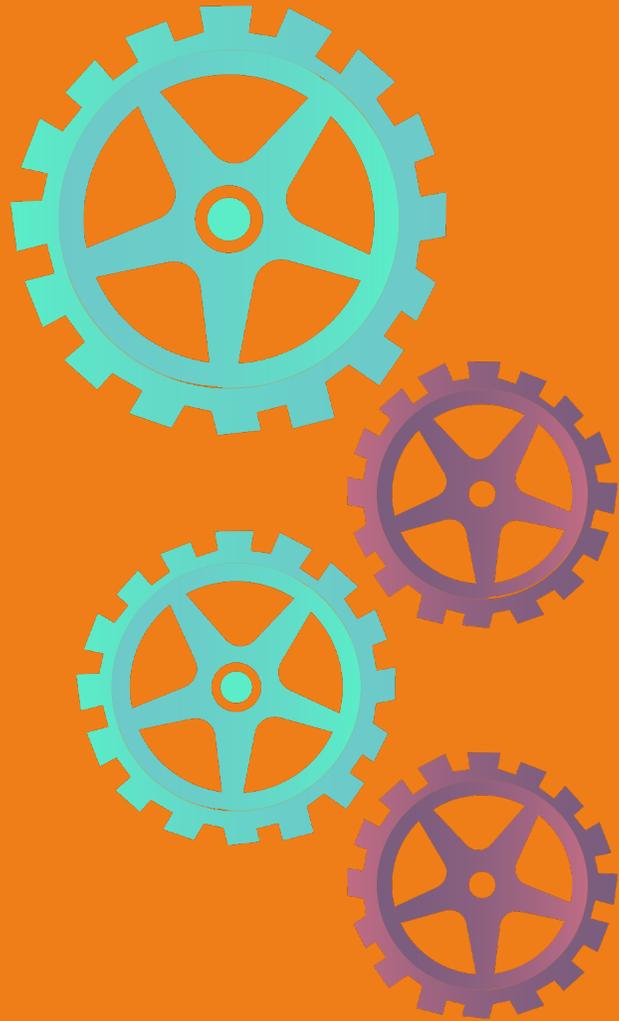# Introduction of collaborative digital tools
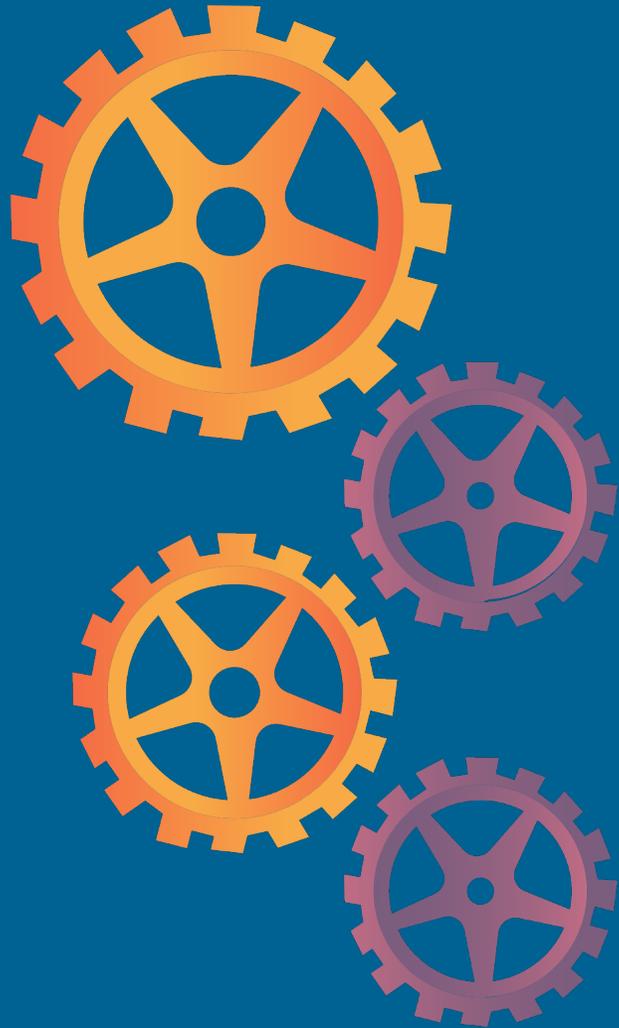
Zuzana Krejčová, EPMA
Miriam Šipošová, EPMA

# What is digital collaboration?

Digital collaboration means working together by using digital technologies. Unlike in traditional collaboration, it connects a broader network of participants who can work simultaneously on one task, share their work, communicate smoothly, and manage their work effectively.
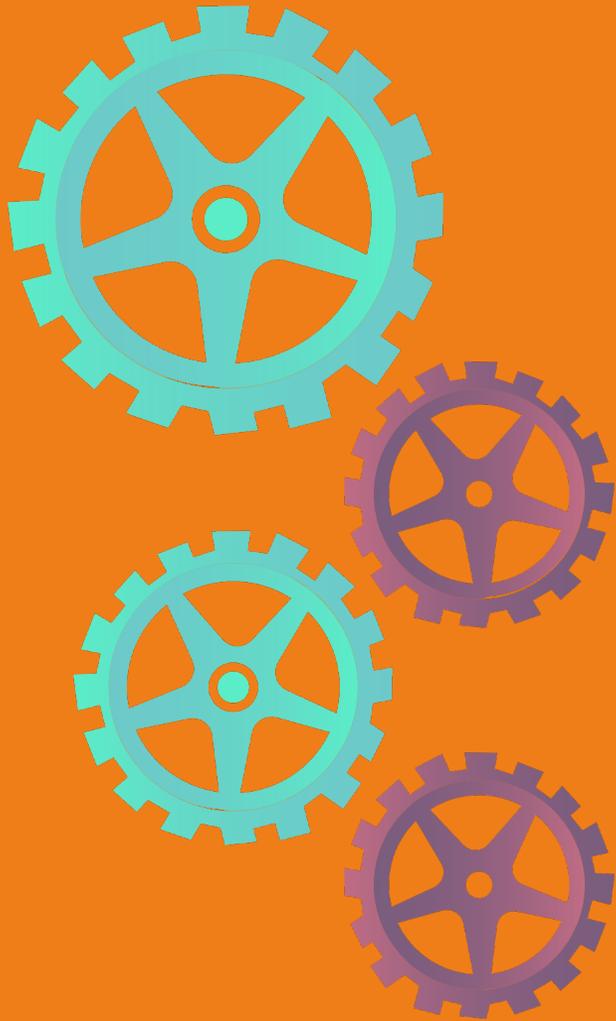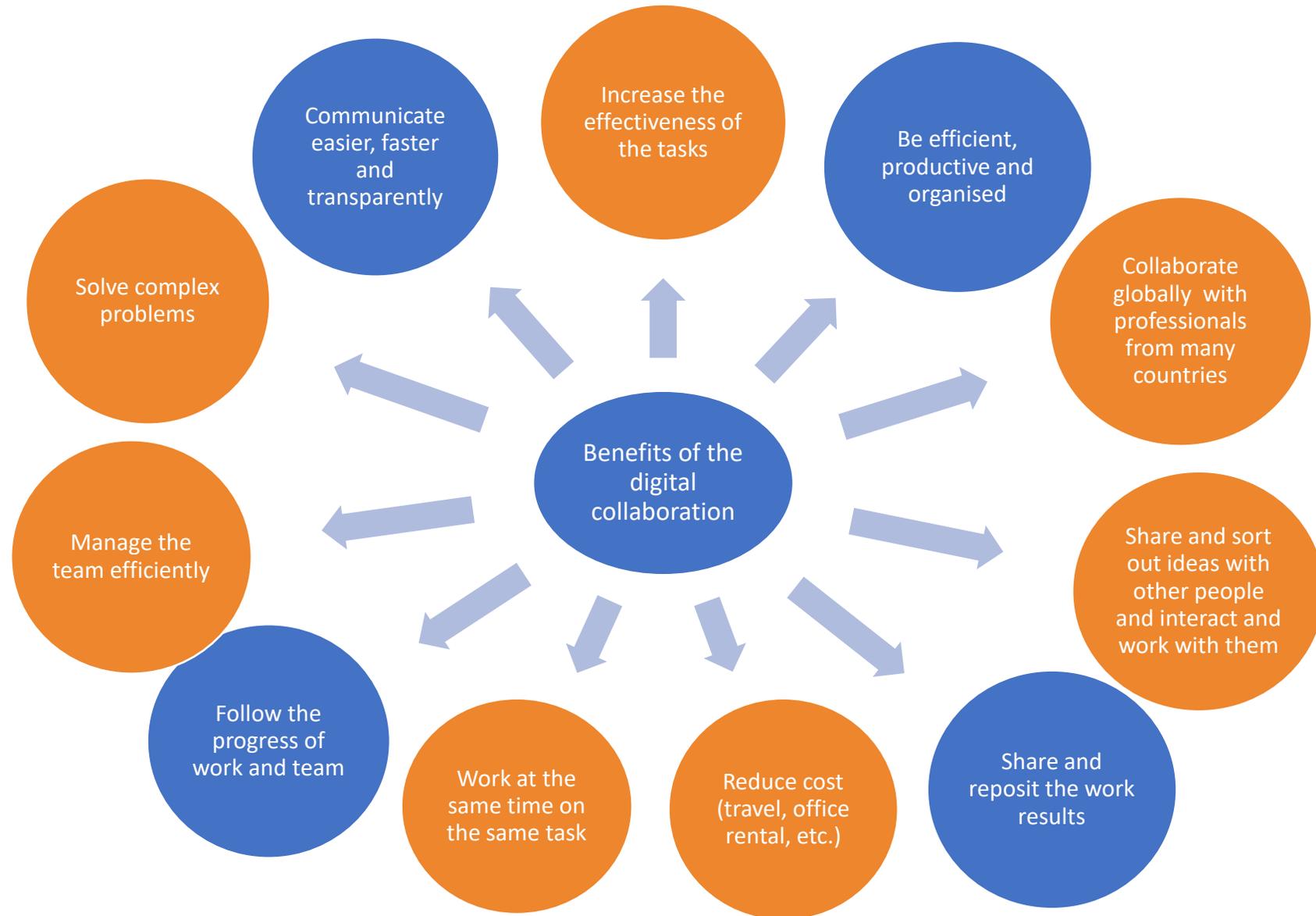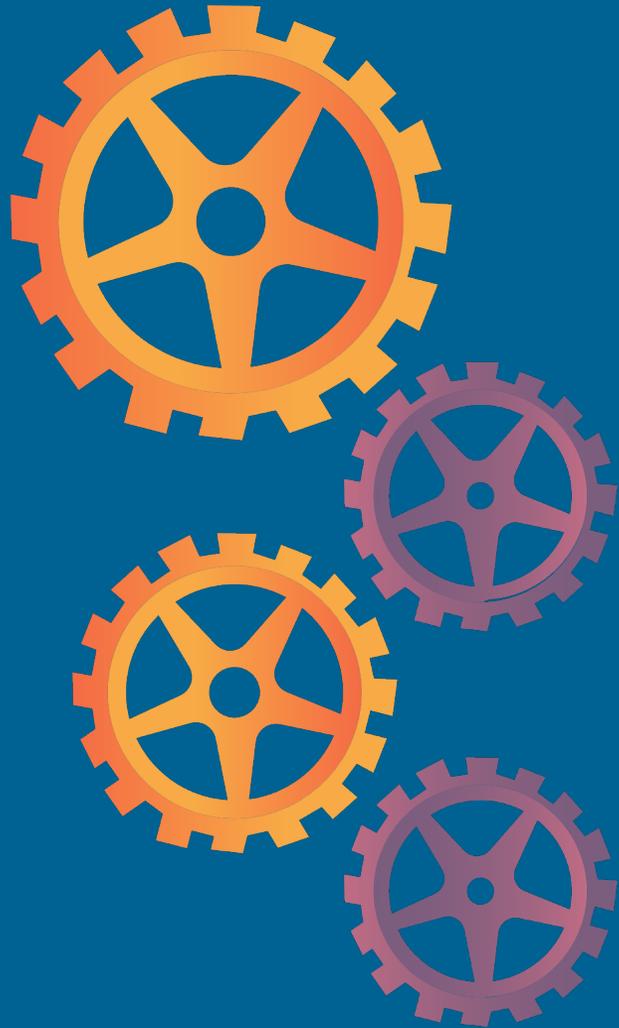
# Why is digital collaboration needed

The modern world of work is shifting from the "classic" office space to more remote ways of working, which changed the 21st century workplace, that allows us to do manage digitally, distribute work and tasks into virtual teams, share data and resources in the cloud and communicate online. The Covid-19 pandemic has only accelerated this situation and showed the power and the effect of digital collaboration on a large scale. It proved that its implementation into the daily work delivers incredible results.

But, at the same time, it has also brought turmoil and presented the world of labour with new challenges, especially to those people who did not expect to collaborate digitally on such a massive level and on a daily basis. Most of these people were not used to this way of working or their organisation was not on such level of digitisation.

Nowadays, there is hardly a person without any experience with digital and remote collaboration and it is very likely that this trend of working will continue because many organisations are opening to new hybrid workspace.

# Benefits of digital collaboration

Communicate easier, faster and transparently

Increase the effectiveness of the tasks

Be efficient, productive and organised

Solve complex problems

Collaborate globally with professionals from many countries

Benefits of the digital collaboration

Manage the team efficiently

Share and sort out ideas with other people and interact and work with them

Follow the progress of work and team

Work at the same time on the same task

Reduce cost (travel, office rental, etc.)

Share and reposit the work results

# Benefits of digital collaboration

Digital collaboration simplifies the tasks, helps with accessing the data, increases the flow of the important information across the organisation and enables smooth and quick communication. Problem solving, decision making, delivering of working results or other activities became swift and more effective than before.

# Why to collaborate digitally at learning level

Contemporary teaching is ahead of many changes in 21$^{st}$ century. In particular, it has to adapt to the digitisation of the course of the world and keep up with new trends of young generations that are born in a fast evolving and digital environment.

The traditional classroom learning provides to student's certain irreplaceable features, such as:

➢ direct feedback of the teacher based on the experience and knowledge,
➢ interaction with their peers,
➢ motivation to learn can be higher when collaborating together with other students,
➢ learning discipline,
➢ being more attracted into learning content compared to studying from home,
➢ Provided infrastructure by school environment (incl. premises as labs, libraries, studios, be part of a unique research and development, support for foreign study stay etc.).

However, recent studies and late experience from learning (mainly gained during the Covid-19 pandemic) show that digital collaboration in learning has brought many positive aspects to education.
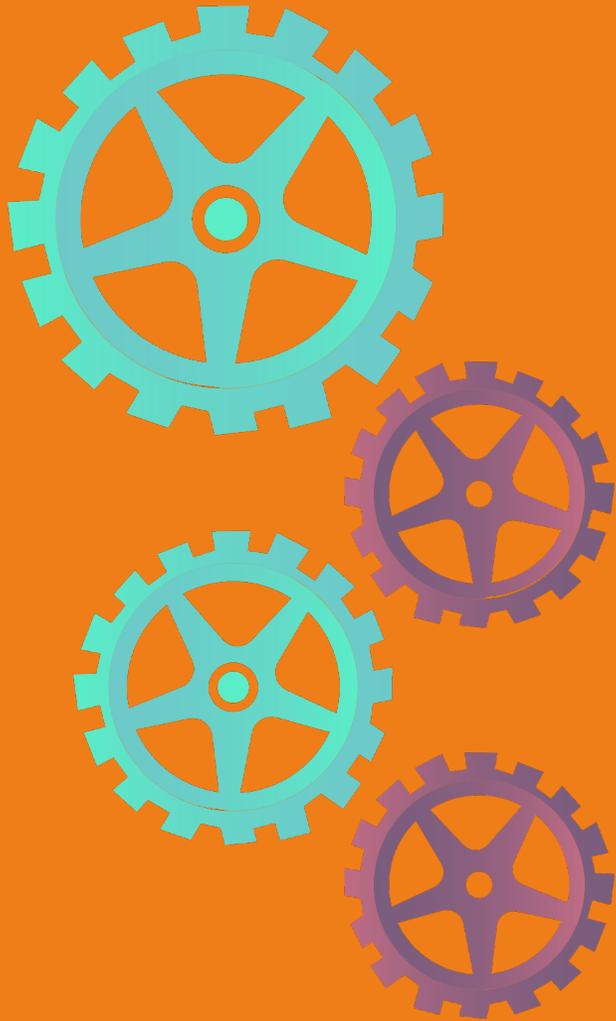
# Benefits of digital collaboration in learning/1

Enhancement of learners' interaction, engagement, and motivation in the classroom

Simplification of access to relevant information and study material

Improvement of access to education

Learning opportunities for students because education is not limited to only classrooms and books anymore

Assists to track the progress of teaching and learning

Acceleration of learning curve

Supporting new levels of productivity for students

Helping teachers deliver more dynamic learning experiences

Providing students with easy-to-access information, fun activities to practice their learning, and advanced learning experiences

# Benefits of digital collaboration in learning/2

Allowing students to discover new subjects and gain a deeper understanding of difficult concepts

Providing of learning at student`s own pace

Supporting of the active involvement and participation of students

Broadening the skills of students by making them use specific tools

Lowering cost (books and other aids for learning)
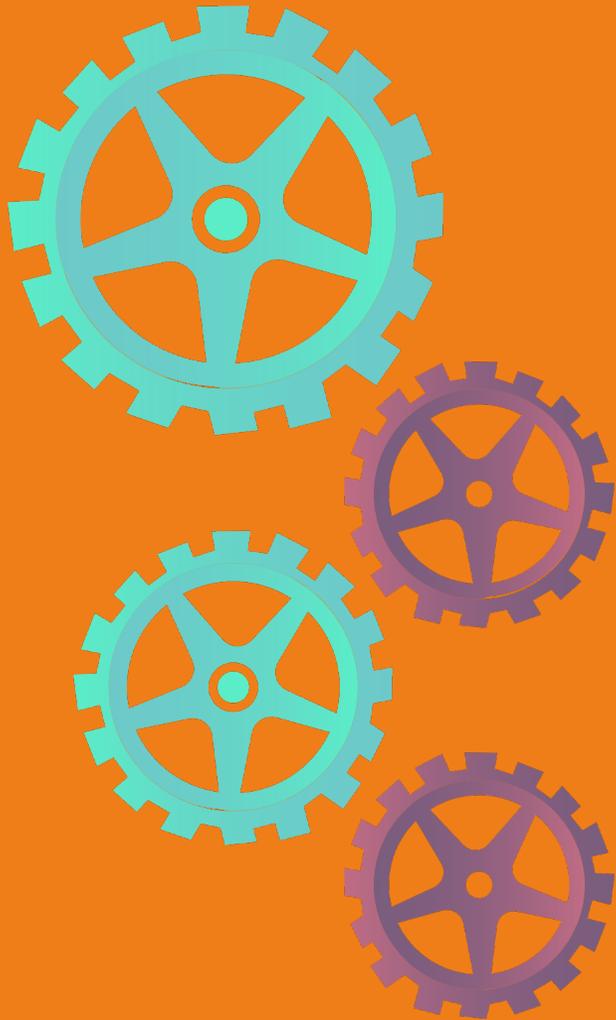
# Digital collaboration tools

Digital collaboration tools are a great asset for any team. They allow you to work with others at the same time from different locations or engage the team members or students.

Since the expansion of digital tools, there can be a bit of a chaos about what features a tool has or what tool to use for that, and so on. Therefore, we introduce you an overview of the most popular tools and their features.

To enable digital collaboration, you can use complex platforms or tools that have been developed to provide appropriate workspace and functionalities or you can also combine them to form an effective and sufficient virtual workspace and provide functioning collaboration option.

# Collaboration tools at professional level

➤ Collaboration platforms
➤ Communication tools
➤ TO-DO boards (Kanban boards)
➤ Mind mapping/ Brainstorming/ Whiteboards
➤ Storing and sharing of work
➤ Surveys

# Collaboration platforms

**The collaboration platform is a virtual workspace that is providing a set of communication and collaboration tools or apps built for people in organizations/ project team.**

➢ **The collaboration tools** allow multiple people to edit a document, spreadsheet or presentation simultaneously. They can have a calendar, the TO-DO list and the tasks and deadlines tracking.

➢ Some are only cloud-based, some provide desk-top apps as well.

➢ **The communication tools** can differ – from simple messaging or chat to video conferencing software and live chat features. They can also provide whiteboard, breakout rooms (to allow to change a big group into smaller ones to work on different tasks simultaneously), meeting filters and enable record the meeting.

➢ Some can be rather used for simple „light weight" projects and some are suitable for large projects only.

➢ Most of them provide free plans, but then they do not provide all features compared to the paid plans (e.g. the amount of people taking part in video conference is smaller, no desk top applications, limited number of users).

# The examples of collaborative platforms

In this short overview, we present the most know collaborative platforms. Each platform contains two embedded links - to websites of each platform with more information and to video introducing the work with them.

➢ Google Workspace  - the video can be found here.

➢ Microsoft Teams – MS Teams tutorial video.

➢ Basecamp - video guide on how to use basecamp is here.

➢ Trello – for short video introduction click here.

➢ Asana - here is an introduction video from Asana and another video on how to use Asana.

# Digital workspace created by the combination of several digital tools

For digital collaboration, you can either choose a complex multipurpose platform with all necessary features or functionalities or create simpler collaborative space by combining several tools.

Following sections group the digital tools according to their use - for communication, brainstorming, sharing of work and gathering information (surveys). If combined, they can form a sufficient workspace with interesting tools supporting your work.

# Communication tools

**Communication tools enable video conferences, on-line chats, screen sharing to present the documents, spreadsheets or presentations, white boards, change a big group into smaller groups into the breakout rooms.**

Some of these tools have waiting rooms for early joining participants, noise-cancelling audio filters, an ability to raise and lower hand and the host can deny entry or remove users if he/she chooses to. They also allow the integration with the calendar.

Several tools enable real time captioning or recording of meetings. Some tools are preferred as the communication tool within the organisation and some are rather used for calling, meetings and conferencing.

Most of the communication tools have free plans but with limited features.

# The examples of collaborative communication tools

This short list will provide you with the most common digital tools used for communication with the team or with multiple people. Again, you will be able to get to the websites of each tool through the links or watch the video tutorials to get the idea how the tools work.

➢ Google Meet - this video will show you how to work with.

➢ MS Teams – this video will show you how to use it for team communication.

➢ Slack - on this website you can find many Slack tutorials that may help you in using the app.

➢ Webex - here is a Webex tutorial for better understanding.

➢ Zoom - here is a video to show you how to use Zoom set-by-step.
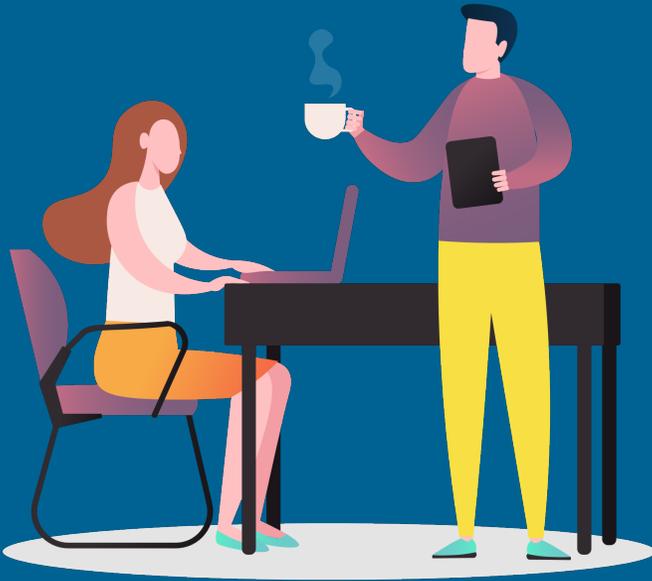
# Communication - Breakout rooms

Breakout rooms are sessions split off the main meeting managed by the moderator. They allow participants to meet in smaller groups with their own audio and video and can be used during main session for collaboration, discussion or any other purpose that serves a user. However, they cannot be recorded. The moderator can also end breakout rooms and participants have 30 seconds to finish their discussion before they are automatically moved back to the main room. Participants in breakout rooms have also the option to return to the main room. Most of the video conferencing tools enable to use breakout rooms. Here are some examples:

**Breakout rooms guides** for [Google meet](#), [Zoom](#), [Webex](#) and [Microsoft Teams](#).

There are also **video guides** for [Google meet](#), [Zoom](#), [Webex](#) and [Microsoft Teams](#).

# TO-DO boards (KANBAN boards)

Kanban boards are powerful tools in digital collaboration, offering benefits for a wide range of contexts, including education. In the realm of digital collaboration, Kanban boards excel by **providing a visual, real-time representation of work, aiding teams in managing tasks effectively**. They enhance transparency by allowing everyone to see what's **in progress, facilitating task prioritization, and helping identify bottlenecks or issues in workflows**. This visual clarity is especially beneficial for remote teams who rely on digital platforms for collaboration.

**In the context of education**, digital Kanban boards can revolutionize classroom and remote learning experiences. Educators can create boards **for lesson planning, student assignments**, and project management, making it easier to organize and track tasks. Students can use Kanban boards **for project-based learning, improving their time management and project visualization skills**. Additionally, it **encourages active participation and collaboration among students, fostering a sense of autonomy and responsibility for their own learning**. **Teachers can also provide timely feedback** through Kanban boards, enhancing the learning process.

Kanban boards are invaluable for digital collaboration across various fields, and they also play a crucial role in modern education by promoting organization, engagement, and effective communication in both physical and virtual classrooms.

# TO-DO boards (KANBAN boards): tools

This is the short overview of the digital kanban boards free available with the links to the tutorial videos that can help you decide which tool you would like to use:

- **Trello**: this [video](#) will provide you with a simple navigation to create the Kanban board

- **KanbanFlow**: this [video](#) will show you how to create the Kanban board in this app

- **Zenkit**: this is the [tutorial video](#) showing how to create a board and work with it

- **MeisterTask:** this [video](#) will introduce the app suitable for task management of smaller projects (up to 30 people working in it).

# Mind mapping/ Brainstorming/ Whiteboards

Digital whiteboards, mind maps or brainstorming tools enable and support online real-time collaboration with partners. These tools make team meetings more visual, collaborative and engaging and can be used for team meeting, class teaching, brainstorming or as a whiteboard when necessary.

The tools provide series of pre-built templates that can inspire or serve as a starting place for the team project. Besides templates it offers many canvas that gives you the freedom to choose how to work with your team.

These tools are of various design, some are used rather by technical teams (for example MS Visio), some are preferred by more creative groups (e.g. Coggle). Their software allows multiple team members to create notes and designs, move things around, co-create the maps or plans and communicate through embedded video calls or online chats. They also allow image uploads/attachments and download the final plan/ map as PDF, image or link. For example, MS Vision supports AutoCAD drawings as well.

# The examples of mind maps, whiteboards and brainstorming tools

➢Miro - their YouTube channel offers quick video guides for beginners.

➢Coggle - it provides you with a simple, well designed, easy-to-use mind map creator as you can see in this video.

➢Microsoft Visio - this video will show you how to work with Visio.

# Storing and sharing of work

These tools enable to create, edit, store, share and access content (document, photos and more) online. They are created to be accessed from different user's devices (including mobile devices, tablets and PCs) so they can be accessed anytime from anywhere.

Storing and sharing tools enable instant sending of files or folders to people inside or outside the organization and bring files together, in one central place.

The tools differ by possibilities of providing a free plan, storage limits, file size limits, downloading and uploading speed, security level, the extent of document management. They also integrate services and systems depending on what software providers they.

Here are the most common examples with the „how-to" videos:

➢ Google Drive – here is the video about its functionalities.

➢ Dropbox - this video will show you how to use Dropbox.

➢ OneDrive - in this video, you can see how this tool works

# Surveys

Survey online tools enable the creation of surveys, quizzes as well as to collaboratively edit and share the forms with other people. They also enable survey distribution.

Some of the survey tools enable creation and analysis in mobile devices with no special software required. And the results can be received instantly and can have a graphic form, as charts and graphs. Some tools also prepare reports on the results, export data and use third party programs.

Some of the most common tools are:

[Google Forms](#) - in this [video](#), you can see how this tool works.

[Survey Monkey](#) – here you can see a [video](#) summary about Survey Monkey.

[Survio](#) – here is the [video](#) about how to start with this tool.
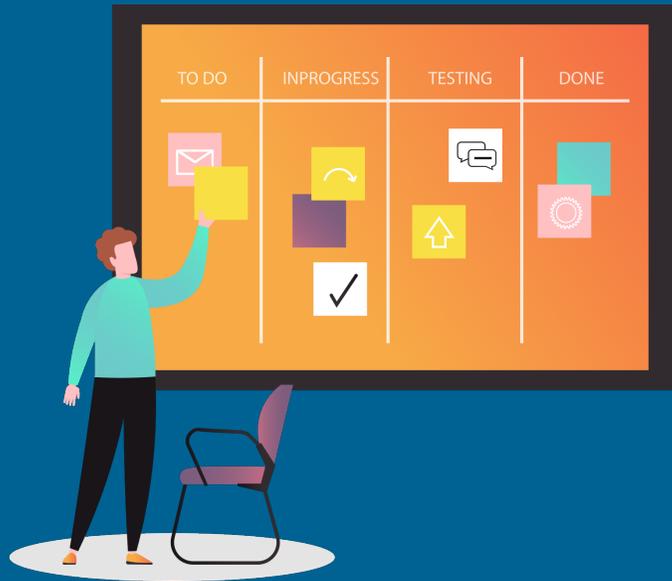
# Collaboration tools at learning level

➢ Complex collaboration

➢ Interactive presentations, quizzes, polls and gamified tools

➢ Interactive whiteboard/ Visual Collaboration/ Brainstorming

➢ Graphic design platform

# Complex collaboration

The collaboration at learning level is not far from professional collaboration, but with the emphasis on the teachers and students needs.

The tools of complex collaboration are different, some are simple and are more designed as a notice boards where the specific content as links, videos, images and document files can be shared. They can also be used during the lessons for direct interaction and can be shared by using a link or QR code.

Others are designed as cloud-based management tool for teachers. It can be organised into multiple classes in one central location, as well as working simultaneously with other teachers and students. They enable teachers and students to work together on any device for flexible learning that includes online quizzes, task lists, and work schedules. Teachers can set assignments, work with deliverables submitted by students, to mark, and to return it graded. They even provide communication tools (chat or video meetings). The teachers can invite the students to work there via private codes.

Advanced tools can also connect teachers in professional learning communities or enable communication with school staff.

Here are the most common ones and the links to more information about their use:

➢ Padlet – this video will show you how to use Padlet.

➢ Google classroom - here is a video that will show you how to use this app.

➢ MS Teams for Education – here is the link to see how to work with Teams for Education.
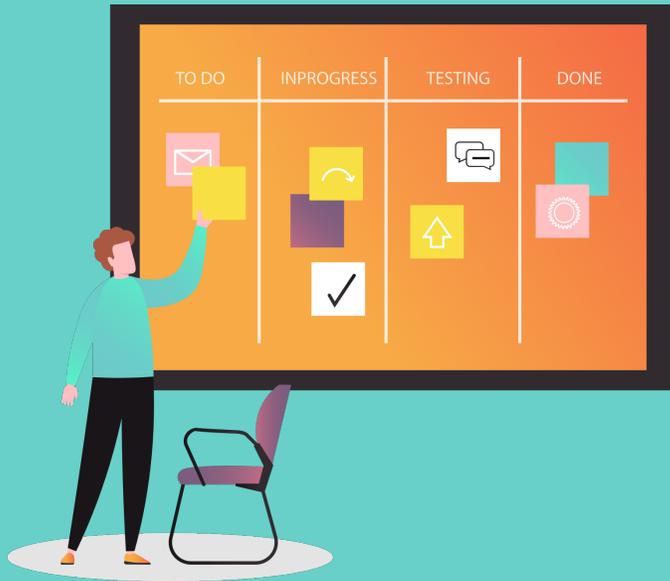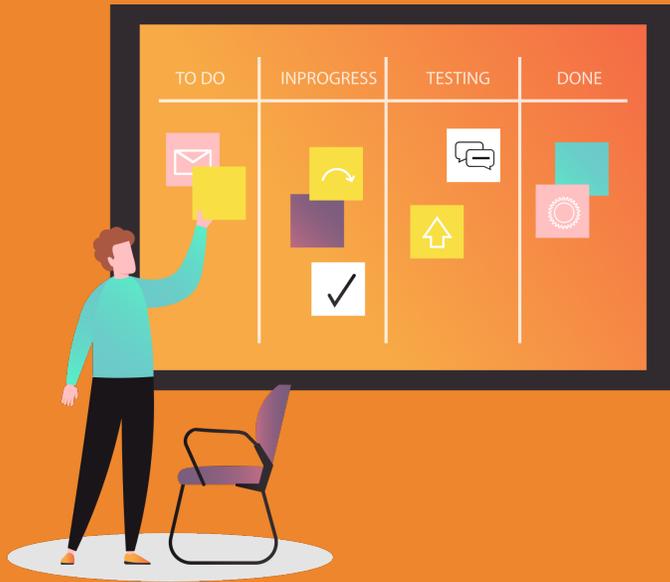
# Mentimeter

**Mentimeter** is an interactive presentation software that uses quizzes, polls and word clouds in order to engage the audience - students. It is built to use both, online education as well as in the classroom. The difference between slide presentation is that Mentimeter allows the teacher to engage students in real time with polls or word clouds. This tool is accessible through any device or browser and the work with it is very intuitive and dedicated apps makes the use easier. If you have PPT presentation and you would like to use Mentimeter poll or word cloud, you can easily integrate it into the presentation.

If you create a quiz, a poll or word cloud your audience uses their smartphones to connect to the presentation by a simple code where they can answer questions. The Mentimeter presentation visualize their responses in real-time and creates a fun and interactive experience in class.

Mentimeter is a great tool for brainstorming or voting in classrooms, whether online or offline. The software focuses more on presentation, polls and word clouds than on quizzes.

Mentimeter requires sign-up before creating a presentation, but it offers possibilities to sign-up with Facebook, Gmail or Google. However, students who only participate on Mentimeter (voting etc.) do not have to sign-up. The basic plan is for free (with limited number of questions per presentations and number of quizzes per presentation).

Here is a video that describes how to create Mentimeter presentation.
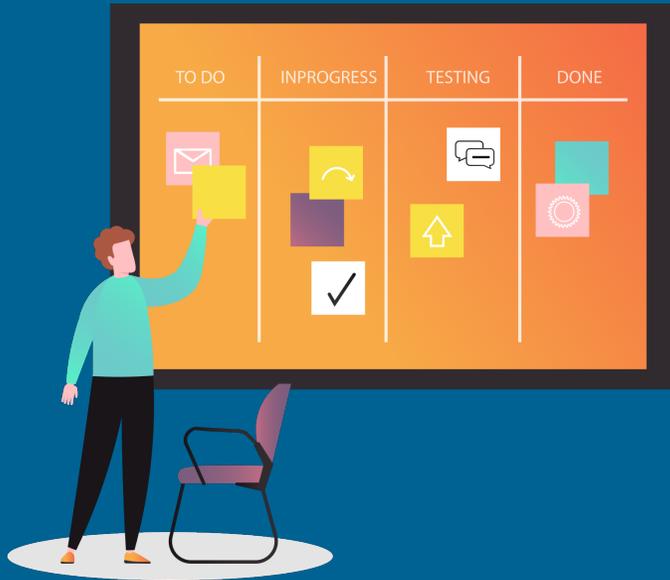
# Slido

[Slido](#) is a Q&A and polling platform for live, remote or hybrid meetings, events, classes, and webinars. Event planners can set up a Slido event in less than a minute while all the participants need to join the conversation is a simple event code or link.

This tool for audience engagement allows the event organisers to crowdsource top audience questions, maximize the Q&A time by letting people vote up their favourite questions, engage participants with live polls and quizzes, collect instant feedback with surveys or brainstorm ideas with upvotes about selected topic. The basic plan is free (up to 100 participants, unlimited audience Q&A, 3 polls per event).

This [video](#) will show you how to use Slido.

**Quizzes**
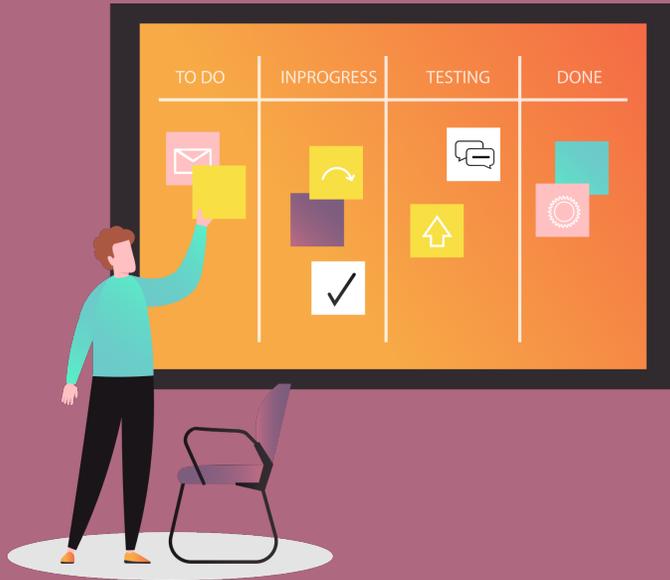
# Socrative

**Socrative** professes to be "your classroom app for fun, effective classroom engagement". In a nutshell, it is a cloud-based student response system, allowing teachers to immediately test student understanding by way of mini-quizzes, assigned to them on class laptops or tablets. Quizzes can be multiple choice, graded short answer, true-false, or open-ended short response. Socrative's strength lies in its assessment method, providing teachers with valuable and timely feedback. The basic plan is for free (up to 5 quizzes, 50 students per room, 1 public room for the class, launch 1 activity at a time, space race assessment, easy quiz sharing with URLs).

Here is a video that shows how can Socrative be used.
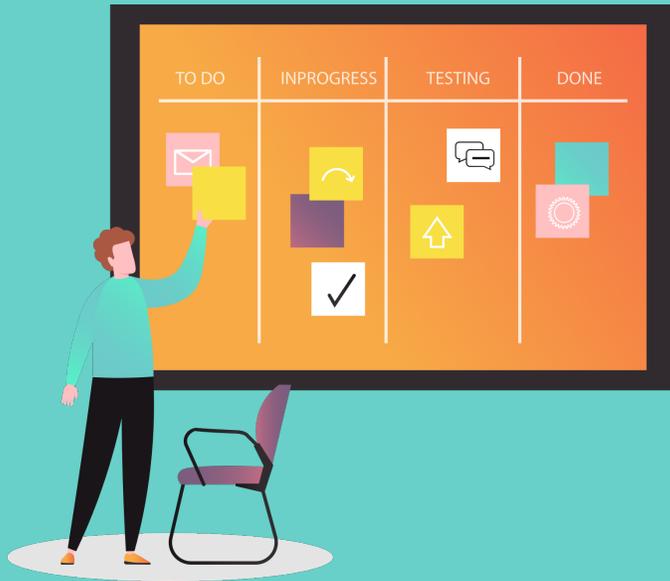
# AhaSlides

AhaSlides is actually one kind of classroom response system, that was designed to engage students in the classrooms using polls, word clouds and super fun quizzes directly within your presentation. Each audience member responds to your slides in a simple, convenient and thrillingly inclusive way.

AhaSlides is a cloud-based interactive presentation software that allows to create custom presentations for meetings, classrooms, conferences, events, and more. The platform facilitates the creation of presentations with elements including polls, quizzes, Q&A sessions, live charts, and more. AhaSlides also offers features such as customizable presentation themes and templates, gamification, voice support via mobile devices, multi-language support, and more.

The basic plan is for free and sufficient for smaller groups (up to 7 participants).

This video will show you how to use this app.

# Quizz-style games
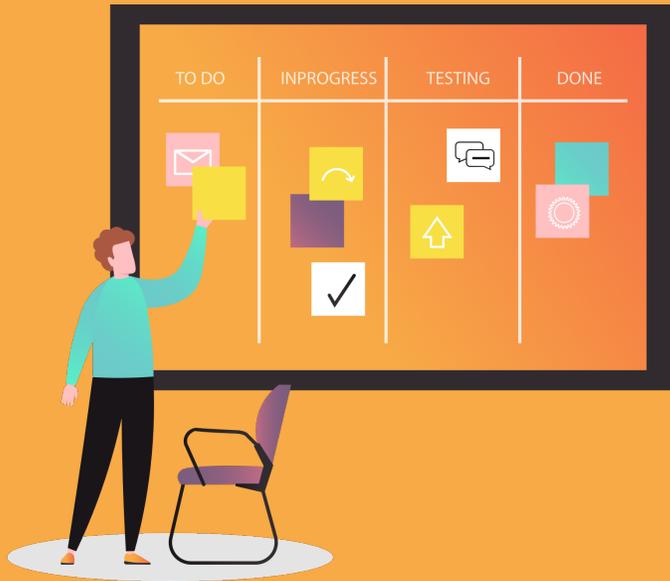


# Kahoot

Kahoot! Is a digital learning platform that uses quiz-style games to help students learn by making the information engaging in a fun way. Kahoot is a free use platform accessible via web browser on any device and it can be used offline and online. There has been created more than 40 million games and the public ones can be played by anyone.

Kahoot basic game offers question and multiple-choice answer that can be advanced with images or videos. It gives points for every correct answer and keeps time scores – the fastest gets maximum points. Based on players' points, Kahoot makes player rankings. This tool keeps everyone involved because of the game and the effort to win and has a learning potential – for example you can use Kahoot to recap a lesson. However, Kahoot offers a license for schools and teachers with more features, but you can also find a free version with limited features (Kahoot with quiz questions, up to 50 participants).

Here are two videos, first is an introduction video and second one explains how to use Kahoot for teachers.
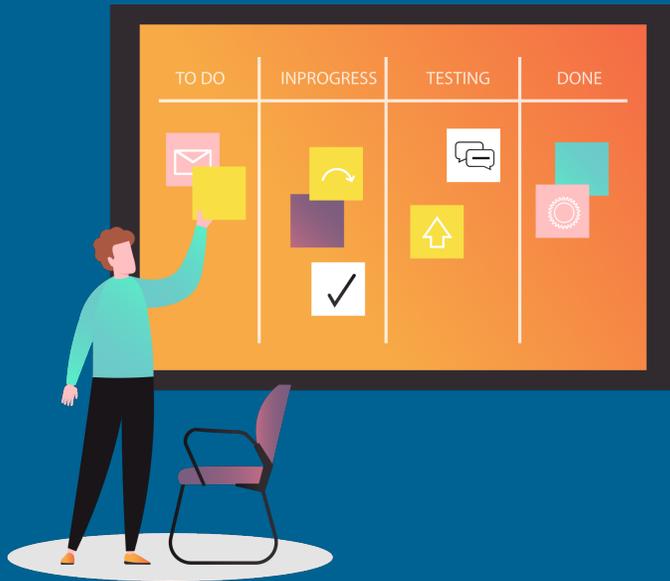
# Lucidspark

Lucidspark, a digital whiteboard platform from Lucid, offers versatile and valuable applications in education. This tool enhances interactive and engaging learning experiences, making it a standout choice for educators. Lucidspark's features, such as the digital canvas, real-time collaboration, templates, and integrations, cater to diverse educational needs. Educators can utilize it for activities like brainstorming, interactive lessons, and group projects, fostering creativity and critical thinking in students.

Both in remote and traditional classrooms, Lucidspark fosters connectivity and active participation among students and teachers. It enables educators to create dynamic, visually stimulating lessons, while students can contribute their ideas and engage in collaborative learning. Moreover, the platform aligns well with agile teaching methodologies, supporting adaptability and responsiveness in education.

Here is a video where you can see how Lucidspark app is used in education.
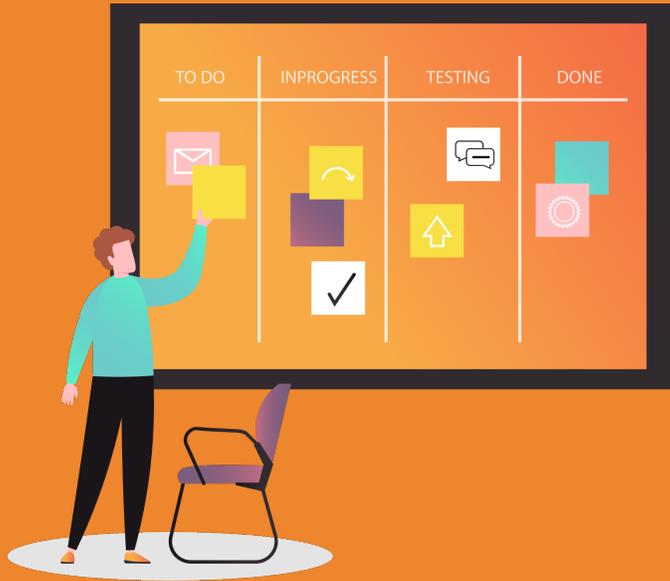
# Mural

MURAL is a virtual tool that enables innovative teams to collaborate visually and brainstorm solutions to their problems or challenges. It is used for organizing your ideas in lists, flowcharts, frameworks, or drawings. MURAL's website offers a full template library that you can use to get started with your own innovation or design thinking project work. There are templates for nearly every step of the process, including planning, storyboarding, accessing, and brainstorming. In practice you can use it for brainstorming, workshops, engaging clients, for strategy and planning or design research. The best features include, for example sicky notes; titles, text boxes and comments; shapes, connectors, frameworks; icons and drawings; images and GIFs. MURAL enables you to share, chat, make an audio calls, mind maps and diagrams. This video will shortly introduce you this tool.

MURAL also allows you to integrate with common software applications like Dropbox, Slack, and Microsoft Teams.

# Graphic design platform
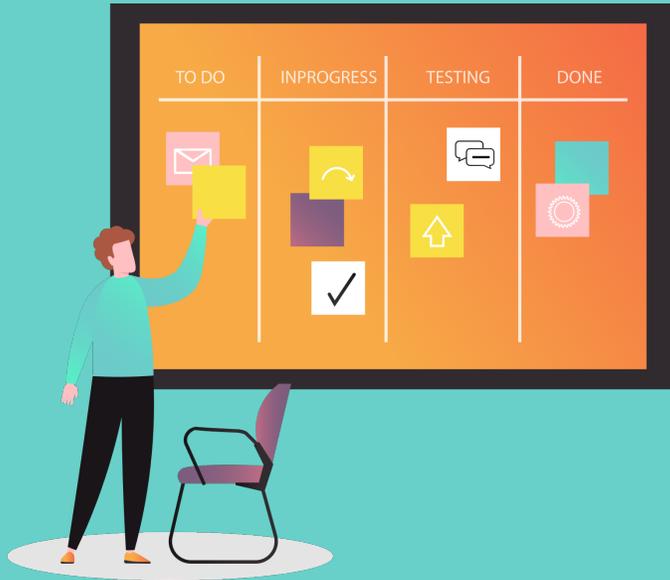


# Canva

Canva is a graphic design platform, used to create social media graphics, presentations, posters, documents and other visual content. The app includes many templates and it can be used in education to create projects of interesting graphic design and help to teach students the basics of digital design at the same time. While this can be used by students to submit projects, it can also teach them how to work more creatively when laying out work. Teachers can also use the platform to create guidance, posters, and more for the classroom and beyond. Own images and videos can be uploaded, which is ideal when working on a smartphone using the app version. Once completed, the file can be downloaded, shared it via lots of social media optimized options, or get printed.

Here is the video how Canva can be used.

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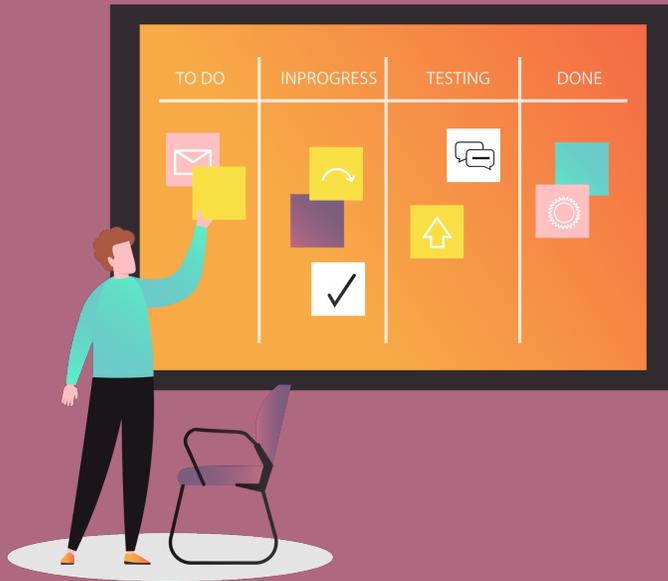
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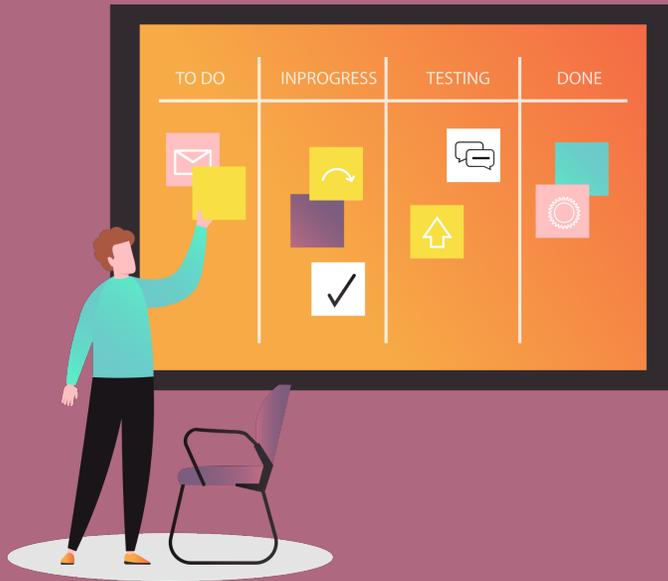
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