Research Skills

How to do a proper research

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Research contains several types of skills. Those can be trained like other activities to reach the best possible result.

At the beginning there is always a question or a problem that needs to be solved. To find the answer to a question you need to do researches.
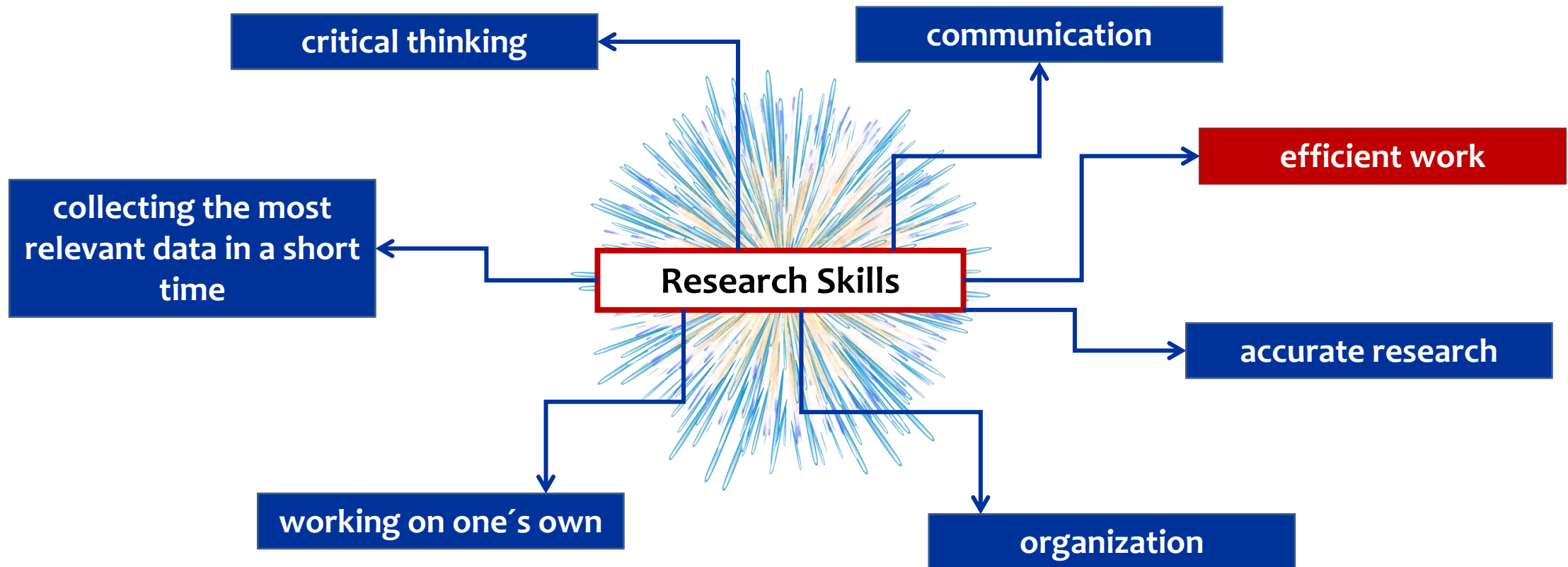

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Definition

What are research skills?

Composition of research skills

critical thinking

communication

efficient work

collecting the most relevant data in a short time

Research Skills

accurate research

working on one´s own

organization

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When do I search for information?

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Current need of information

„I need to take care of my neighbours' fish. – I don't know anything about fish."

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The closest restaurant:

https://cdn.pixabay.com/photo/2016/09/13/18/38/silverware-1667988_960_720.png

Weather forecast:

https://cdn.pixabay.com/photo/2013/07/12/12/53/weather-forecast-146472_960_720.png

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Frequent researches

Personal interests:

News:

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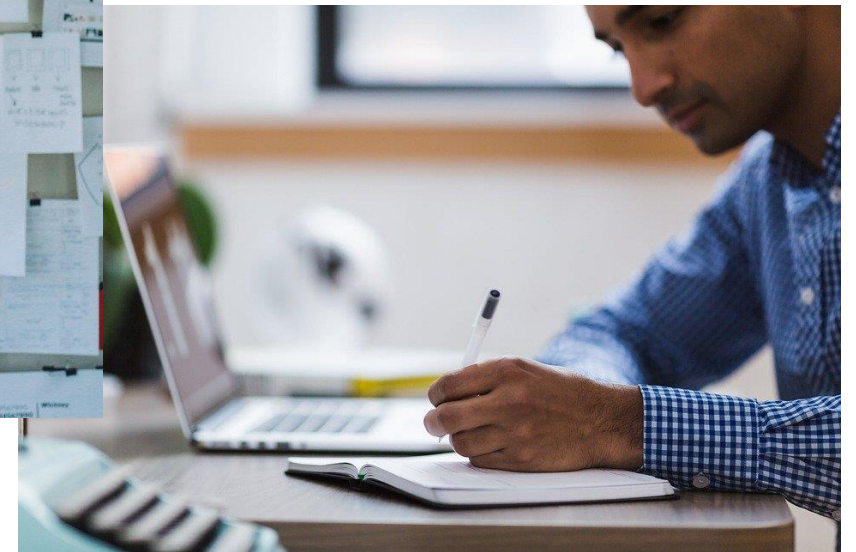https://cdn.pixabay.com/photo/2015/01/28/22/16/workplace-615375_1280.jpg

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Necessary research – for school, work, etc.

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https://cdn.pixabay.com/photo/2018/01/17/07/06/laptop-3087585_1280.jpg

https://cdn.pixabay.com/photo/2017/08/01/00/38/laptop-2562325_960_720.jpg

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What are the steps of research?

1. Searching for information and collecting it

2. Reflecting about the information

3. Categorisizing the information

4. Creating a structure
   (for a lecture, work, etc.)

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Improving research skills

- **Doing researches is an activity just like others.**

➔ You need to do it again and again to increase your skills

- **If you tackle research skills themselves your researches will be more efficient and sucessful.**
- Use methods you have learned **during a previous research** for your next research

If you don´t do frequent researches ask yourself these questions:

- Which topics am I interested in?

- How much do I know about the things that I am interested in?

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Short survey:

https://cdn.pixabay.com/photo/2020/07/11/22/57/business-meeting-5395567_1280.jpg

Which sources do you use?

- **books**

You get information about the exact topic you are searching for.

- **internet**

You get many information in a short time by using keywords.

➔ You get a lot of information you don´t need.

- **talking with experts**

You can get direct answers to your questions an learn from the experiences other people have made.

Possibilities

How can I get information?

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What is an encyclopedia?

„A reference work is a work such as a book or periodical (or its electronic equivalent) to which one can refer for information. The information is intended to be found quickly when needed. Reference works are usually referred to for particular pieces of information, rather than read beginning to end."

- https://en.wikipedia.org/wiki/Reference_work

➔ An encyclopedia does <u>not</u> replace a scientific research.
It can be used for the gathering of information and therefore it is only a part of a proper research.

➔ Example: Wikipedia - <u>Everyone</u> can create an article.

The system of online results

SEO and SEA

- **Search Engine Optimization (SEO)**

Marketers use <u>techniques</u>, which list their website on the top of the results (f. ex. relevant keywords, website-architecture, etc.)

Users only investigate the first or second site of the results.

➔ The following results won´t be discovered.

Employers know about that an use SEO for their own purpose.

- **Search Engine Advertising (SEA)**

Companies <u>pay</u> for listing their website on the top of the results.

These results will be marked an an advertisement.

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The system of online results

data collection

- **data collection**

The system stores the kind of information you are searching for:

respectable / untrustworthy sources

- **recommendations**

The system provides you with the information that fits you.

➔ **You will stay limited in your mind / knowledge.**

„Recommended posts for you…"

- **the system adjusts to you**

If you frequently search for respectable sources, you will be provided by „good" information.

➔ The system „lerns" to provide proper results.

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How can I affect my researching results?

- **Use „" for your keywords; websites will definitely contain these words**

Example: „proper research"

Possibilities when using Google:

- Use a **minus** in front of several keywords; the search engine will cut out every information that contains the keyword you mark with a „-"

Example: proper research **-fake**

- **Google Scholar**

Google Scholar searches especially for scientific textes, books or documents.

➔ **Use different search engines; they show different results**

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exercice:

https://cdn.pixabay.com/photo/2020/07/11/22/57/business-meeting-5395567_1280.jpg

Type the word „news" in your search engine. What shows up on your device and in which place?
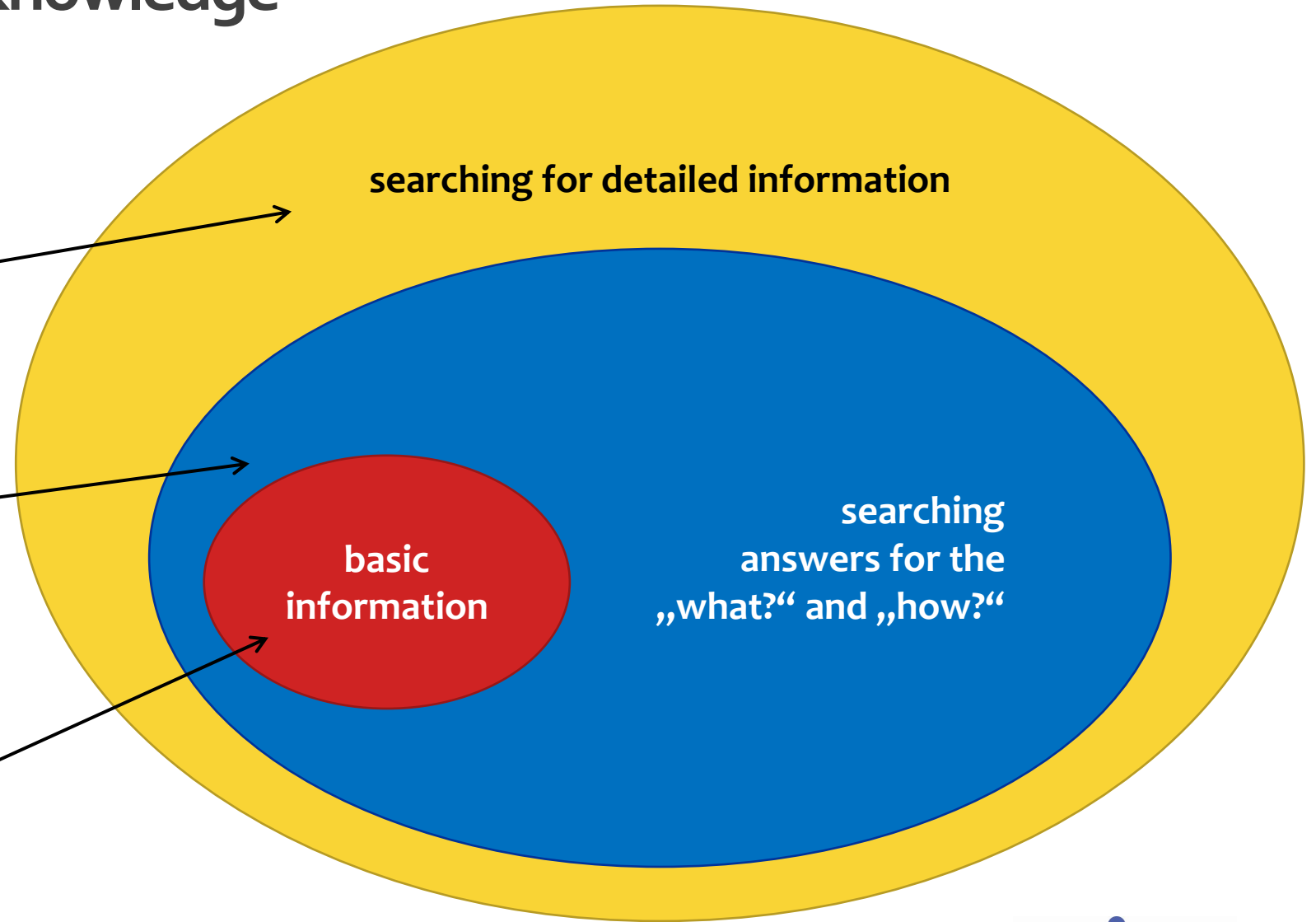
How do I increase my knowledge?

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Increasing your circle of knowledge

searching for detailed information while **using the knowledge you already have**

questions you ask yourself **about the information you have already gained**

- **definitions**
- **summaries** of the topic

searching for detailed information

basic information

searching answers for the „what?" and „how?"

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Question the information you are gaining:

- **Does the information make sense?**

- **Does it agree with the knowledge I already have?**

- **Could my knowledge be wrong?**

- **Who exactly gave this information to me?**

Sources:

Only use respectable sources for your research.

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Reflecting

Reflect about the information you find

Example:

Statement: Walruses can fly.

Does it make sense?

-    „No.“

Reasons:

They have no wings, they are too heavy, etc.

Personal experience:

„I have never seen a walrus flying when I observed one at a zoo.“

Could it be possible? – Ask an expert about it or search for respectable sources.

https://pixabay.com/photos/rosmarus-odobenus-water-mammal-387243/

https://pixabay.com/photos/walrus-walrus-scotland-3433748/

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Respectable sources

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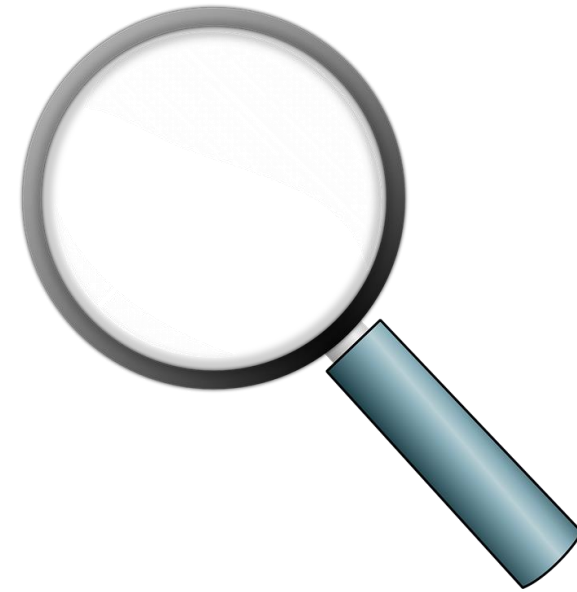- **imprint and author**

Are there any contacts on the website?

Do the contact´s email adress and the phone number work?

- **date of publication**

How old is the article? **When and where** has it been published for the first time?

- **search for other contributions**

Are there any other <u>respectable</u> people, who have explained the same subject? What do they say/write about it?

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Checklist

What do I have to check?

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- **no reference**
- **typing and spelling mistakes**
- **emotional, unobjective style of writing**
- **missing imprint**
- **statements without facts or specialist knowledge**

attention:

Even a website that looks respactable can be **faked**. Check whether these points fit with the website.

https://cdn.pixabay.com/photo/2014/04/02/10/18/magnifying-glass-303408_960_720.png

Advice

How do I identify untrustworthy sources?

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Where can I find respectable sources?

- **departments**

Departments offer respectable and subject-specific information.

- **avoid untrustworthy websites**

Never do researches on social media platforms or (untrustworthy) chat forums.

- **university library**

These libraries offer specialist literature about different subjects.

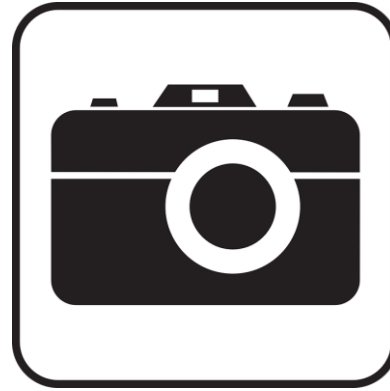https://cdn.pixabay.com/photo/2010/12/13/09/51/book-1797_1280.jpg

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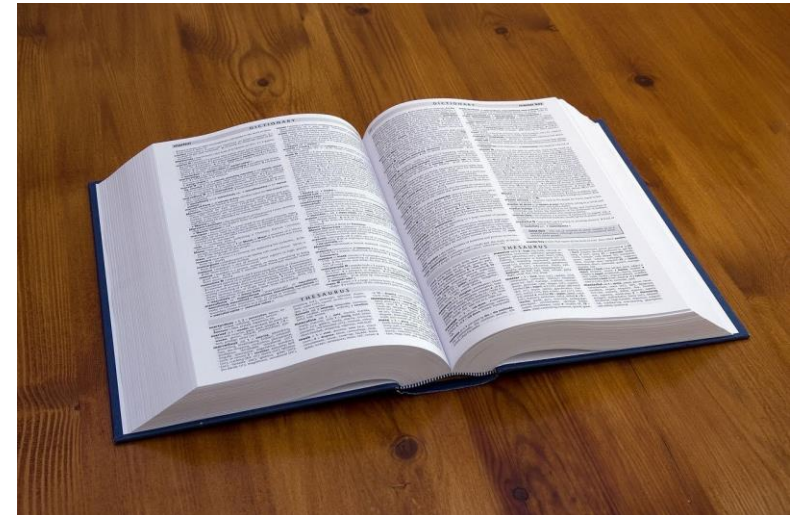
Quoting

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speeches:

https://pixabay.com/vectors/speech-bubble-arrow-ellipse-shape-25916/

photos:

https://pixabay.com/vectors/photo-picture-image-photography-99135/

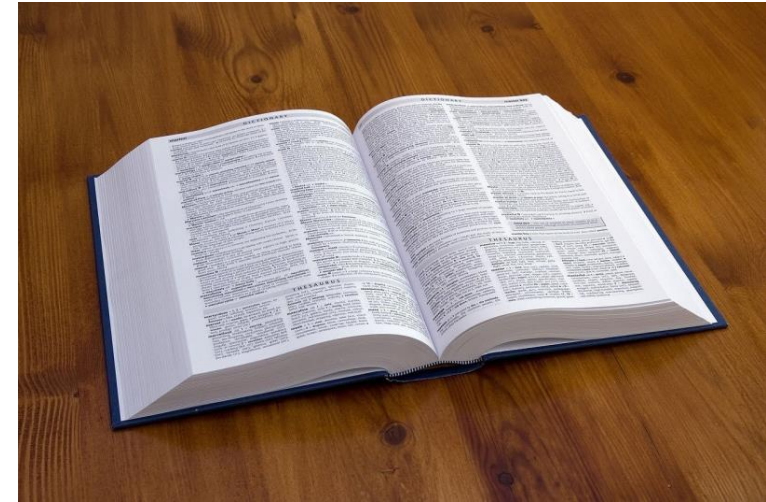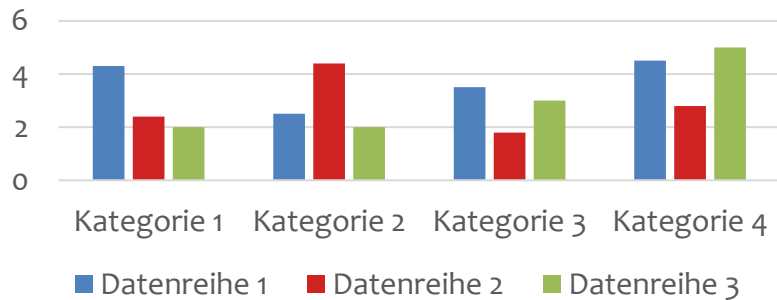**texts:**

https://cdn.pixabay.com/photo/2010/12/13/09/51/book-1797_1280.jpg

diagrammes, grafics:

Hier Statistik einfügen

Kategorie 1   Kategorie 2   Kategorie 3   Kategorie 4

■ Datenreihe 1   ■ Datenreihe 2   ■ Datenreihe 3

Possibilities

What kind of possibilities do I have?

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Harvard Referencing:

surname of the author, title from the article/book…, year of publication, page number (if it is a book)
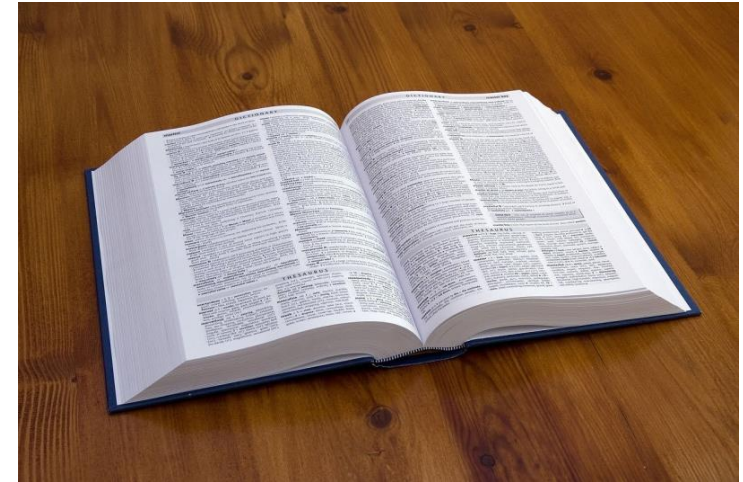
If you have a bibliography, name, year and page number are sufficient. **Example:** (Helms 1981: 132)

online sources:

Name the URL and the **date you have checked it for the last time.**

attention:

Articles and information often will be deleted from websites. That is why you need to give the date next to the URL.

https://cdn.pixabay.com/photo/2010/12/13/09/51/book-1797_1280.jpg

Process

How do I quote right?

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Why is quoting so important?

- **copyright law**

It is not allowed to pretend to be the information you have collected as your own accomplishment. Who exactly is the author and where did you find the information?
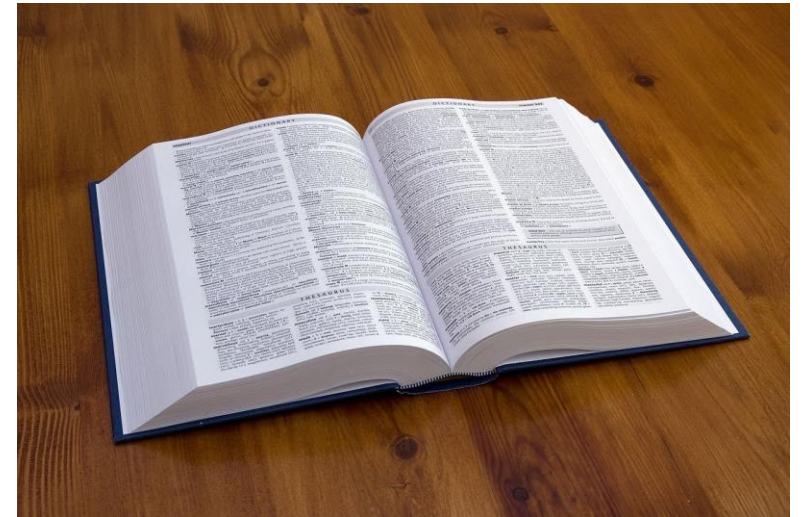
- **you can verify your statements**

Sources can verify your statements about a topic.

- **illustration**

Certain sources allow the audiences / reader´s access to the subject, like pictures, graphs, etc.

<u>attention:</u> **Pictures and graphs can be faked too!**

https://cdn.pixabay.com/photo/2010/12/13/09/51/book-1797_1280.jpg

sources:

- https://www.indeed.com/career-advice/career-development/research-skills
- https://www.marketing91.com/research-skills/
- https://www.121watt.de/seo/was-ist-seo/
- https://www.more-fire.com/tipps/was-ist-seo/
- https://herr-kalt.de/arbeitsmethoden/erfolgreich-referat-recherchieren
- https://www.uni-bamberg.de/ub/fuer-schuelerinnen-und-schueler/erfolgreich-recherchieren/
- https://www.mentorium.de/ebook/wissenschaftliches-arbeiten/zitieren-zitation-zitierregeln-zitiernormen-tipps/
- https://www.unicum.de/de/erfolgreich-studieren/hausarbeit-co/literaturverzeichnis
- https://www.mentorium.de/harvard-zitierweise/
- https://de.wikipedia.org/wiki/Nachschlagewerk
- https://en.wikipedia.org/wiki/Reference_work
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