

BLISS

BOOSTING HEALTH LITERACY FOR SCHOOL STUDENTS

Toolkit Teachers handbook for teaching digital health literacy:

Managing health information

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Managing health information

Digital health literacy is about finding, understanding, evaluating, and applying digital health information and services. Broadly, digital health literacy can be described as a competency by which students can better and systematically learn how to manage (online/digital) health information, make informed health decisions, inform their health behavior, and promote their health.

In this unit, students will learn particular competencies related to digital health literacy in the following dimensions:

Browsing and searching data, information and digital content on health topics

Competence Description

- To articulate health-related information needs, to search for health information and health content, to access and navigate between health information in digital environments
- To apply search strategies for health information

Filtering, structuring, and understanding health information

Competence Description

- To structure, filter, convert and edit relevant health information
- To select media resources for health information effectively
- To comprehend health information found via digital sources and within the digital information ecosystem, including the internet, social media, and communication apps
- To understand the meaning behind health information and health communication with friends,
- To understand how health information and knowledge can inform your decisions and behaviors

Evaluating health data, health information and digital health content

- Competence Description
- To understand how health information is prioritized on the web
- To analyze the health information in relation to the question and health needs
- To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content about health
- To identify unreliable websites and fake news about health issues

Learning objectives and outcomes

Each exercise provides specific educational frames that shall be supplemented and modified by teachers' personal perspectives, experiences and didactical methods.

Objective

Students will learn digital health literacy competencies in the following skill areas:

- browsing and searching data, information and digital content on health topics
- filtering and structuring health information
- understanding digital health information
- evaluating health data, health information and digital health content

Outcomes

After the lesson, the students will be able to:

- seek for health information online
- filter relevant health information and structure health information based on their search goals
- understand what the health information is about
- form critical judgments about health information

Applied pedagogical methodology

Project-based learning

Cooperative Learning

Participatory Teaching and Learning (PTL)

Competency-based Learning (CBL)

Structure of the document

The content of the lesson is based on a unit with three exercises and associated tasks:

1. browsing and searching data, information and digital content on health topics
2. filtering, structuring, and understanding health information
3. evaluating health data, health information and digital health content

The unit is displayed in an educational worksheet table that includes the activities, methods, time and materials and media. The educational worksheet represents a guide for the teacher.

Below the worksheet, the tasks of the exercises (handout for students) and a material collection for the students are presented. After the group work, the students will present their results from the internet search to the class.

Summary

KEY-COMPETENCIES

browsing and searching data, information and digital content on health topics

filtering and structuring health information

understanding digital health information

evaluating health data, health information and digital health content

TOPIC(S)

Addictive substance-related health information

Searching the internet

DESCRIPTION OF THE ACTIVITY

To perform a search on a health question about addictive substances

To filter, structure and understand the information found on the internet

To evaluate the health information based on evaluation criteria

Unit: Managing health information

Procedure for a double lesson of 90min				
Teaching Phase	Activities/Interaction	Method/Social Form	Time	Material & Media
Welcome + presentation of the topic	Teacher stands in front of the class; students listen and can ask questions, create groups; share materials	Frontal	5 minutes	Information from the teacher, Task sheet for students
Students complete task 1	Students decide independently about the group roles based on the group card.			Group role card (material collection)
Browsing and searching data, information and digital content on health topics				
Students work on tasks 2 to 6	Students develop a question about addictive substances, define variables (search terms, question, search engine) for the search, and carry it out on the Internet	Group work	20 minutes	Task sheet for students, info box search engines (material collection), info box on research (material collection), laptop, tablet or mobile phone
Filtering, structuring, and understanding health information				
Students work on tasks 7 to 9	Students clarify together which terms they do not understand, what possibilities they have to find out the meaning of them, and use these possibilities; Teachers help if necessary	Group work	20 minutes	Task sheet for students, laptop, tablet or mobile phone
Filtering, structuring, and understanding health information				
Students work on task 10	Students evaluate the information and sources found based on the evaluation criteria; Teachers are available for questions	Group work	20 minutes	Task sheet for students, laptop, tablet or mobile phone, evaluation criteria (material collection)
Presentation of results from the group				
Students present their outcomes	One or more students from each group present either orally or visually their key findings and report their experiences	Frontal presentation	15 minutes	

Task sheets of the Unit “Managing health information”

Exercise 1 for browsing and searching data, information and digital content on health topics

This task is about searching and finding information. To do this, you will do research on the topic of addictive substances.

Tasks

1. First, allocate the offices within your group.
2. What do you already know about addictive substances? (1-2 sets)
3. Agree on a health question related to addictive substances. You can develop your own question or consider the suggestions in the material collection. Create a mind map.
4. Now determine the following things before you start your internet research:
 - A specific question that you would like to answer (1 sentence)
 - At least three unique search terms or combinations of multiple terms. It is helpful to use synonyms (words with the same meaning) (example: drugs, dependence, addiction)
 - Which search engine you want to use. You can include the info box "Search engines" to do this.
 - What is your motivation for answering this question (1-2 sentences)
 - What you can do to make the research successful (1-2 sentences)
5. Now start your research and enter the defined search terms into the search engine of your choice.
6. Write down three sources (websites) that came up during your research. To do this, write the name of the page once on and in 1-2 sentences, what is written about there to answer your initial question.

Exercise 2 for filtering, structuring, and understanding health information

This task is about filtering, structuring, and understanding the health information you identify on the Internet or other digital sources. Now, try to understand the three sources and the content you have written out. To do this, please complete the following tasks and document your approach and results of the processing.

Tasks

7. Now look at the information found and its key messages.
 - a. Are there similarities and differences? Name them.
 - b. Which terms need to be clarified to you in this text or give ambiguous information? Tag them.
8. Give at least three ways to find out the meanings of the labeled terms.
9. Use your written options to find out the meaning of your labeled terms. Document your approach and the results.

Exercise 3 for evaluating health data, health information and digital health content

This task is about evaluating the information found. For this, you can judge them with the respective evaluation criteria.

Tasks

10. Try to evaluate the results you find. To do this, use the evaluation criteria (material collection). Answer the questions within the individual assessment units in writing.

Material collection

Group cards

Task manager

You make sure that

- the tasks are completed.
- the goal is pursued and achieved.
- everyone fulfills their roles and is involved in the work.
- all tasks are distributed fairly.

Timekeeper

You make sure that

- the specified working time is adhered to.
- the breaks are adhered to.
- you jointly discuss and agree on whether more time is needed.

Notetaker

You make sure that

- to keep notes on any ideas, solutions, and results.
- to prepare the notes in a way they can easily be presented afterward.

Moderator

You make sure that

- everyone has their say in the group work.
- everyone hears each other out.
- everyone sticks to the rules of speaking.
- that your groups keep the volume down.

Suggestions for Internet research on an addictive substance topic

- Psychological and physical changes/consequences of consuming by:
- Alcohol
- Marijuana/Cannabis
- Tobacco/nicotine
- Cocaine
- Heroin
- Ecstasy
- Sleeping pills and sedatives
- Painkillers
- Methamphetamine

Evaluation criteria

Checking the content

- What type of text is it? (Examples: Opinion, commentary, scientific article, satire, advertisement, report ...)
- What feelings does reading the information trigger in you? (Do you feel e.g. uncomfortable or upset?)
- Is the content presented in a very one-sided way?
- Does the content contain contradictory information?
- How up-to-date is the content? (Older information is not necessarily worse. Perhaps the topic was very relevant at an earlier time. The temporal context must always be taken into account).
When was the page last updated?

- Are there any unanswered questions?

Checking the sources

- Are other reliable sources (e.g., experts or official organizations) cited in the text?
- If experts are quoted, are they really experts in the field? Try to find out.
- Do other sources report the same information?

Check the media provider

- Do you know the online site/media provider?
- Try to find out who is behind it (e.g. under "Contact", "About us" or "Imprint")
- Are there sponsors or donors who finance this site? If yes/no, what could that mean?
- What audience is the site primarily aimed at? For whom was the content created? What could be the intention behind the information provided?

Checking the images

A "reverse image search" can be used to determine whether the specified photo or image is current, where the origin of the image lies, or whether it has already been used in a different context and therefore, possibly distorts the specified content.

- **With Google:** In addition to the search bar of the Google image search (<https://www.google.com/imghp?hl=en>) you will find the symbol of a camera. Click on this, either upload the image to be analyzed or enter a URL. The search results of the sources in which the image has already been used.
- **With Yandex:** It is often worth using platforms other than Google for a reverse image search, because the algorithms within a Google search are not uncontroversial. Via the Yandex image search (<https://yandex.com/images/>), the camera symbol next to the search bar can also be found, and the image to be analyzed can be uploaded or a URL entered to be analyzed. The search results of the sources in which the image has already been used.

Verification of the author

- Is there a name above or below the content?
- If so, does this person really exist? In most cases, real people can usually be found by entering them into a search engine (e.g., Google, Ecosia, or Bing).
- Does the person appear in other contexts? If so, what are they?