

DEVELOPING DIGITAL LEARNING MATERIALS

IN PRACTICE



AGENDA

- Welcome & Intro
- What to do in case of limited ITC skills and knowledge
- Illustrative tools and interactive media
- Facebook group for community management

Break

- WAIPA: background and instructions to group work
- Group exercise
- Restitution
- Closing



DEVELOPMENT OF DIGITAL LEARNING MATERIALS

LIMITED ICT INFRASTRUCTURE AND LOW DIGITAL SKILLS: HOW TO ADAPT?



A Project from the Swiss Agency for Development and Cooperation SDC



In partnership with



Implemented by



The lack of a complete and well-functioning ICT infrastructure and the low digital skills, both for teachers and students, are one of the biggest challenges in terms of ensuring the effectiveness of digital learning materials and learning process overall. Usually, the consequences of these limitations are multiple, ranging from issues that are closely related to the effectiveness of classes and learning process:

- difficulties in transferring and understanding of the new information;
- low interactivity between teacher and students, among students and between the student and the material;

- up to more complex and long-lasting effects, such as:
- lack of motivation;
 - a feeling of inferiority compared to others;
 - a feeling of being excluded;

- or even:
- dropping out of school.

01

WHAT TO DO IN CASE OF LOW DIGITAL SKILLS?

When it comes to developing and using digital learning materials, we constantly face the problem of low digital skills. There is always a considerable part of teachers and students that have difficulties in adapting to this technology-based learning approach. What to do? How to help this category to be part of these innovative ways of learning? Here are some helpful suggestions:

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WHAT TO DO WHEN THERE IS LIMITED ICT INFRASTRUCTURE?

Many schools, especially in less developed countries and remote areas, have limited ICT infrastructure. We will focus on two main situations related to this issue, trying to suggest how we can face this challenge:

02

SITUATION B: THE STUDENT HAS LOW DIGITAL SKILLS

- 1) Organize the classes in groups, where at least one student has higher digital skills, inserting group assignments, projects etc. in the digital learning material could support this approach.
- 2) Create a students' forum led by an ICT expert or a high-skilled digital teacher or student where students could ask questions and share their experience.
- 3) Opt for an easy-to-manipulate digital learning material, so that the students will be able to work on it even independently.

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SITUATION A: LIMITED ICT INFRASTRUCTURE AT SCHOOL

Case 1: There are no computers/laptops at school/classroom for the students

1) Try the "Bring your own technology" initiative: In order to compensate the lack of infrastructure at school, students could be asked to bring their own technology devices, e.g. laptops, tablets, iPads, etc.
A plan B: what we would like to call the "All for one and one for all" strategy. If bringing the technology at school still does not ensure that each student uses his own device, the students could be divided into groups working on the same device.

2) Encourage the use of mobiles: if the learning materials are placed in a platform managed by the school, pay special attention in adapting the structure, the font sizes and the look of the platform for a mobile use (easy-to-navigate components, readable fonts, etc.).

Case 2: There is an unstable internet signal at school

1) Make hard-copies of the digital learning material. Teachers could print the digital learning material from the platform and distribute copies of it to the students. Students could work on the hardcopy and try to simulate as much as possible the interaction activities as if they were working on the platform (e.g. face-to-face discussions, asking each-other questions included in the tests, etc.).

2) While working on the digital learning materials, it is suggested to avoid long videos that consume too much internet data and insert the script as a backup.

03

“ The ABC project is currently collaborating with a VE school. The project's coordinator just presented to the school a proposal to create a platform for digital learning materials in order to support online classes during the pandemic. The schools' staff is thrilled by the idea but most of the teachers are worried. Their digital skills leave much to be desired and they hesitate to engage in this initiative. Moreover, they are worried on how they will use the digital learning materials in their classes...

What would you suggest to the project and the teachers to support the process?

”

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Photos

Pros

- Easily found
- An effective way to:
 - ✓ concretize a concept
 - ✓ break the monotony of a long text
 - ✓ transmit a message
 - ✓ stimulate emotions
- A booster of visual literacy skills

Cons

- Distracting if too many are used
- Confusing if the purpose is not clear

Where & how to use it?

- To demonstrate a step-by-step process
- To emphasize an important concept
- To break the ice or stimulate a discussion
- In practice classes, to concretize objects, processes or phenomena that cannot be seen from close
- Throughout the body text



Sources:

Pexels / Freepik / Unsplash / LibreStock

Cost:

Free

Level of required digital skills:

Low

Icons

Pros

- Attract the audience's attention
- Suitable in illustrating abstract concepts

Cons

- Distracting if too many are used
- Confusing if the meaning is ambiguous

Where & how to use it?

- In schemes, sketches, graphic organizers etc.
- To illustrate steps, procedures, parts of a whole etc.



Sources:

The Noun Project / Flaticon / Iconfinder / ICONS8

Cost:

Free

Level of required digital skills:

Low

Videos

Pros

- Excellent tool to:
 - ✓ concretize
 - ✓ attract attention
 - ✓ increase engagement
 - ✓ stimulate interactivity
- A long-lasting impact
- Suitable for people with reading impairment
- Flexible tool: record, cut, insert voice-over or text

Cons

- Creating a “Watching the video is enough” mindset
- Lose interest if too long
- Consume too much internet data
- Might not be suitable for people with hearing impairment

Where & how to use it?

- To explain a complex process
- To bring indoors what happens outdoors.
- To support practical subjects/topics
- As an evidence and assessment tool
- To break the ice
- To replace large text
- To stimulate a discussion
- To present a case study



Sources:

Clipchamp / Adobe Spark / Animaker / Animatron Studio / Edpuzzle / OFFEO / Renderforest /

Cost:

Free version is available
Free

Level of required digital skills:

Low

Giphs

Pros

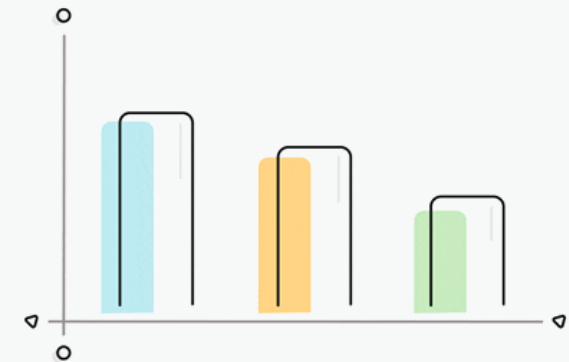
- Easy to create
- An effective way to:
 - ✓ attract attention
 - ✓ explain a process
 - ✓ retain information
 - ✓ learning more enjoyable
- Do not consume too much internet data

Cons

- Can't be edited (modified)
- Confusing if the purpose is not clear

Where & how to use it?

- As a visualization of a process or a pattern
- As a way to decontract the audience (funny giphs)
- Very suitable for younger audience
- Do not consume too much internet data



Sources:

Imgur
GIPHY / Make a Gif

Cost:

Free version is available
Free

Level of required digital skills:

Low

Graphic Organizers

Pros

- An effective tool to:
 - ✓ present ideas,
 - ✓ demonstrate connections
 - ✓ organize large information
 - ✓ attract attention
 - ✓ stimulate engagement
- Facilitate cognitive process
- Boost soft skills when given as assignment (organizing, prioritizing etc.)

Cons

- Complicated if busy
- Take time to be created
- Needs digital skills

Where & how to use it?

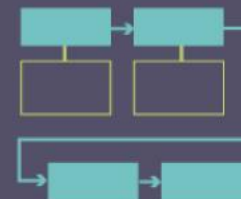
- To evoke priory-gained knowledge
- To replace a large text
- To understand if learning objectives are achieved
- Explain the relationship between main concept and related other elements
- Present sequential cause-effect relationship
- Present the steps of a process



CIRCLE MAP



BUBBLE MAP



FLOW MAP



MULTI-FLOW MAP

Sources:

Canva / EdrawMax / Mind Meister

Cost:

Free version is available

Level of required digital skills:

Low-Intermediate

Padlet

Pros

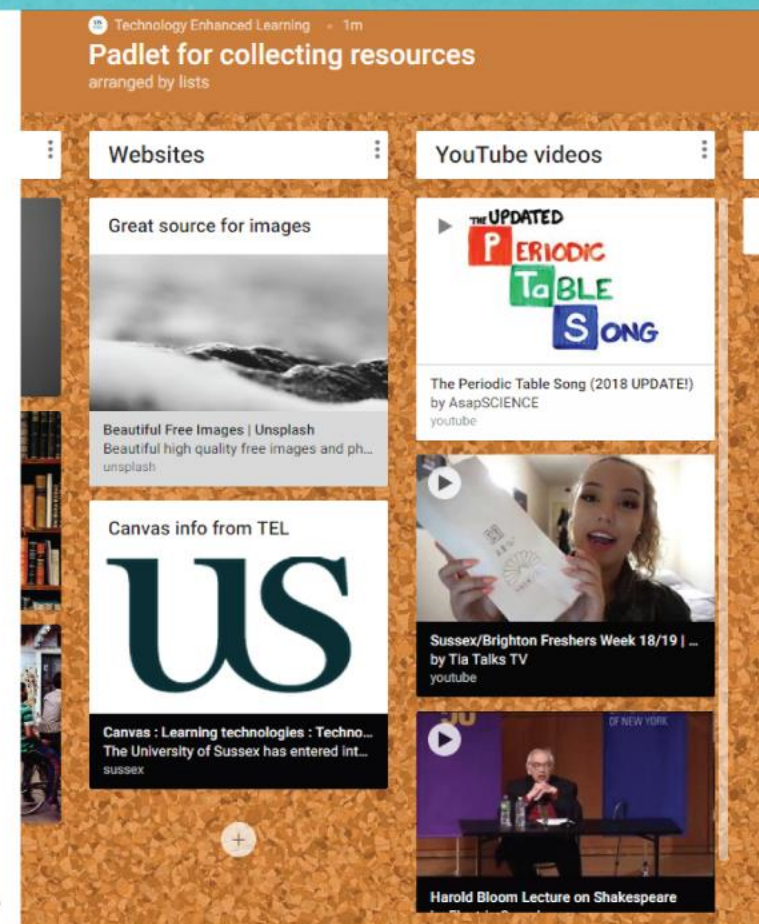
- Easy to use
- Dynamic learning process
- Imitates a physical class
- Suitable for all types of postings
- Highly interactive

Cons

- Difficult to be managed in case of too many participants
- Confusing in case of too elements are placed

Where & how to use it?

- As a discussion or brainstorming board
- As a blog for a teamwork or project
- As a peer-to-peer assessment tool



Sources:
www.padlet.com

Cost:
Free trial (3 padlets) /
Start at 5€ monthly

Level of required digital skills:
Low

Mentimeter

Pros

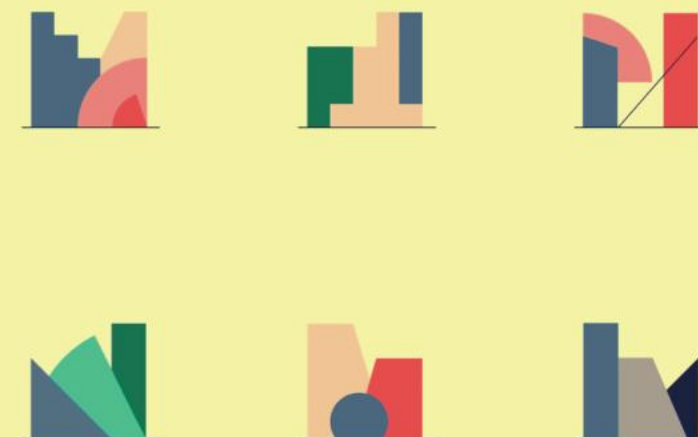
- Easy to use
- Presentation with immediate feedback
- Various types of presentations
- Engages all learners at once
- Stimulates interactivity

Cons

- There is no import option: everything has to be created from scratch

Where & how to use it?

- When you want to receive immediate feedback
- To break the ice
- To evoke priory-gained knowledge by asking the learners to complete it
- To understand if learning objectives are achieved
- To present a dilemma



Sources:

www.mentimeter.com

Cost:

Free version is available

Level of required digital skills:

Low

How do we implement WAIPA



Assignment:

Creating a learning material for digital use based on the WAIPA scheme

- **Teamwork:**

- 3 groups/chat rooms
- a moderator per each group



- **4 text options (on the padlet sheet):**

- Roles of marketing
- History of environmental pollution
- The basics of social inclusion
- Importance of occupational safety and health



- **Assignment's final product:** A learning material suitable for a digital version, according to the WAIPA scheme.

Assignment:

Creating a learning material for digital use based on the WAIPA scheme

Within each group, you will have to assign to members the following tasks:

Member 1:

Elaboration of 2-3 content-related learning objectives

- Focus on the text main concepts, knowledge or skills it provides to transform them into **learning objectives**.

Example: At the end of the lesson/session, the learner should be able to:

- Analyze the characteristics of...
- Define the use of ...
- List the principles of ...



Assignment:

Creating a learning material for digital use based on the WAIPA scheme

Member 2: **Text adaptation**

- The base for **Inform** and **Process** phase.
- The member in charge should carefully read the text and **adapt it** to a digital-prone version.

Tips:

- Try to break down the text into subtopics (if and where it makes sense).
- Remove irrelevant phrases/parts.
- Shorten long and complicated phrases.
- Use bullets if possible.



Assignment:

Creating a learning material for digital use based on the WAIPA scheme

Member 3: **Text illustration**

- Needs a full **understanding** of the narrative material to carefully choose how to illustrate.

What could we use?

- Images
- Schemes

- Videos
- Graphics

- Icons
- etc.



Assignment:

Creating a learning material for digital use based on the WAIPA scheme

Member 4: Elaboration of the “Welcome” and “Activation of Existing Knowledge”

- For the first component: remember that we do **not start immersing** into the topic yet.
- For the second component: we should imagine what the learner could **already know** based on the knew information in the text.

What to use for the Welcome phase?

- A light, ice-breaking element.
- An image & a question.
- A quote.
- An interactive poll etc.
- A discussion
- A content-related joke etc.

What to use for the Activation of Existing Knowledge phase?

- A set of questions
- A discussion
- A graphic organizer
- An image/video to interpret
- A brainstorming session
- A short test
- An interactive table/scheme etc.



Assignment:

Creating a learning material for digital use based on the WAIPA scheme

Member 5: **Elaboration of the Transfer & Analyze components**

- Here we decide what assignment to give and what activity to carry out to understand if the **learning objectives are met**.
- Member 5 should **interact** with Member 1 who has to elaborate the learning objectives, in order to make sure the Analyze component corresponds to them.

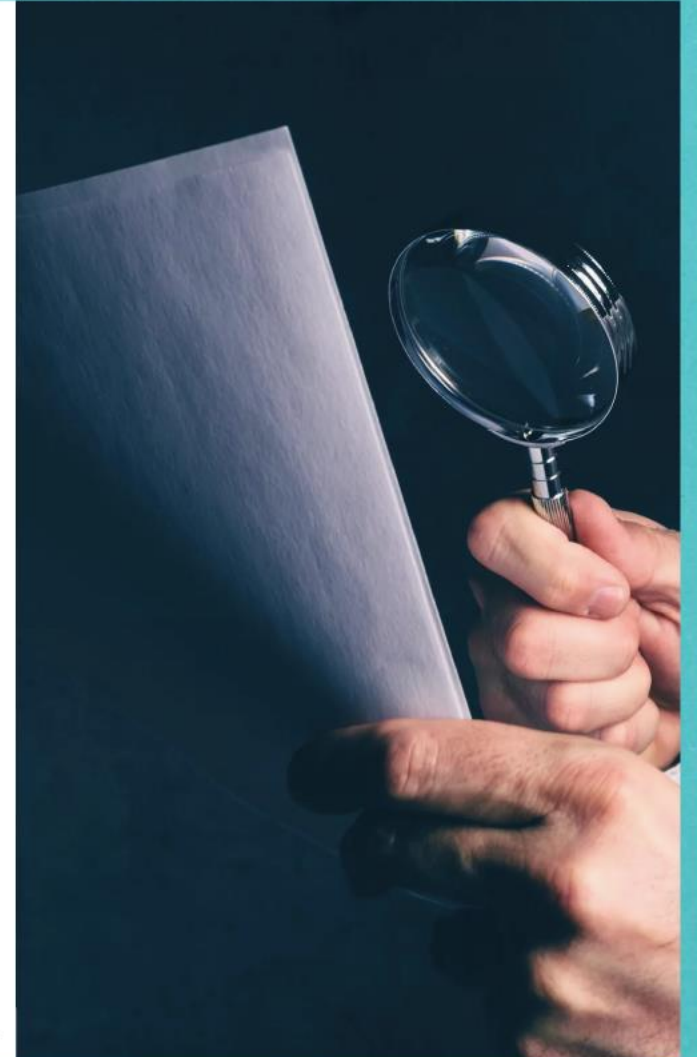
Tip: Start with the assignment, then move to the Analyze phase, to give time to Member 1 to formulate the learning objectives.

What to use for the Transfer phase?

- An individual assignment
- A group assignment
- A project etc.

What to use for the Analyze?

- A synthetic/deductive questions
- A discussion
- A mind map
- An interactive table/scheme
- A dilemma
- A case study

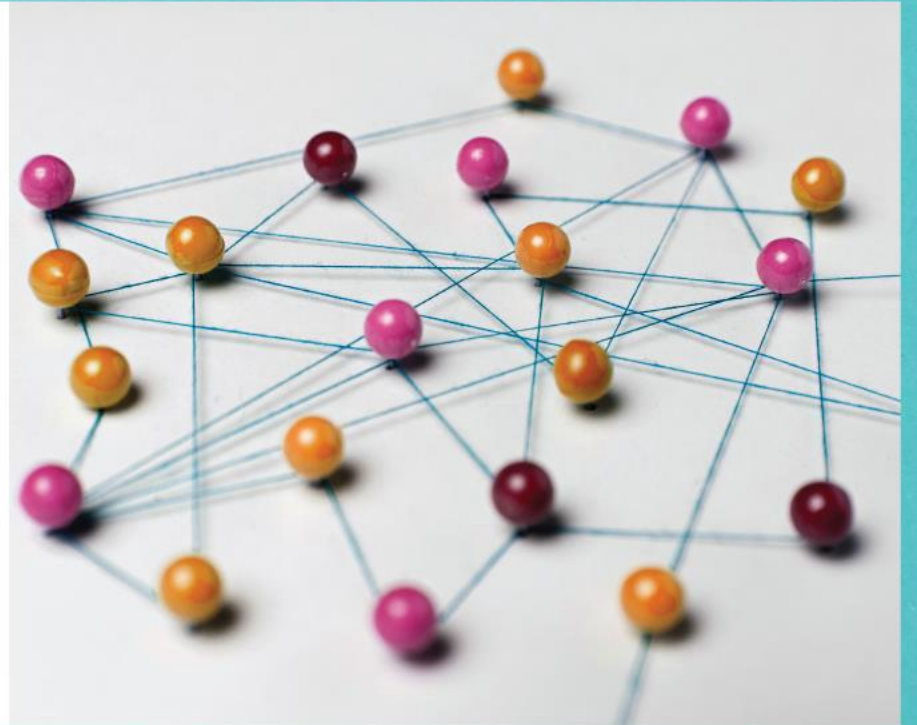


Assignment:

Creating a learning material for digital use based on the WAIPA scheme

What to keep in mind:

- **Communicate** with each-other to make possible the insertion of various elements in different phases of the learning material and to ensure the material's coherence.
- Try to **assemble** all components 5 minutes earlier to see how the final product looks.



Results from Group Work

TEXT 1: Roles of Marketing

<https://padlet.com/rafikolaj/krwkeep1r97bvsfg>

TEXT 2: History of Environmental Pollution

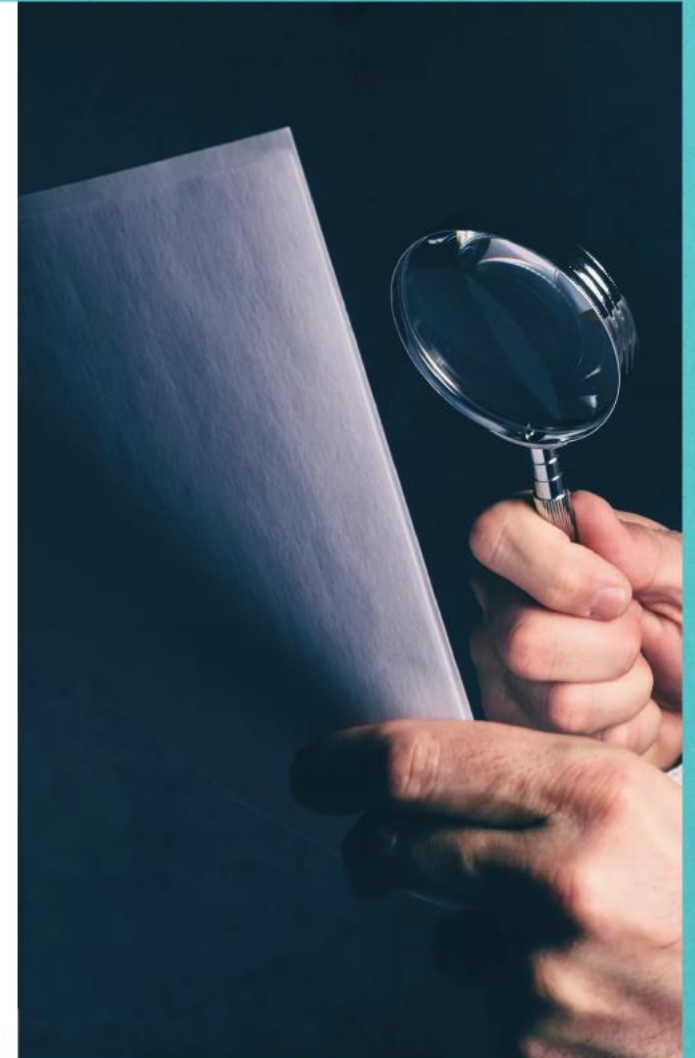
<https://padlet.com/rafikolaj/Bookmarks>

TEXT 3: The basics of social inclusion

<https://padlet.com/irenamajko268/z57ymqe2n0valcyv>

TEXT 5 - Methods of Cooking -

<https://padlet.com/albinabardhi22/kfb7agjf1395psl>





THANK YOU!