

ENLIVEN ENHANCED LEARNING AND TEACHING IN INTERNATIONAL VIRTUAL ENVIRONMENTS

Whiteboarding tools

April 27, 2022



Co-funded by the Erasmus+ Programme of the European Union



Project number: 2020-1-IT02-KA226-HE-095637

WHITEBOARDING TOOLS





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I General explanation of Whiteboarding Tools

What are Whiteboarding Tools?

An online whiteboard is a learning space where both teachers and students can write and interact with students in real-time via the internet. Online whiteboards are software solutions that come along as apps or browser-based tools. They support teams to collaborate visually over distance in real-time. Online whiteboards can be used for the same purpose as a real whiteboard, but without the limitations of a real whiteboard. Each participant of a meeting logs in to the same online whiteboard space and can add his content, while all the others see what he is doing in real-time and they can interact if needed with all the content. The purpose of a whiteboard is to visualize thoughts, concepts, write down ideas, explain and teach, plan and create in the group and many other things.

Benefits of Whiteboard Tools

An online whiteboard helps teachers to facilitate team activities when working online. It enables teachers to increase the value of teaching processes according to:

- 1. To improve collaborative processes when working remotely.
- 2. Teams can work on a shared board and visualize everything they do in real-time.
- 3. To boost the efficiency of online meetings and ad hoc collaboration sessions.
- 4. They enable you to do a workshop completely digital and remotely.
- 5. To foster the creativity of your teams when working digitally.
- 6. To make innovation happen even when people work remotely.
- 7. To implement agile methods and create an agile virtual workspace

There are many more reasons online whiteboards are a booster for your team collaboration.

What does an online whiteboard need to help teams collaborate remotely?

To get the full power of an online whiteboard, it should have at least these features:

- 1. Infinite or huge canvas (this is the actual digital whiteboard)
- 2. Support sketching, drawing, and handwriting with a digital pen
- 3. Sticky notes and workshops cards in various shapes and colors
- 4. Multimedia content like images, videos, and audio recordings
- 5. Upload documents like PDF and other office documents
- 6. Connectors to create mind-maps, concept-maps, and design workflows
- 7. Shapes, text, and other tools to design content on the board
- 8. Voting and rating of ideas
- 9. Commenting and chat options

- 10. Integrations with audio-and video conferencing solutions like Microsoft Teams, Google Hangouts, Webex, Zoom, etc.
- 11. Access rights management capabilities to restrict actions on the board of individual members if needed

With all these features online whiteboards allow you to do many different things, and the usage scenarios are endless and differ from departments and industries.

Ideas for its use

Most of the interactive whiteboard hardware allows you to download apps or start a web browser. Depending on the hardware you are using you will have a different user experience when working with your online whiteboard. The better the touch and ink technology and the more performant the PC that is powering the interactive display, the better your user experience will be. Drawing on an online whiteboard needs some exercise. Usually dependent on the hardware you are using, there are some significant differences. If you are used to working with Apple's iPad or Microsoft Surface Devices, you will see that drawing on the online whiteboard feels very natural, as the digital pen technology of these devices is excellent. If you are using hardware that is not optimized for pen usage but offers one, you will see that there are several challenges when drawing or handwriting. Sometimes you feel a lag, or the pen is not as precise as you expected.

List of online whiteboards

There are a lot of online whiteboards available. Dependent on your needs one of the following solutions will cover your use cases:

Allo Bluescape Conceptboard Collaboard Deon **Explain Everything** Hoylu InVision iObeya Klaxoon Limnu Lucidspark Microsoft Whiteboard Miro Mural Padlet Briefcase Prysm Visual Workplace Stormboard Weje.io.

II Guidelines for advanced usage of Whiteboarding Tools

This part is explained through the two papers published in International Scientific Journals. Please, read the articles and try to give answers to the questions from the Journal papers.

Discussion Forum

Using a digital whiteboard for student engagement in distance education

The COVID-19 pandemic transformed educational processes across different educational levels. As institutions and faculty members' efforts focused on guaranteeing academic continuity, the challenge was how to translate the learning methodologies applied in the classroom to virtual settings. A digital whiteboard was integrated into synchronous class sessions to complement the educational experience. Students and teachers interacted to co-construct ideas and socialized learning during these sessions. The objective of this study was to assess the impact of introducing a digital whiteboard on student engagement. The quantitative approach integrated students' perceptions through an online survey with 12 items. The results show that the students enjoyed the dynamic(4.56), students believe that the incorporation of a digital whiteboard contributed to understanding abstract concepts(4.83), and perceived the resource contributed to class engagement (4.72). The design of educational projects that incorporate these resources translates to active learning dynamics which foster student engagement.

Read more

- 1. What are the instruments designed for student engagement?
- 2. How Covid-19 influence the student's engagement in a digital environment?

How Online Whiteboard Promotes Students' Collaborative Skills in Laboratory Learning

This work reports on the use of an online whiteboard in producing a collaborative and interactive report in laboratory learning at the Faculty of Pharmacy, Silpakorn University, Thailand. In this strategy, 166 students worked in groups of 8-9 to create experimental flow charts, to record data and to discuss results with friends on the board. Along with the students' activities, the instructors accessed the boards to monitor student progress and to provide feedback. From the questionnaires, most students reported that they were satisfied with using the tool and agreed that the learning activities were effective. While most of them had never used an online whiteboard before, they reported that the tool was not difficult to use and had useful and attractive features. Furthermore, they gained digital skills and teamwork skills from learning with the whiteboard. Therefore, an online whiteboard can be used as a tool to engage students in collaborative learning, active learning and formative assessment.

Read more

- 1. How to design an online whiteboard-based laboratory report?
- 2. What is a students' perception of the online whiteboard?

III Practical example of Miro

Used mainly for online collaboration, Miro gives the possibility of dividing one's work into teams. In every team, people can create boards for different needs:

- 1. Meetings and Workshops,
- 2. Brainstorming and Ideation,
- 3. Agile Workflows,
- 4. Mapping and Diagramming,
- 5. Research and Design,
- 6. Strategy and Planning,
- 7. Building Blocks, and
- 8. Community.

Each of these categories has several templates everyone can use, such as Mind Map, Kanban Framework, and Quick Retrospective. Also, there is an option called New board, used for creating a board from scratch, with drag and drop options for adding different elements.

Miro can be used in class for collaborating while doing tasks – it gives a simple overview of what each participant is doing. Also, it can be used for making projects, as a part of the curriculum.

Functions of Miro are limited, according to the plan you are using, for more information about Miro plans, *click here.*

To start making first steps with the Miro board, like designing your first board and learning how to use the basic functions, watch this video.

As already said, you can use a variety of templates which Miro offers. In *this video* you can learn more about them and how to use them.

In Miro, besides creating boards, you can also upload different files. *Watch this* video to learn more about it.

Since whiteboards are all about collaborating with others, it's important to know how to share them with colleagues, as well as how to collaborate with them. To learn how to do that in Miro, take a look at *this video*.

Also, you can present frames from your board, as well as export the board, and *this video* is how to do that!

miro

IV Whiteboard Tools - Assessment

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