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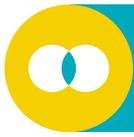
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Glossary



Blended Learning

Blended learning describes the integration of different learning methods and delivery modes. It is often described as the combination of online and offline (face-to-face) learning modules. However, blended learning can bring together many more aspects of learning. It also takes into account informal, formal, synchronous and asynchronous learning aspects and can combine self-learning and group work, etc.



Digital Learning

The term digital learning generally refers to teaching and learning with digital media. Digital learning can include formats such as e-learning, as well as other synchronous and asynchronous formats.



Digital Literacy

E-literacy is the ability to use digital devices and services. At the most basic level, this means understanding how devices and services can be of use, and how to use technology (starting by switching on the equipment). At a higher level, e-literacy involves understanding the correct, specific application and use of technologies – for example, for calling friends or sending a text messages using a simple mobile phone (feature phone), smartphone apps or computer software.



E-Learning

In e-learning, participants work independently through media-based learning content, which usually contains learning success controls in the form of quizzes and exercises. The learning progress is visibly documented. The course units are retrieved from a web server via the Internet or intranet. The learning content is accessed via an Internet browser or an individual program. E-learning can also be offered in a tutored format and/or combined with interactive techniques such as communities, forums, etc.



Learner-Centered Design

The term learner-centered is akin to user-centered focus of a product. If a course is designed in a learner-centered way, it means extensive attention has been given to the needs, interest and skills of our learners when we design our course. As oppose to content-centered course design, where teacher usually works up a list of topic and decides how much time to spend on each, the heart of learner-centered approach is to decide first what students can and should learn in relation to this course, then how to assess students' performance and figured out how such learning can be facilitated. By shifting from content-centered to learner-centered, instructional design becomes learning experience design.



Learning Management System / LMS

Learning Platform / Learning Management System (LMS) is a content management system that hosts and organizes learning content and processes. The platform enables communication between learners and teachers and acts as an interface between education providers and learners.



Open Source / Open Educational Resources / Open Access

Open-source software and systems are open sources, can be used freely and offer valuable tools in digital learning.



Synchronous and asynchronous e-learning

The more common forms of e-learning instruction include distance education in which the student and teacher are separated in both time and geographic location (asynchronous) and virtual classroom (synchronous) in which the teacher and student are separated by geographic location but meet at the same time



Video Lecture

Learning content is conveyed in short videos. Learning videos are available in various formats. One of the best-known portals besides YouTube is TED, which offers concise lectures as its core product. Learning videos on platforms like YouTube or Vimeo have become a popular education tool. Short video sequences (often animated) are used to convey content in a concise, clear and understandable way. This is often used in Blended Learning.



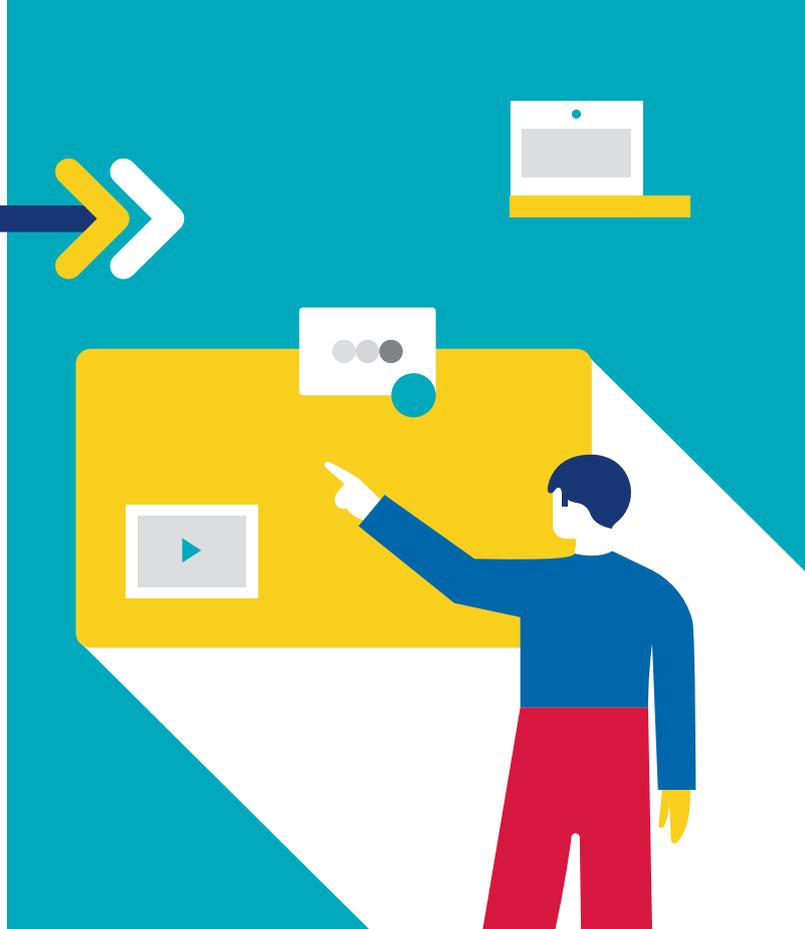
Webinar

A webinar is a synchronous online seminar with a learning group where the participants follow the speaker(s) live via video and interact with each other in discussions. The main presentation is usually 1-to-many or few-to-many, i.e., the presenters broadcast, and the participants take a more passive role.

Overview

Goal of this handbook: provide a starting point for online teaching

The main goal of this handbook is to provide you with a general perspective of online teaching. In this handbook you will be provided with the basic instructions that will help you organize your online class in an interactive yet practical way. Throughout this handbook you will be able to find detailed explanations provided with text, pictures, figures and other relevant resources which will facilitate your journey to becoming an innovative module leader that is competent of providing high quality classes for either online or hybrid teaching. Through this guide, you will be able to easily learn about online classes including the guidelines, videos and other additional resources.

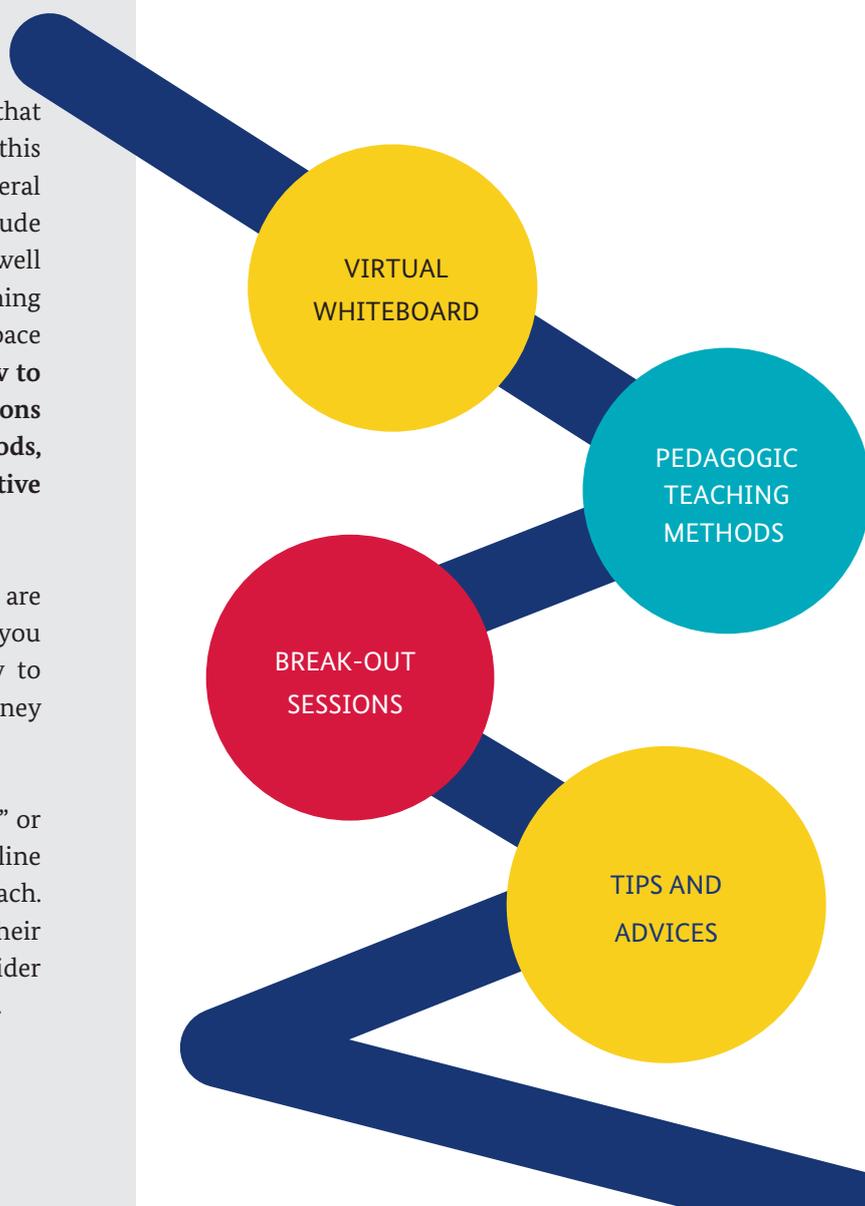


Resources for deepening your knowledge and finding solutions

Aiming to avoid the traditional handbooks that are full of text and theoretical approaches, this handbook makes a difference by providing several links, resources, platforms that will help you include practical approaches during your class as well innovative, up-to-date digital learning and e-learning platforms that can be used as a virtual working space during and after your classes. **You will learn how to use virtual whiteboards, create break-out sessions for your group work, pedagogic teaching methods, tips and advice for a successful and productive online class.**

In addition to this comprehensive manual, there are guiding videos available that will practically help you with your hands-on experience explaining how to use different platforms in order to make this journey more fun and easier for you.

Finally, there is no one exclusive “right approach” or “right methodology” for achieving a successful online class and therefore there is no perfect approach. As a result, each and all of us should have their own approach when it comes to what we consider compiling and delivering a successful online class.

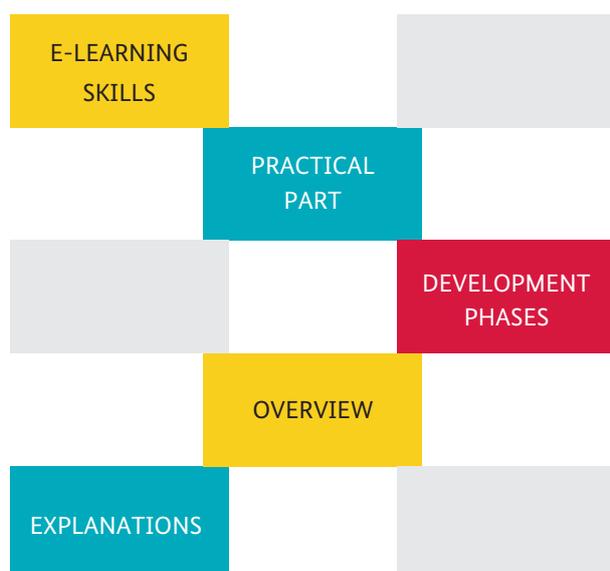


Summary of our own insights and learnings

The journey we have jointly started aiming to establish a system that provides teachers the necessary pedagogic, technical and practical skills is a challenging yet new era that requires a lot of hard work, consistency and adaptability with the new technological updates. As a constant learning process, together we have witnessed that teamwork and a lot of motivation required to succeed. Online teaching also requires the appropriate approach for different subject areas and also creativity in the content creation of your specific course. Taking into account the speedy technological advances in the global level, having the adequate skills for providing online classes represents a competitive advantage for today's era of education.



Expectation: Mastering the e-Learning tools requires many hours of work and experimentation



This comprehensive handbook aims to provide you with the necessary theoretical knowledge (explanations, overview, development phases, the practical part (utilization of platforms) and other e-learning skills, you will surely be required to put a lot of work and motivation on yourself in order to succeed. So, we suggest that you experiment a lot with the materials provided and regularly attend out training sessions for a better comprehension of all modules included. You can also check the guiding videos for specific queries you might have regarding one of the platforms.

You shall expect to be able to organize yourself an online class yet practice a lot and continuously learn by doing for continuous advancement of your online teaching skills. Improving your online teaching skills through consistent practical application will help you build the desirable profile of a professional and innovative teacher.

„Experiment a lot. You will learn the most from your own experiments / mistakes & failures”

“A person who never made a mistake – never tried anything new” – Albert Einstein. Taking into account that online teaching reached its peak attention during the Covid-19 times, that were times of uncertainty, we are jointly entering a new era in terms of future education trends – where online or hybrid teaching is foreseen to be a part of our “new normal” lives. Therefore, through this journey there will sometimes be delays, mistakes or obstacles that are completely normal and acceptable and that will only help us altogether further improve ourselves in this field.

Nevertheless, the area of e-didactics and online teaching represents a field that is new, and therefore, we shall reserve ourselves from aiming a “perfect class” immediately after having read this handbook since self-experimenting is always a part of the continuous practical applications.

Essential technical requirements for a successful online teaching session

Basic Set-up

Always remember to test your technicalities, settings such as microphone and headset, internet connection and similar technical issues prior to starting your online class session. Most of the conferencing tools allow you to do so.

Checklist



Webcam

- good lighting from the front
- whole face + shoulders visible



Students know what to bring / expect?

Emphasise required equipment necessary to participate in online class

- Internet access
- Computer/tablet
- microphone, headset etc.).



Microphone

- test microphone before meeting (5-10 minutes prior)
- Reserve headset ready in case of any issues
- Everybody has a link to the video conference? Send meeting link and lesson plan to students at least 2 days in advance
- Send meeting access information (username, password, code, etc.)
- make sure that



Enough power on all devices?

- Enough power/battery in all devices to complete the online lesson and tasks
- Reserve equipment in case of technical failure or empty power/battery

We recommend:

- ✓ Headset microphone
- ✓ Internet connection via cable (Ethernet)
- ✓ Laptop with integrated webcam
- ✓ Tablet with pen for advanced online whiteboard work

Troubleshooting

Remember: your technical help is vital to your students' participation and engagement in online classes.

- At minimum: provide your contact details to students in case technical support is needed
- For many online software problems, switching browsers is a solution. Make sure you know the settings of your video conferencing software well, so you can help students setting up for example their microphone
- Before meeting with a group for the first time, a separate meeting “Technical check-in” is recommended. Meet for 10-15 minutes just to check if everyone can connect, talk & see each other, use basic functions of VC software



E-Didactics

E-learning involves the use of computers and other electronic devices to ensure the implementation of online teaching and learning. In the following section, we firstly discuss the difference between traditional didactics and e-didactics (Stahl, Koschmann & Suthers, 2014). Moreover, this section emphasises two important forms of implementing e-didactics, namely through:

synchronous and asynchronous e-learning

blended learning

The purpose of this section is to emphasise the extended definition of distance education, which is not limited to online teaching.

Traditional didactics vs. e-Didactics

The difference between classical/traditional didactics and e-Didactics is stipulated by a paradigm shift in the primary focus of didactics: from face-to-face teaching to online teaching and learning (Uvalic-Trumbic & Daniel, 2013). To fully transition into e-didactics, digital literacy of teachers is considered imperative. Table 1 summarizes the results of comparative analysis between traditional and e-Didactics.

Traditional	Characteristics	e-Didactics
Quality of teaching and learning, students' competency and proficiency	Primary goals	Quality of teaching and learning, students' competency and proficiency
Face-to-face, hybrid	Delivery format	Hybrid, online, e-learning
Physical classroom, auditorium	Primary learning and teaching space	Learning management systems, virtual space
Text, graphics	Instructional material representation	Hypertext, media
Static and illustrative	Use of graphics and visualisation	Dynamic and interactive
Classroom discourse	Primary means of communication	Online discussion boards, chats, social networks

Synchronous and asynchronous e-learning

The more common forms of e-learning instruction include distance education in which the student and teacher are separated in both time and geographic location (asynchronous) and virtual classroom (synchronous) in which the teacher and student are separated by geographic location but meet at the same time.

Figure 2: Synchronous and asynchronous e-learning

Synchronous e-learning	Asynchronous asynchronous e-learning
<ul style="list-style-type: none"> • Chat • Video and • Audio Conference • Pre-recorded lectures • Application sharing • Whiteboard 	<ul style="list-style-type: none"> • E-mail • Discussion forum • Wiki • Blog • Pre-recorded lectures

Blended Learning

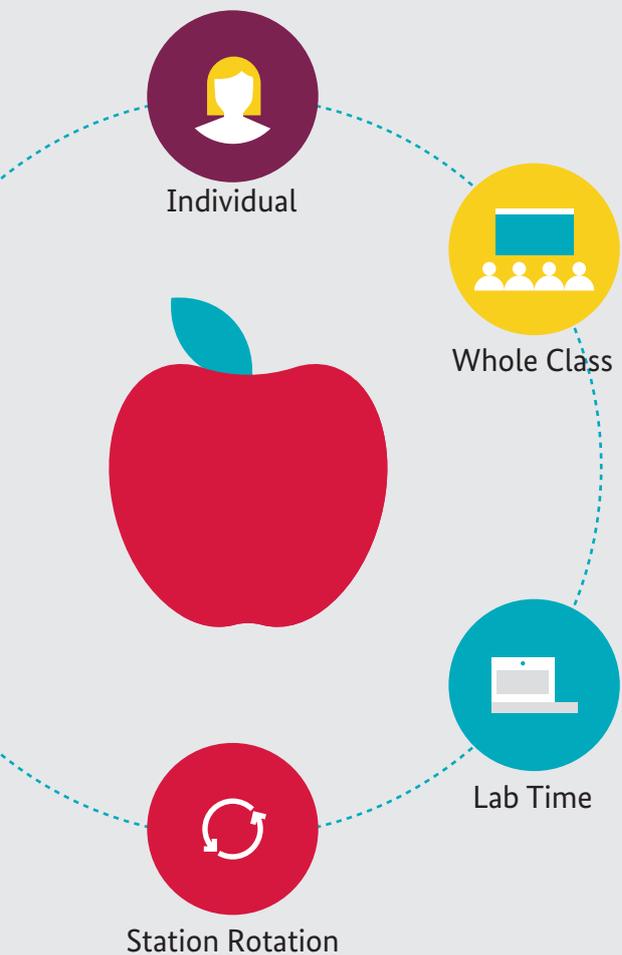
Additional computer-based learning, such as individualised or group-based, can be combined with the face-to-face instruction. Such approach is referred to as hybrid or blended learning. Blended learning courses combine the best of both, because it allows you to move most of the content to an online environment and save the course time for discussion, questions, and problem solving, i.e. for face-to-face troubleshooting. Blended learning combines different training media (e.g. technologies, activities and events) to create an optimum training programme for a specific audience. The term “blended” means that traditional instructor-led training is being supplemented with electronic formats (Bersin, 2004). Info graphic example (below)



What is Blended Learning

Today's classroom blends traditional methods of instruction with digital instruction for a variety of learning possibilities.

There are a variety of effective blended learning models available for teachers to incorporate into their classrooms depending on the needs of their students



73% of educators report an increase in student engagement



59% of students are more motivated to learn in a blended classroom



60% of teachers indicate student academic ability was better in classes that used blended learning models

Benefits

- Flexibility
- Effectiveness
- Engagement
- Differentiation

Needs

- Reliable Technology
- Teacher Training

The Future of Blended Learning

Blended-learning classrooms are incorporating futuristic technologies to further engage tech-savvy students.



Artificial Intelligence

AI offers students the ability to connect globally and receive personalized learning while empowering teachers with valuable, timely student data.



Virtual Reality

VR allows students to experience environments, countries, and cultures in ways not previously possible—from interactive chemistry labs to undersea excursions or visits back in time.



Augmented Reality

AR combines a user's real-time environment with overlaid, digital information creating engaging learning activities such as AR book reviews, language instruction, and spatial lessons.

Design of online instruction

A student-centred approach to online learning addresses instruction of a group as individual students separated by time and location. Many teachers simply provide their PowerPoint presentations, lecture notes, and recorded lectures into the course management system and label the material as an online course (FAO, 2011). Online education involves guided didactic conversation with carefully designed materials to emulate a conversation with the student.

According to Vai and Sosulski (2015), there are six design considerations for student-centred online instruction that you should consider and incorporate into your designs:

Interface design – should be intuitive such that a student is able to open a Web page or tutorial and immediately start learning without having to guess what to do next.

Control – students should have the ability to select tactics at any moment to support their learning, including:

1. navigation
2. choice of context of the lesson materials and examples
3. choice of quantity of material to learn or number of examples.

Feedback – judging answers, i.e., providing feedback, and then making decision on what content the student will engage in next.

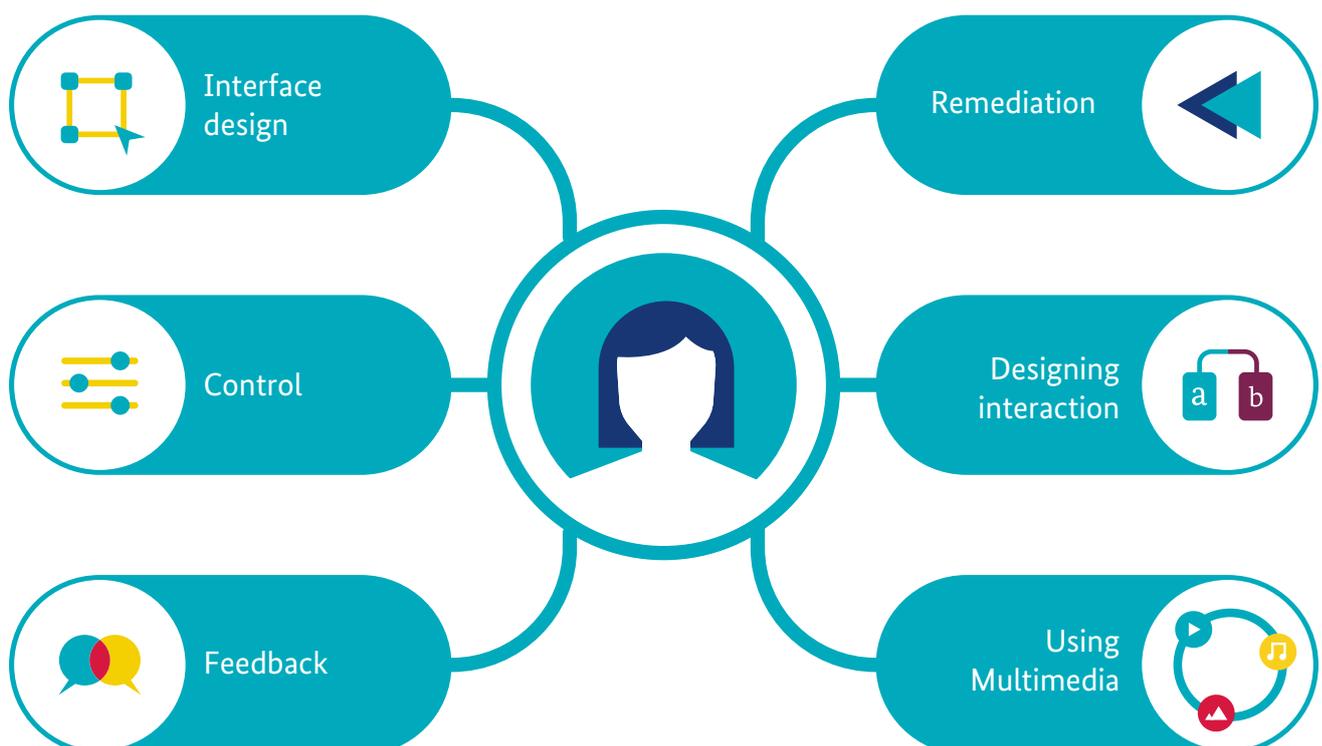
Remediation – in case you need to apply the following recommendations:

- have students simply reread material one more time
- advise or coach students on the level of instructional support they should select for the next section based on their performance
- provide a response-based feedback.

Designing interaction – online instruction should involve:

- a variety of interactions ranging from entering individual words or a letter as a response to clicking on a button or object.
- interaction that engages students cognitive processing

Using multimedia – multimedia instruction is the incorporation of both pictures and words or narratives in the instruction. Often the mix results in narrative animation.



Chronology planning and conducting of e-learning class

- a** **Identify the context** – Face to face vs. online
 - ✓ Learning objectives
 - ✓ learning outcomes
- b** **Define the procedures:**
 - ✓ plan the time and date when the e-class will take place
 - ✓ Keep a comprehensive list of students to contact them easily
 - ✓ send the invitation with short teaching instructions' that students need to follow with link of online platform
 - ✓ Design online teaching methodology and means to support You and your students to achieve learning objectives / learning outcomes in most efficient way
 - ✓ To make the e-class more interactive and engaging for students, design your presentations, videos or any other online lecturing means through applying of online tools
- c** **Organize E-class** – make sure you are present at least 10 minutes before the online class starts and check all necessary technical and presentation means are set.
- d** **Evaluation of the E-class**
 - ✓ Create an open and respectful environment where everyone feels comfortable to express themselves
 - ✓ Allow for student feedback about introduced topic
 - ✓ Collect feedback using one of the relevant tools, and
 - ✓ Reflect on lessons learnt

Practical tips you need to consider during lesson planning

Don't start with the slides

Rather than immediately starting the class in the traditional way with slides and content, try something more innovative that will at the same time attract the students' attention and make them feel more present. We recommend energizers at the beginning (this can be reached through "funny" "ice-breaking" questions using Mentimeter for example or using another tip that we have already provided in section xy: E-Didactics. Besides energizers, since online teaching is another dimension of teaching in comparison to teaching in classes, a simple "how are you" or checking whether the technicalities are working for everyone could be a joint participation.

Define learning outcomes first

One thing that we know for sure as teachers, is that a well, pre-structured class is most of the times effective. Of course, experience plays a major role in this regard however pre-lecture work is always a positive thing to do since during this time you will also establish the learning outcomes and structure your class or entire course/module accordingly. Defining the learning outcomes firstly, besides helping you have a proper and more efficient class will also in-directly create "mind-maps" for students during their learning process. They will naturally find it easier to cooperate and comprehend when they are aware of the expectations.

Plan the pauses to give your session a definitive structure. Online sessions should have a short break (important: screen-break as well!) at least every 60 minutes. That way you automatically end up with slots of ca. 50 minutes, that you can plan individually.

One of the common obstacles of the online teaching process, has been considered keeping the attention of the participants at the optimal level because of the lack of live interaction between participants that would happen naturally during short coffee-breaks in ordinary face-to-face classes. During the virtual ones, we propose short “off the screen breaks” every 50 minutes of continuous sessions as well as a longer 15-20 minutes break for sessions longer than 3 hours per day. These breaks altogether will have a refreshing effect to participating and better attention results for the upcoming sessions.

Vary teaching formats as much as you can

Change the format ca. every 20 minutes (especially avoid too long presentations). As a didactic advice, you may consider that online classes have been experiencing a lack of proper attention. Therefore, you may want to consider of varying teaching formats as much as you can, to keep things fresh and students’ attention at satisfactory levels. For example, make a general instruction of the topic using graphs provided by Excalidraw for 20 minutes then using Zoom in combination with Mural – make students work in groups for the next part of the class or even as a post-tutorial work.

Visualize your key points, as well as tasks

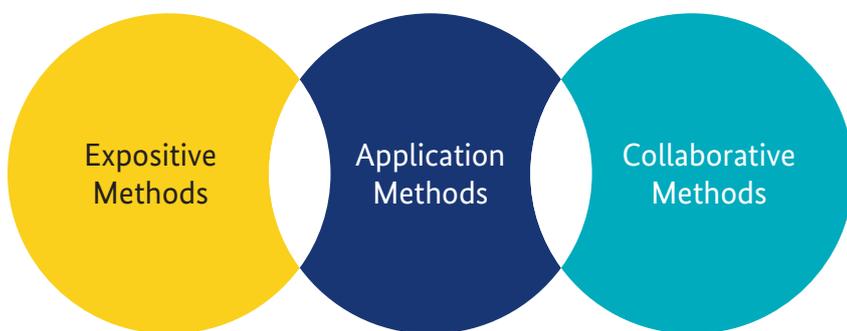
Having gone through the platforms thoroughly, we suggest using them for the visualization of some key important points you might want to emphasize during your class. For example, you can provide graphs, figures and diagrams depending on the context of your course and of course depending on the topic and insights you consider as most important for that topic.

- 
- ✓ Don't start with the slides
 - ✓ Define learning outcomes first
 - ✓ Plan the pauses
 - ✓ Visualize your key points, as well as tasks
 - ✓ Vary teaching formats as much as you can

E-Methods

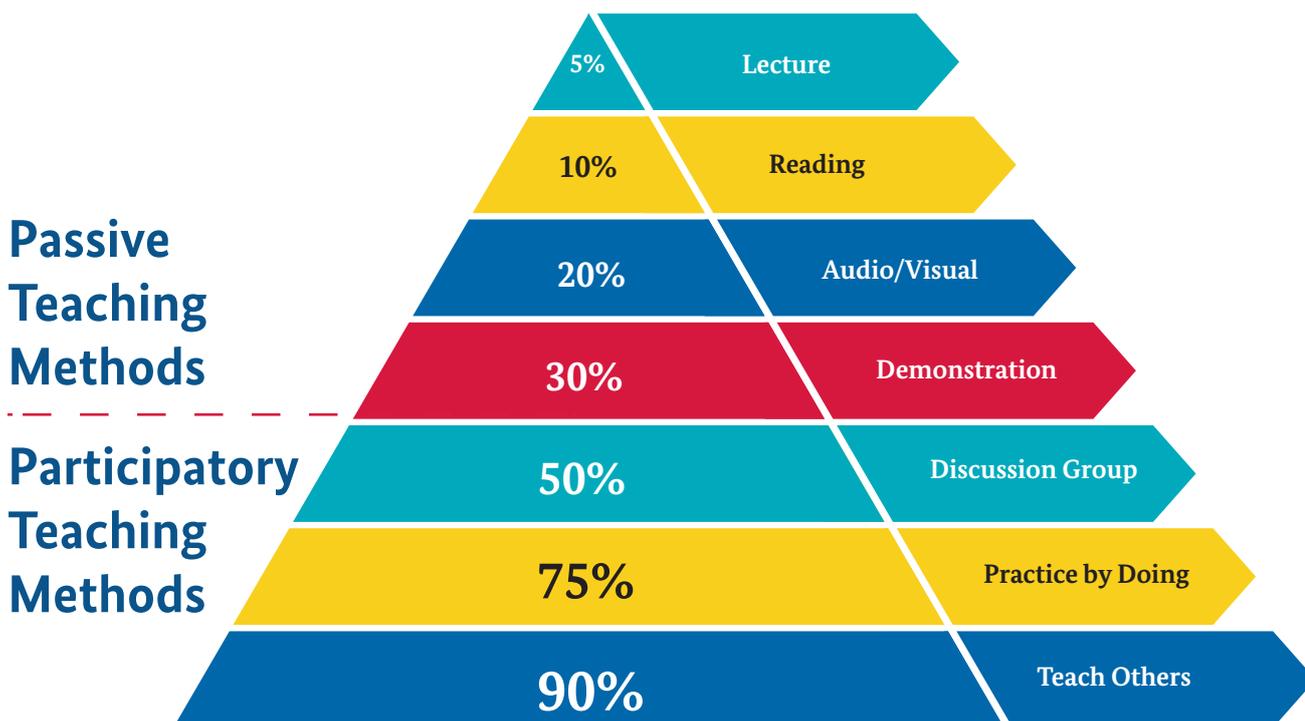
The design of online learning will involve using a combination of the following instructional methods:

- **Expositive methods** – which emphasize “absorption” of new information. Expositive methods include presentations, case studies, worked examples, demonstrations.
- **Application methods** – which emphasize the active processes that students use to perform procedural and principle-based tasks and build new knowledge. Application methods include demonstration-practise method, job aids, case-based or scenario-based exercises, role play, simulations and serious games, guided research, project work.
- **Collaborative methods** – which emphasize the social dimension of learning and engage students sharing knowledge and performing tasks in a collaborative way. They include online guided discussions, collaborative work and peer tutoring.



The learning pyramid in e-learning context

The learning pyramid is a model explaining participatory and passive teaching methods that can be applied in e-learning context (Letrud & Hernes, 2018). The development and use of e-methods can be best explained by using the learning pyramid (see Figure 3).



Lecture:

Lectures are most effective when students join e-learning course prepared and actively participate in e-class discussions.

Reading:

For visual learners, reading textbooks will likely be a more effective learning method for them. Reading is a necessary, especially in e-learning format, whereby students engage with course materials outside e-class asynchronously.

Audio-visual:

The audio-visual learning method may incorporate various audio-visual learning/teaching tools including videos, sound, pictures, and graphs. The effectiveness of audio-visual learning and study methods are enhanced when combined with other, more active forms of study. We suggest how VET teachers can combine different audio-visual learning and study methods in our video tutorials.

Demonstration:

Demonstration usually involves the teacher providing students a learning task that they can observe. It represents an effective study method, especially in e-learning formats when engaging with learning can be ambiguous or confusing (Ulwick, 2016).

Discussion:

Discussion, or “Group Discussion”, is a form of Cooperative Learning. It is a cooperative learning method that relies on students interacting and studying material with other students and teachers (McPherson & Nunes, 2004). In e-learning context are intended to stimulate student thinking and increase participation and engagement.

Practice (by) doing:

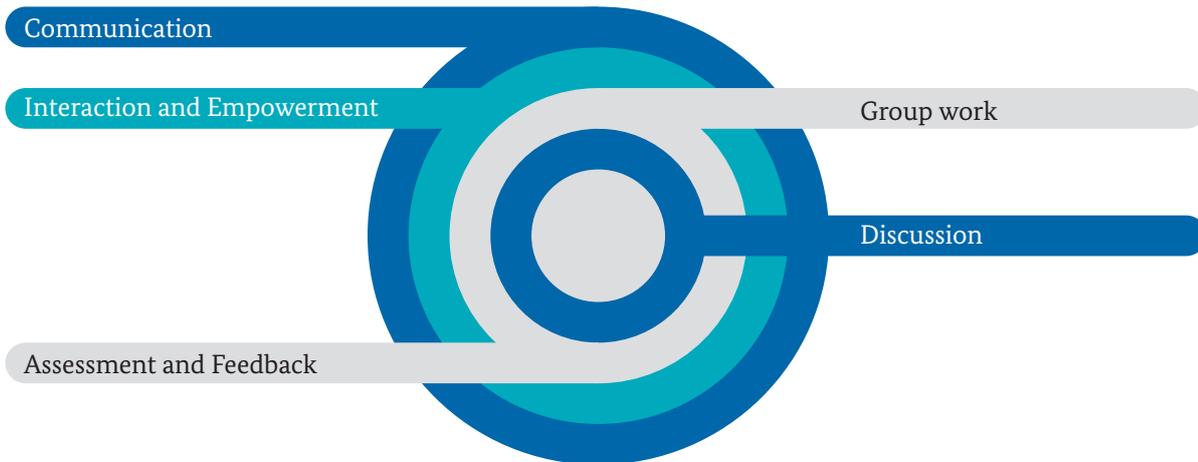
This method of study encourages students to take what they learn and put it into practice – whereby promoting deeper understanding and moving information from short-term to long-term memory (Savery, 2006). Practice by doing in online learning formats leads to more in-depth understanding of material by employing a range of creative approaches in ensuring greater retention and better recall (Chiappe & Arias, 2015).

Summary:

The effectiveness of any learning method, as presented in the Learning Pyramid, will also be influenced by your online teaching style. We recommend you use a more participatory teaching approach for effective online teaching and learning. Below we provide a list of creative ways to keep your students involved in your e-learning course.

Creative ways to keep your students involved in your course

This section provides creative ways to keep your students involved in your course. Watch our video tutorials to learn more about ways to better foster the following using different platforms and tools:



Communication

Many people assume that because a course is online, instructors do not need to communicate with the students, but it is the opposite. The most successful online courses are those in which teachers are actively involved and get to know their students, even though it is only virtually.

Interaction and empowerment

Promoting and maintaining interactivity within online classes continues to be a vital concern among teachers in e-learning formats. Interaction in learning environments leads to improved learning outcomes and increased student satisfaction while fostering independent learning skills (Growth Engineering, 2019). Plan interactive and engaging activities in each e-learning course. The interaction channels can be:

- Student to student
- Student to teacher
- Teacher to student

Assign roles and responsibilities to your students by including students in different roles, for example:

- Give students the role of forum moderator with edit and chunk rights.
- Give students different resources, depending of their roles in a role game/simulation.
- Give students the rights to create the section content of next week (and only that week).

Group work

Set up project student groups

Various communication tools help trainees come together.

Group activity

Use group activity for generic advantages, which are motivational, educational, more interactive and ideological. Via online tools, there will be administrative advantages, flexible participation and visibility (Vai & Sosulski, 2015). Group activities can be:

- Discussing on a case study
- Preparing for group projects
- Brainstorming
- Collaborative authoring
- Critique of examples
- Preparing case study report
- Online role playing
- Online debate
- Decision-making
- Team compilation of examples



Breakout sessions

Breakout sessions are considered a practical way to engage students in groups and with interactive activities. Breakout sessions are usually organised with 2-5 people in one group. This ensures the realisation of activities more effectively. When you organize breakout sessions, please consider the following instructions to be provided to your students

- Objective of the activity
- Methodology and approach of the activity
- Assessment of student engagement
- Expected results/learning outcomes

Discussion

Discussion is a means for your students to share their thoughts on the class readings and topics, among others. It is also valuable because it shows students that you are engaged and are following their engagement (Stahl, Koschmann & Suthers, 2014). If students find replies interesting and useful, they are more likely to get involved in the discussion.

The following list details other ways that you can creatively use discussion to keep students engaged in discussions:

- Debates
- Role-playing
- Story telling
- FAQ

Encourage your students to follow these suggested guidelines when engaging in forums and any other interactive sessions:

1. Stay on topic
2. Use titles that describe or list the topic.
3. Use the forum search if you are not sure something may have already been discussed.
4. Be welcoming and polite to all students, especially new students of the forum.
5. Refrain from re-starting a topic that has been inactive.
6. Remember that forum discussions are different from tweeting and sending text messages on your cell phone.
7. Personal issues are not appropriate issues for forum discussions!

Assessment and Feedback

According to Kirkpatrick and Kirkpatrick (2006), teachers can employ a range of assessment and feedback approaches to monitor students' achievements and performance by:

- Track student progress
- Create practice tests and quizzes
- Weekly evaluation
- Give feedback
- Peer-feedback

Track student progress

In terms of participants' knowledge of the special topics relevant to the course objective, a specific questionnaire should be administered to your students at the beginning, middle and end of the course to assess their progress of their achievements.

Create practice tests and quizzes

Practice tests are great tools to check students' knowledge before they have to be formally evaluated. Quizzes can be set up for students to take the tests repeatedly until they know the material and feel confident with the subject matter. Quizzes might also be a fun way to introduce a topic!

Weekly evaluation

Feedback can be used to create course weekly evaluations that are easily accessible to students within their courses. It provides the designated course evaluation coordinator full control over setting up, distributing, and collecting results for their respective departments and calculating the results as students submit the evaluations.

Feedback

Providing feedback to students is considered invaluable for their course progress. Feedback can be given by teachers directly on specific assignments. Moreover, students can also receive constructive feedback from their peers.

The benefits for students and teachers are:

- Evaluation (higher order thinking)
- Student involvement in the assessment process
- Learning community
- Streamline marking process and reduce marking load

Important takeaways

Table 3 showcases practical methodologies for online teaching that help teachers structuring e-session effectively.

Table 3: Helpful and practical methodologies for online teaching

Name	Look out the window	Partner interview	Individual exploration
Purpose	Activation	Activation	Try it now
When to use?	Beginning of a session, especially with a group that is new to the format	First session, new group	After teacher has presented a subject
Learning Outcomes	Get to know each other and the respective learning environment “Break through the virtual barrier”	Getting to know everybody in a fun and interactive way	Students familiarize themselves with a complex or difficult subject and find out, where their understanding has holes
How to	As introduction, everybody presents their working environment: what do they see when looking out of the window. Use webcam, so that it becomes visual and engaging	Set up breakout sessions for 2-3 students each. They interview each other on a couple of leading questions (Who are you? What are your hobbies/ passions? Etc.) 10-15 minutes interview time Students present their interview partner to the rest of the group (keep it short, ca. 1-2 minutes)	Formulate a challenging task Have students work on this task individually, with little time (expectation is not for everybody to finish) The questions that arise should be written down and will be discussed afterward
Tips & Tricks	Don't force students to turn on the camera. If they don't want to, they can describe the view as well	Devise specific questions, that help you Segway into the topic of your course The breakout session will subtly make them turn on audio and video...reflect on that afterwards, if you want your students to have the camera on for your class Let them visualize the answers on a virtual whiteboard, so they have something to present afterwards	Keep the task visual by posting it in some accessible format (e.g., on a whiteboard / PPT within the VC)

Name	“Mumble” groups	1-2-4-all	Round table
Purpose	Discussion	Activation	Discussion
When to use?	Before discussing a complex subject with the whole class	When discussing	If you want to hear everybody’s thoughts and opinions
Learning Outcomes	Students explore a topic in pairs	Create interaction	Every student articulates some thoughts on the subject matter
How to	<p>Create breakouts for 2-3 students each. Let them freely discuss some topic you have presented for a short time (ca. 5 minutes). Further discussion afterwards with entire class (“What did you find out during your small group time?”)</p>	<ol style="list-style-type: none"> 1) Have students think about a challenging topic (with a leading question) individually for 2 minutes 2) Set-up breakouts with 2 students each: they share their ideas from phase 1 and formulate some key insights. Ca. 4 minutes 3) Bring two pairs together in a new breakout. Share and consolidate ca. 8 minutes 4) Everybody together, talk about the consolidated insights, reflect and reach learning outcomes 	Ask an open question and have everybody give an answer, one after the other, in a pre-defined order
Tips & Tricks	Combines activation with a learning topic	Advanced method, use only if you feel comfortable with the VC software and have faith in the ability of your group	Order: alphabetically / by age / random Have variations of leading questions ready, if students struggle to give new aspects after a couple of answers.

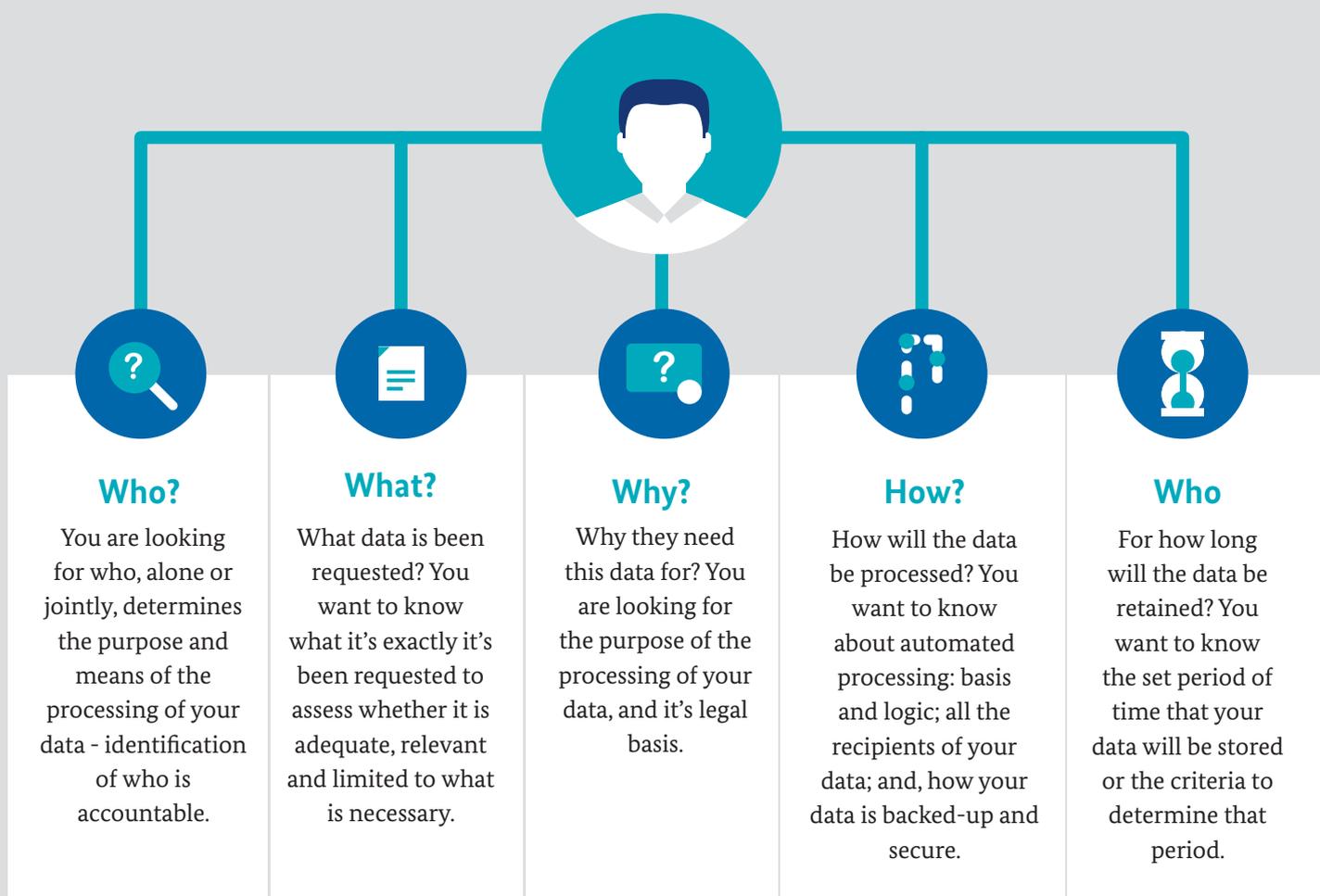
Name	Classic Presentation	Video presentation	Who wants to be a millionaire?
Purpose	Present Content	Present Content	Quiz
When to use?	Simple topic, clearly structured presentation	Engaging presentation that can be reviewed after class	Fun control of learning progress
Learning Outcomes	Students get teacher's perspective on a subject, hear and see important facts	Students get a learning resource, that they can use again after class	Students get feedback on their grasp / understanding of a certain subject
How to	Use PowerPoint to create slides that visualize your key points and present them to your students	Find a good video on the subject matter. Alternatively, you can create one yourself (advanced). Show the video in class and discuss it afterwards. Share a link to the video with the class, so they can review it	Use Quizizz / Kahoot to create a gamified quiz for your students and play it live in class. They can even use their Smartphones for a cool quiz experience
Tips & Tricks	! Attention span in virtual meetings is much shorter than in real life. Keep it short and simple. Put little text on your slides – images are extremely important	Simple software to create desktop videos: Loom.com Great resources to find existing videos are YouTube, Vimeo (and of course Google)	Maybe you can find some incentives for students, that ace the quiz Reflect on answers that few students got right Make it fun!

E-Tools

Data protection and security during e-learning

Before discussing about e-tools accessibility, purpose, functionality, and compatibility with other tools (see section 5.2), we draw your attention to the importance of data protection and security during e-learning. Figure 9 illustrates essential questions you should ask before providing your data and use an online tool.

Figure 9: How to protect your personal data Info graphic example (below)



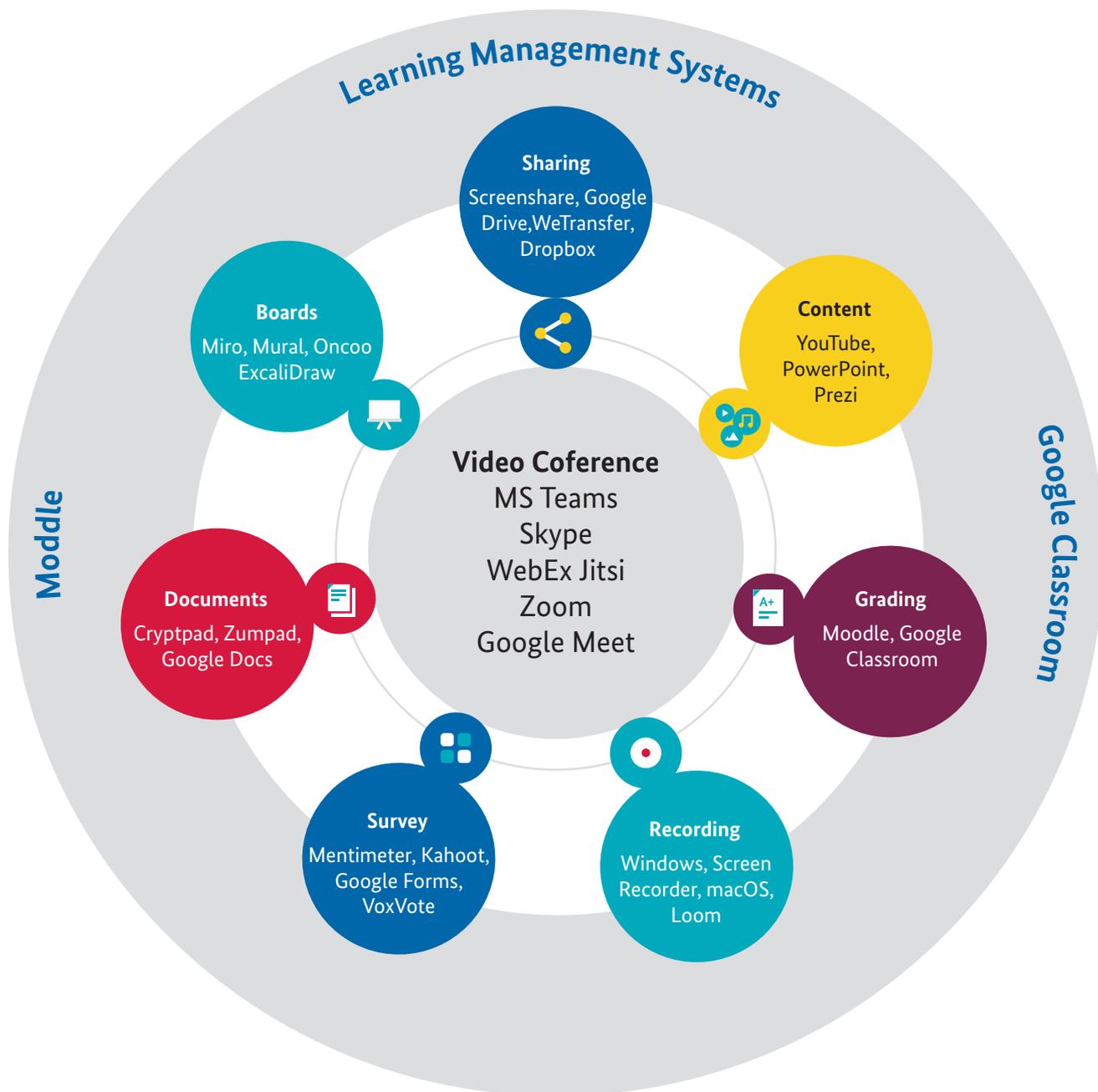
In this manual, we recommend the following five aspects of e-learning relating to protect personal data and privacy protection:

- 1. Preparing devices and tools before online learning.** Setting up the devices, managing the network settings, selecting and installing tools before online learning to ensure a solid learning environment is the basis for personal data protection.
- 2. Preserving personal data when logging in learning platforms.** Registering and logging into learning platforms require learners to create a solid password, protect the password and biometric information to make a safe online learning environment.
- 3. Protecting personal privacy when navigating learning platforms.** It is important to consider backing up data in learning management system (LMS).
- 4. Keeping personal data safe when using social networking tools for learning.** When using social networking tools, attention should be paid on utilizing webinar appropriately, posting in threaded discussion and forums responsibly, and surfing online safely.
- 5. Clearing personal data after finishing online learning.** After finishing e-learning, teachers and students should make the decision on whether to delete the data or not.

The “Zoom + X Wheel”

There is a long list of online tools available that can be utilized during the process of teaching online. The various tools can be categorized as paid and free software and subcategorized into many groups depending on the specific function that they offer. We divided the software into the nine categories represented in Figure 10 based on functionalities that they offer.

Figure 10: e-Tools based on functionality



The video conferencing tools are the foundation of every online class, while the others serve a complementary role based on teaching needs. Thus, if lecturers want to explain something using a white board, they have to use one of the white board tools in addition to the video conferencing tool, with which the communication happens, and the screen can be shared.

When there is a need to collaborate on a document together with other participants, a combination of a videoconference tool (ex. MS Teams) and tool for online document collaboration (ex. Cryptpad) can be used to enhance the cooperation experience. Many users already use a variety of tools combined to deliver the desired message to participants, a simple example this can be sharing a PowerPoint presentation while delivering a lecture about a specific topic.

Video Tutorials

Sharing Screen

Sharing the screen during an online session enables the lecturer to show the specific content during the lecture to the participants.

- [Sharing Screen Tutorial: Link Here](#)

Group work

Breakout sessions provide the ability to divide the meeting participants into smaller groups (size of group can be adjusted according to class needs)

- [Breakout sessions: Link Here](#)

Excalidraw

Excalidraw is a simple online whiteboard that offers the opportunity to collaborate online with multiple users at the same time. Users are limited to adding shapes and letters of various colours.

- [White Board Tutorial: Link Here](#)

Cryptpad

Cryptpad is a web based collaborative platform with office similar capabilities such as word processing and spreadsheets.

- [Collaborating Documents Tutorial: Link Here](#)

Mentimeter

Mentimeter is an online platform to enhance the interactivity of presentations and receive feedback of participants within a presentation.

- [Create Interactive Presentation Tutorial: Link Here](#)
- [Present an Interactive Presentation Tutorial: Link Here](#)

Recording and editing videos (with integrated Windows programmes)

Loom is a video messaging tools that enables users to record their screen, videos, and microphone in order to.

- [Record Screen Tutorial: Link Here](#)
- [Edit-Videos Tutorial: Link Here](#)

Moodle

Moodle is an open-source Learning Management System that offers an array of opportunities for lecturers to manage a class, such as: enrolment, grading, class structuring, providing materials, feedback, chat, forums, libraries etc.

- [Registering and Navigation Tutorial: Link Here](#)
- [Structure and Creating Content Tutorial: Link Here](#)
- [Assignments & Quizzes Tutorial: Link Here](#)
- [Grading, Feedback, and Tutorial: Link Here](#)

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