spacing; 3 cm margin on all sides. This all corresponds to roughly 320 words per page. The title of the paper may maximally include 255 characters.

As an alternative to a written Matura paper, another form of presentation is possible, e.g. a creative work, video, film, play, screenplay, composition, or concert. However, this is only possible in consultation with the supervisor and must still include written comments. These comments should encompass five to ten pages in addition to any images, graphs, bibliography etc.

In the case of Matura papers in which placebo experiments, data collection by means of surveys or experiments subject to authorisation in accordance with the Human Research Act (Humanforschungsgesetz - HFG) are carried out, the relevant requirements must be taken into account. The Ethics Commission Eastern Switzerland (Ethikkommission Ostschweiz - EKOS) and the Prorektor responsible for Matura papers are happy to advise on any in question in this respect.

The author of a Matura paper confirms with his or her signature that the paper is entirely their own work and that any assistance given by others was restricted to advice and proof-reading, that all sources employed in preparation of the paper and all quotations used are clearly cited and due acknowledgment is given for all help provided by others. In the case of plagiarism\*,

\* Plagiarism is understood to be the adoption of undocumented or insufficiently documented adoption of foreign intellectual property independent of its origin, i.e. including the internet, in one's own paper, including the adoption of facts, ideas, arguments, or specific formulations as well as paraphrases or translations beyond what can be assumed to be common knowledge. (Declaration on Plagiarism, University of Paderborn. <https://kw.uni-paderborn.de/institut-fuer-anglistik-und-amerikanistik/studium/plagiatserklaerung>. 28.2.2022).



according to art. 1 quarter of the Matura paper guidelines, the Rektor may order the fourth year to be repeated and another Matura paper to be written. The right to expel the student from school is also reserved.

As a rule, three copies of the paper are to be submitted. For bilingual papers, which have been supervised by different teachers for content and language, four copies are to be submitted (one copy for the content supervisor, one copy will later be returned to the student with comments, one copy for the school library, later the school archive, and one copy for the linguistic supervisor, if applicable). At submission the paper must also include two electronically stored pdf files:

- The first file contains the original paper.
- The second file must be made ready for the plagiarism check according to the following specifications (cf. also <http://www.copy-stop.ch>):
- According to the data protection laws, names of students, teachers, and third persons must be deleted everywhere they appear, e.g. title page, footnotes, acknowledgements.
- The file is to be given a name which is compatible with the internet, i.e. the name may not include an Umlaut, special symbols, or empty spaces. Only the year of submission and the title are to appear in the name, e.g. "18-Ueberschwemmung-Auenwaelder" and the suffix ".pdf".
- All illustrations are to be removed in this version in order to reduce file size.

These electronic documents are submitted via the Nesa school administration platform.

## **7 Presentation**

The presentation is to take 20-30 minutes and includes a brief speech (15 minutes, formulation of the thesis and results) as well as a discussion of the topic. For group work, each member is to talk for 15 minutes. If possible, the presentation will take place together with other similar topics. Ideally, at least one additional teacher should be present. Further people may also be present, e.g. teachers, students of other grades (according to the directions of the school administration), people close to the presenter, as well as representatives of the media invited by the school administration.

The presentation will take place in school rooms of the KSBG.

## **8 Evaluation**

The Matura paper is graded according to the criteria catalogue on page 12, which is agreed upon by the supervisor and the student individually using the evaluation sheets (including the sub criteria) and according to article 14 of the Maturitätsprüfungsreglement des Gymnasiums. The grade of the paper counts for the Matura exam. The title and the grade of the paper will be registered in the Matura grade booklet.

When discussing progress reports, the student is to be given interim evaluations. These evaluations are intended to be profoundly formative. The discussion of progress reports should lead the student to apply themselves sufficiently in order to achieve their stated goals. For this purpose students should reflect upon their work process in terms of a self-evaluation.

All the students involved in a group project will be graded equally.

The student will receive written notification of his or her evaluation with justification after the submission of the paper, at the latest one week before the presentation.

A paper which is accepted to the national competition "Schweizer Jugend forscht" by the time of the KSBG Matura paper presentations receives grade 6.

St.Gallen, March 2022

Kantonsschule am Burggraben St.Gallen



Michael Lütolf  
Rektor

# Evaluation Criteria

Based on Bonati and Hadorn (2009)

There are four types of Matura papers:

- **Research paper:**

In a research paper a topic is studied in depth.

- **Creative production:**

In a creative production an artistic work is created from ideas and inspiration.

- **Technical production:**

A technical production produces an operational product from a constructive idea

- **Organisation of an event:**

An event systematically plans and implements activities, a procedure or processes.

For each type of Matura paper there is a prescribed amount of aspects which are graded and which each have their own evaluation sheet. The final grade is attained by calculating the weighted average of the individual aspects.

The following aspects and weighting apply to a research paper:

Aspect	Weighting	Weighted grade
A: Written paper – content	35-50 %	Grade component * 0.35-0.5
B: Written paper – language and form	25-35 %	Grade component * 0.25-0.35
C: Work process	10-20 %	Grade component * 0.1-0.2
D: Presentation	10-20 %	Grade component * 0.1-0.2
Final grade ( <i>rounded to the nearest half grade</i> ):		Sum of all weighted grade components

The following aspects and weighting apply to a creative or technical production or organisation of an event:

Aspect	Weighting	Weighted grade
A <sub>1</sub> : Product (work, product, event)	05-35 %	Grade component * 0.2-0.35
A <sub>2</sub> : Written paper – content	15-25 %	Grade component * 0.15-0.25
B: Written paper – language and form	15-25 %	Grade component * 0.15-0.25
C: Work process	10-20 %	Grade component * 0.1-0.2
D: Presentation	10-20 %	Grade component * 0.1-0.2
Final grade ( <i>rounded to the nearest half grade</i> ):		Sum of all weighted grade components

The same basic structure of evaluation criteria applies to the various types of Matura paper, but each type includes different sub-criteria. The sub-criteria are to be agreed upon by the supervisor and student at the beginning of the paper writing process. These sub-criteria are essentially to come from a list of suggestions ([www.ksbg.ch](http://www.ksbg.ch)). The suggested list is not conclusive, i.e. additional criteria specific to the topic or type of paper may be included. The coordination of the specific requirements is done by the respective departments.

An overview of the basic structure of the evaluation criteria can be found on the following page. Only the main criteria are given; the agreed upon sub-criteria are to be entered into the evaluation sheets (template: [www.ksbg.ch](http://www.ksbg.ch)).

**Overview of the process and the basis of evaluation:**

1. Discussion of the agreement for the preparation of the Matura paper
2. Define the basis of evaluation:
  - a. Specify the applicable sub-aspects of the appropriate Matura paper type (research paper, creative production, technical production, organisation of an event) for the student's paper from the list of sub-aspects according to the following model. Product criteria at the finalisation of the agreement, process criteria as soon as there is enough insight into the work process, presentation criteria before the presentation. Changes to the evaluation criteria are possible in agreement with the student.  
([www.ksbg.ch/gymnasium/uebersicht-ausbildung/matura-maturaarbeit.html](http://www.ksbg.ch/gymnasium/uebersicht-ausbildung/matura-maturaarbeit.html))
  - b. Compile an evaluation sheet per sub-criteria A-D ([www.ksbg.ch](http://www.ksbg.ch)).
3. Make a rough draft (suggestion: [www.ksbg.ch](http://www.ksbg.ch)).
4. Conduct discussions of progress reports.
5. Complete the evaluation sheets A through C after submission of the paper and evaluation sheet D after the presentation. The grades for each sub-category (A-D) are to be weighted according to the agreement and calculated into a final grade.
6. Conduct a final discussion (= final evaluation session).

In the final discussion of the paper and presentation the supervisor must communicate to the student which evaluation judgements led to the final grade in an understandable way.

## Overview of the basic structure of the evaluation criteria (acc. Bonati und Hadorn, 2009)

Evaluation criteria for a research paper (Weighting)	Evaluation criteria for a creative produc- tion (Weighting)	Evaluation criteria for a technical pro- duction (Weighting)	Evaluation criteria for the organisation of an event (Weighting)
	<b>A1 Work: Content (20-35 %)</b> <ul style="list-style-type: none"> <li>• Design idea and method</li> <li>• Treatment of the topic</li> <li>• Quality of content</li> <li>• Independence</li> <li>• Layout</li> </ul>	<b>A1 Product: Content (20-35 %)</b> <ul style="list-style-type: none"> <li>• Construction idea and method</li> <li>• Treatment of the topic</li> <li>• Quality of content</li> <li>• Independence</li> <li>• Layout</li> </ul>	<b>A1 Organisation: Content (20-35 %)</b> <ul style="list-style-type: none"> <li>• Organisational intention and method</li> <li>• Treatment of the topic</li> <li>• Quality of content</li> <li>• Independence</li> <li>• Layout</li> </ul>
<b>A Written paper: Content (35-50 %)</b> <ul style="list-style-type: none"> <li>• Formulation of problem and method</li> <li>• Treatment of the topic</li> <li>• Use of knowledge and sources</li> <li>• Quality of content</li> <li>• Independence</li> </ul>	<b>A2 Written paper: Content (15-25 %)</b> <ul style="list-style-type: none"> <li>• Design idea and method</li> <li>• Treatment of the topic</li> <li>• Use of knowledge and sources</li> <li>• Quality of content</li> <li>• Independence</li> </ul>	<b>A2 Written paper: Content (15-25 %)</b> <ul style="list-style-type: none"> <li>• Construction idea and method</li> <li>• Treatment of the topic</li> <li>• Use of knowledge and sources</li> <li>• Quality of content</li> <li>• Independence</li> </ul>	<b>A2 Written paper: Content (15-25 %)</b> <ul style="list-style-type: none"> <li>• Organisational intention and method</li> <li>• Treatment of the topic</li> <li>• Use of knowledge and sources</li> <li>• Quality of content</li> <li>• Independence</li> </ul>
<b>B Written paper: Language and Form (25-35 %)</b> <ul style="list-style-type: none"> <li>• Layout</li> <li>• Language</li> <li>• Quotations, Sources, References</li> </ul>	<b>B Written paper: Language and Form (15-25 %)</b> <ul style="list-style-type: none"> <li>• Layout</li> <li>• Language</li> <li>• Quotations, Sources, References</li> </ul>	<b>B Written paper: Language and Form (15-25 %)</b> <ul style="list-style-type: none"> <li>• Layout</li> <li>• Language</li> <li>• Quotations, Sources, References</li> </ul>	<b>B Written paper: Language and Form (15-25 %)</b> <ul style="list-style-type: none"> <li>• Layout</li> <li>• Language</li> <li>• Quotations, Sources, References</li> </ul>
<b>C Work process (10-20 %)</b> <ul style="list-style-type: none"> <li>• Motivation and independence</li> <li>• Quality of the work plan</li> <li>• Procedure and use of resources</li> <li>• Progress and reliability</li> <li>• Team-specific aspects (for team work)</li> </ul>	<b>C Work process (10-20 %)</b> <ul style="list-style-type: none"> <li>• Motivation and independence</li> <li>• Quality of the work plan</li> <li>• Procedure and use of resources</li> <li>• Progress and reliability</li> <li>• Team-specific aspects (for team work)</li> </ul>	<b>C Work process (10-20 %)</b> <ul style="list-style-type: none"> <li>• Motivation and independence</li> <li>• Quality of the work plan</li> <li>• Procedure and use of resources</li> <li>• Progress and reliability</li> <li>• Team-specific aspects (for team work)</li> </ul>	<b>C Work process (10-20 %)</b> <ul style="list-style-type: none"> <li>• Motivation and independence</li> <li>• Quality of the work plan</li> <li>• Procedure and use of resources</li> <li>• Progress and reliability</li> <li>• Team-specific aspects (for team work)</li> </ul>
<b>D Presentation (10-20 %)</b> <ul style="list-style-type: none"> <li>• Structure</li> <li>• Knowledge of topic</li> <li>• Language</li> <li>• Media and aids</li> <li>• Interaction</li> </ul>	<b>D Presentation (10-20 %)</b> <p><i>D1*: for Presentations: the same criteria as for other types of papers</i></p> <p><i>D2*: for performances (e.g. dance, play, performance)</i></p> <ul style="list-style-type: none"> <li>• Performance and interaction</li> <li>• Organisation</li> </ul>	<b>D Presentation (10-20 %)</b> <p><i>D1: for Presentations: the same criteria as for other types of papers</i></p> <p><i>D2: for performances</i></p> <ul style="list-style-type: none"> <li>• Performance</li> <li>• Discussion</li> </ul>	<b>D Presentation (10-20 %)</b> <ul style="list-style-type: none"> <li>• Structure</li> <li>• Knowledge of topic</li> <li>• Language</li> <li>• Media and aids</li> <li>• Interaction</li> </ul>

\* D1 is the customary option and required at the KSBG. D2 typically takes place before D1 as a “premiere” of the work in a special setting. This performance may be included in the evaluation, but must then be counted towards the “written” paper.

# Layout of the Matura paper

Students are introduced to the layout of the Matura paper by their supervisor. In addition to the following general guidelines, further specifications will be made according to the choice of topic.

Recommendable publications with abundant practical information for the composition of written papers (planning, presentation, formal specifications) are the following:

- Metzger, C. Lern- und Arbeitsstrategien. Aarau: Sauerländer. 2017
- Stiftung «Schweizer Jugend forscht», Leitfaden. 2010. [www.sjf.ch](http://www.sjf.ch)
- [www.i-mooc.ch](http://www.i-mooc.ch) of the Institute for Wirtschaftspädagogik, University of St. Gallen

## 1 General structure of the Matura paper

- Title, author, table of contents
- Introduction: leads the reader into the topic, describes the methods used, and formulates the problem for investigation resp. the hypotheses
- Main section: contains the author's own results and comments and/or assessment
- Summary: compares the problem and hypotheses with the author's results and draws a conclusion
- Literature: list of all used sources
- Declaration of original work (cf. p 19, ch. 5.6), date and signature

## 2 Work steps and methodological tips

When writing a Matura paper, one is usually engaged with a complex problem. However, there are different ways to solve a problem (problem solving processes). All methods are based on the fundamental steps of problem detection – problem treatment – problem solution.

In the following, one possible problem solving process is described in detail. Supervisors will be able to prompt or specify special procedures for specific papers or projects.

### 2.1 Choosing a topic

- Is the topic appropriate for the student's level (manageable in content and scope)?
- Does the topic require more than the mere awareness and processing of existing literature but allow practical work and an original approach to a problem?

### 2.2 Determining the problem

First confrontation with the subject area:

- What is it about?
- What is the task? What are possible objectives?
- Is the topic new or can existing knowledge be connected to it?
- Has the topic been defined sufficiently or does it need to be limited further? Into which components can it be structured?
- What is the structure of the task?

- Which additional difficulties may arise in the course of writing the paper?
- Which tasks must necessarily be done first? Which tasks may be done later? (Sequencing of the paper, preliminary time schedule)?

### **2.3 Clarification of the overall conditions and requirements**

- Availability of third parties (specialists), resources and specialist literature?
- Availability of laboratories and IT resources?

### **2.4 Intense familiarization with the topic**

- First experiments
- Limitation of the topic
- Adjustments to the time schedule

### **2.5 Initial work**

- Examination of the literature
- Collection of data, carrying out of surveys, construction of models etc.

### **2.6 Analysis**

- Analysis of the material, drawing of conclusions
- Statements (facts) are solidified to discoveries, from which consequences (deductions) can be derived
- Development of a concept for the written paper and presentation

### **2.7 Composition of the written paper and preparation of the presentation**

- Formulation of the test, proof-reading by another person
- Final version of the text; addition of tables, illustrations, and appendices

## **3 Instructions for the use of sources**

### **3.1 Search for material and literature**

Careful research for information and sources is the important first step towards successful work production. The reliability, timeliness and quality of the sources used have a significant influence on the final product. Therefore, it is essential to do research before submitting the final topic and to get an idea of the source situation. Under certain circumstances, this can lead to adjustments in the choice of topic.

Literature can be accessed via libraries, carefully selected websites and reference works. The library of the Kantonsschule offers assistance for efficient and reliable research with:

- a wide range of media,
- access to numerous online reference works, eBooks and databases (e.g. newspaper and journal archives),
- advice on other libraries and interlibrary lending,
- help with the critical evaluation of sources,
- research advice at the counter, by e-mail or telephone (bibliothek.ksbg@sg.ch/058 228 14 17),
- time for extended search support (information from the library staff or on the website).

These offers help to find one's way through the abundance of possible sources, to achieve the essential results as quickly as possible and to question the sources critically.

When examining the literature, it is worth copying important passages by hand or photocopying while making exact notes of their sources. This will save time when citing (quotations) these passages in one's own work. Whenever possible, consult the most recent publications.

## 3.2 Quotations

Quoting another person's statement, be it a quotation from a text or an oral statement, must be identified using clear notation. A quotation is the adoption of another person's thought in one's own paper. In a narrow sense, it is the adoption of a phrase, a sentence, or a longer passage, as well as an oral statement of another author. In a broader sense, it is the non-verbatim adoption of another person's arguments, i.e. paraphrases, processes, and results. Besides the acknowledgement of other people's thoughts, the purpose of correct citations and source identification is to allow the reader to find the relevant sources. Accordingly, different manners of identification will be necessary, depending on the type of source used, e.g. books, newspapers, electronic media, interviews etc. Nevertheless, the formal citation of sources throughout a paper should be as consistent as possible.

The following two sections are intended to assist students in making correct source citations in their Matura paper and creating a bibliography. Further information can be found in the following: Metzger, Christoph. 2017. Lern- und Arbeitsstrategien. Ein Fachbuch für Studierende an Universitäten und Fachhochschulen. 12. Auflage. Aarau: Sauerländer. Excerpt can be found in "Anleitung zum Schreiben einer Fach- oder Maturaarbeit" at <http://www.isme.ch>. In this context, the following reference work for citations by the ETH may also be helpful and clarifying: to be found at [http://www.ethz.ch/students/exams/plagiarism\\_s\\_de.pdf](http://www.ethz.ch/students/exams/plagiarism_s_de.pdf).

### 3.2.1 Comments on quotations in a text

Two alternatives are common for annotating comments in continuous text: the first uses footnotes, the other parentheses.

- The alternative with footnotes, i.e. superscripted numerals, in the continuous text:
  - ... wie Fischer<sup>1</sup> in seinem Lebenswerk bereits erwähnte ...
  - ... Und folglich sollten auch die Wissenschaften selbst als Fenster vor- und dargestellt werden, um durchschaubar zu werden.<sup>1</sup> Es ist zudem wichtig, dass ...
  - ... Es konnte gezeigt werden,<sup>1</sup> dass diese Behauptung literarisch gesehen nicht zutrifft. ...
  - ... In der Einleitung von Fischer<sup>1</sup> heisst es: „Und folglich sollten auch die Wissenschaften selbst als Fenster vor- und dargestellt werden, um durchschaubar zu werden.“

Print media sources are acknowledged in the footnote as follows:

- a) Fischer, 2003, p. 17

Online sources are acknowledged in the footnote as follows:

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<sup>1</sup> Fischer, 2003, p. 17



- b) Schoop, 2017, *Die Leere nach dem Boom*, nzz.ch (Autor known)
- c) Maestrani.ch, 2014, *Nachhaltigkeitsbericht* (Autor unknown)
- d) Wikipedia, 2012, *Neandertaler* (encyclopedia as a special case)

- The alternative with parentheses in the continuous text:

Print media sources:

- a) ... wie Fischer (2003, p. 17) in seinem Lebenswerk bereits erwähnte ...
- b) ... Es konnte gezeigt werden, dass diese Behauptung literarisch gesehen nicht zutrifft (Fischer, 2003, p. 17). ...
- c) ... In der Einleitung von Fischer (2003, p. 17) heisst es: „Und folglich sollten auch die Wissenschaften selbst als Fenster vor- und dargestellt werden, um durchschaubar zu werden.“

Online sources:

- d) ... wie Schoop (2017, *Die Leere*, nzz.ch) aufführt ... (Autor known)
- e) ... wie maestrani.ch (2014, *Nachhaltigkeitsbericht*) aufführt ... (Autor unknown)
- f) ... wie Wikipedia (2012, *Neandertaler*) aufführt ... (encyclopedia as a special case)

The same fundamental approach is followed for interviews with contemporary witnesses, specialists, etc. as with literary sources (cf. above)

Alternative with footnote:

<sup>1</sup>Bronfen (2014, type of source, e.g. interview, oral communication, etc.)

Alternative with parentheses in continuous text:

... as Bronfen (2014, type of source, e.g. interview, oral communication, etc.) remarked

...

### 3.2.2 Bibliography

The bibliography is to be listed alphabetically according to the last name of the (first) author. If the author is unknown, the title is used for the alphabetical listing. Depending on the topic of the paper, the bibliography may be divided into different parts according to the type of sources (print media, electronic media, interviews etc.).

*Bibliographical reference to a book:*

General: Surname, first name. (year of publication). *Book title*. Place of publication: Publisher. Page number(s).

Fischer, Ernst Peter. (2003). *Die andere Bildung*. Munich: Ullstein. p. 55-58.

Keller, Alfons J., Mattes, Roland und Hochuli, Jost. (1987). *Das Rote Fass von Roman Signer*. St. Gallen.

*Ortsbilder und Bauten*. City of St. Gallen, Municipality of St. Gallen, St. Gallen. no year.

Spierling, Volker. (1992). *Kleine Geschichte der Philosophie*. Munich: Piper.

Waloschek, Pedro. (1991). *Neuere Teilchenphysik. Einfach dargestellt*. Cologne: Aulis.

*Bibliographical reference to an article in a book:*

General: Surname, first name. (year of publication). Title of the article. In: Surname, first name of the editor. *Book title*. Place of publication: Publisher. Page number(s).

Robinson, Vera M. (2002). Geleitwort oder eine historische Sicht von Humor in der Pflege. In: Bischofberger, Irene (ed.): *Das kann ja heiter werden. Humor und Lachen in der Pflege*. Bern: Huber.

Wheeler, John. (1988). In: Davies, Paul C. W. und Brown, Julian R. (ed.): *Der Geist im Atom. Eine Diskussion der Geheimnisse der Quantenphysik*. Frankfurt: Insel. p. 75–87.

*Bibliographical reference to an article in a magazine:*

General: Surname, first name. (year of publication). Title. *Name of the magazine*, Year (Issue): Page number(s).

Seegers, Lothar. (1983). Biotopbeobachtungen an *Lamprichthys tanganicanus*. *DATZ*, 36(1): 5-9 .

*Bibliographical reference to a newspaper article:*

General: Surname, first name. (year of publication, date of publication). Title. *Name of the newspaper*. Page number(s).

Widmer, Christof. (2011, 28. Jan.). Kantonsgeld gegen Stromfresser. *Tagblatt*. 31.

*Bibliographical reference to an online article:*

A difference is made if the author is known or not. Encyclopedias and similar sources are treated separately.

General: Surname, first name. (if not available: homepage of the website). (Last online update; if not available: no year). *Title* (if available). Date viewed. Address.

Schoop, Florian. (14.02.2017). *Die Leere nach dem Boom* (nzz). (Autor known)

03.03.2017. <https://www.nzz.ch/zuerich/teure-wohnungen-in-zuerich-die-leere-nach-dem-boom-ld.145260>

maestrani.ch. (2014). *Nachhaltigkeitsbericht 2013/2014* (pdf). (Autor unknown)

05.01.2017. [http://www.maestrani.ch/fileadmin/user\\_upload/pdfs/Nachhaltigkeitsbericht\\_2013-2014.pdf](http://www.maestrani.ch/fileadmin/user_upload/pdfs/Nachhaltigkeitsbericht_2013-2014.pdf)

Wikipedia. (2012). *Neandertaler*. 10.05.2016. <http://de.wikipedia.org/wiki/Neandertaler> (encyclopedia as a special case)

*Source reference for an interview, oral communication, etc.:*

General: Surname, first name. Function (if applicable). Home or work address. Date of the interview.

Müller, Elisabeth. Professor. University of Kuala Lumpur. Interviewed on 14 June 2004.

## **4 Remarks on the formal layout of the title page**

The title page must contain the following elements:

- Matura Paper
- Title of the paper
- Date submitted
- Submitted by: (Name of the author)
- Submitted to: (Name of the supervisor, including the academic title)
- Kantonsschule am Burggraben St.Gallen

## **5 Remarks on the individual sections of the Matura paper**

### **5.1 Structure of the table of contents**

The table of contents includes all the essential chapters of the paper with page numbers, which enable the reader to find the individual sections of the paper. It is not counted toward the required length of the paper.

### **5.2 Elements of the introduction**

The introduction states the specific definition of the problem to be examined in the paper. It describes the limitation of the topic, the background situation, and any available sources and literature.

Hypotheses are formulated and the questions necessary to their verification are posed.

Methods are introduced through which the verification of the hypotheses are to follow. The theoretical and practical foundations employed for the paper are outlined, e.g. specialised literature, experiments, interviews, test series etc.

The student should make clear how he or she intends to deal with the topic and structure the paper. The introduction therefore assumes a superordinate position as a connective link for the following chapters.

### **5.3 Description of the main section (discussion, presentation of results)**

The results of the paper are presented in the main section. The main section should be clearly structured using subheadings.

As a rule, methods and considerations which may aid the verification of the hypotheses must be described.

### **5.4 Development of the conclusion**

In the conclusion, the results of the main section are compared with the problem and hypotheses formulated in the introduction. From this, the central statement of the paper is presented in the sense of a conclusion.

### **5.5 Arrangement of appendices**

The appendix does not count towards the required length of the paper. The appendices are to be numbered and are to refer to appropriate sections of the paper (references to the appendix in the relevant text passage).

## **5.6 Declaration of Original Work**

„I confirm with my signature that this paper is entirely my own work and that any assistance given by others was restricted to advice and proof-reading. All sources employed in preparation of the paper and all quotations used are clearly cited and due acknowledgment is given for all help provided by others. I am aware of the definition of plagiarism in the Matura paper guidelines and that submission of work which has been plagiarised is a serious breach of the Matura regulations (Art. 1quarter of the Maturitätsprüfungsreglements des Gymnasiums).

Date and signature: .....

## **6 Special remarks for the humanities**

The Matura paper is to be written in the target language, e.g. in English, French etc. Justified exemptions to this rule may be made upon request of the supervisor and given to the relevant department for assessment.

### **6.1 Table of contents**

- Overview of the conceptual structure of the paper (main chapters and subchapters).

### **6.2 Introduction**

- Depiction of the student's motivation for choosing the topic
- Limitation of the topic and clarification of the questions to be discussed in the paper
- Discussion of the procedure and applied methods
- Structure of the paper

### **6.3 Main section**

- Description of the starting situation
- Interpretation of texts, citation of sources, comparison of literature
- Presentation of results

### **6.4 Conclusion**

- Concise summary of the most important results of the paper

### **6.5 Closing Remarks**

- Statement of personal experiences made during the completion of the paper
- Any necessary acknowledgements and thanks to people and institutions which have contributed to the successful completion of the paper

### **6.6 Bibliography**

- List of all material, sources, and illustrations

## **7 Special Remarks for the Sciences**

### **7.1 Table of Contents**

Overview of the conceptual structure of the paper (main chapters and subchapters).

### **7.2 Introduction**

- Depiction of the student's motivation for choosing the topic
- Discussion of the precise enquiry/hypothesis
- Clear limitation of the area of investigation
- Structure of the paper

### **7.3 Materials and methods**

- Description of the method
- Exact experiment instructions, used materials, illustrations of experimental arrangement etc.
- Basis in the literature

### **7.4 Results**

- Presentation of the results in the form of graphs, tables etc. with clear keys and additional comments

### **7.5 Discussion**

- Discussion of the results in reference to the enquiry/hypothesis stated in the introduction
- Judgement of the precision of the results, highlighting of possible sources of error
- Formulation of further enquiries/hypotheses for further work, if necessary

### **7.6 Conclusion**

- Concise summary of the most important results of the paper (enquiry/hypothesis, procedure, statements based on the achieved results)

### **7.7 Closing Remarks**

- Statement of personal experiences made during the completion of the paper
- Any necessary acknowledgements and thanks to people and institutions which have contributed to the successful completion of the paper

### **7.8 Bibliography**

- List of all material, sources, and illustrations

## **8 Special remarks for papers in the fields of art and music**

For papers in the fields of music and art, special directions for the particular case will be given by the department.