iLab Manual

Future-proof your classroom – teaching skills 2030

Module 7

Teaching in Virtual Classrooms

University of Valencia

Valencia, Spain

Enrique Bigné

Alberto Badenes

Luisa Andreu

Carla Ruiz

Future-proof your classroom – teaching skills 2030

Welcome to the course Teaching2030!

Technology rapidly changes the way we think, live, learn and lead. Education plays an essential role in this transformation process. Teachers and trainers have to be prepared for new challenges and learning environments in order to guide future generations the best way possible. Based on these considerations, the blended-learning course "Future-proof your classroom – teaching skills 2030", Teaching2030 for short, addresses teachers, tutors and trainers in higher education institutions providing them with instructional competencies and skills over eight modules. The course comprises a web-based training course (cBook) and an on-site learning space (iLab) and can be accessed without limitations and is free of charge. It is funded by the Erasmus+ Austrian National Agency under Key Action 2 Strategic Partnerships.

Lucia and Marko will guide you through the cBook and iLab

The didactical concept of the entire blended-learning course follows the principles of **storytelling**. Storytelling is quite common in company training but has so far not been commonly used in educational courses. It is, however, an essential part of Teaching2030. Throughout the modules, Lucia and Marko, two teachers at a higher education institution, who will guide you through your learning experiences, helping you deal with the new trends and difficulties you might experience in your future teaching, will accompany you. They tell stories about their recent successes with their students and their reservations about giving new approaches a try, they provide each other with teaching advice and support, and, last but not least, they help future educators manage the challenges they may face. They are both a constant presence in the cBook and in the iLab, which are closely interlinked.

The **cBook (computerBook)** is a web-based training environment that contains the eight modules of the course, each of which comprises five chapters organised around key topics. The cBook offers you a diverse range of learning material, like information (texts, hot spots, didactic sequences), interactive exercises (drag and drop, multiple choice, memory, surveys, word clouds), reflection tasks, videos and additional materials and links. Each cBook module contains five major tasks entitled "iLab", indicating that these tasks are better suited for use within the iLab**.** In addition, the cBook provides reflection tasks, called "iThink", for discussion in the iLab. Nevertheless, you can also work with the cBook as a stand-alone MOOC.

The *iLab (innovationLab*), as part of the blended-learning course, is an on-site, open, self-directed learning space, estimated to require two days per module. It can be organized as a training environment under the supervision of a Teaching2030-developer, or without supervision, as a self-directed learning environment for teachers who would like to widen and strengthen their teaching approaches and skills. The iLab is designed to be used flexibly, as it provides additional exercises, tools, materials and links, but it is recommended that the cBook be completed first in order to build a solid basis for the iLab. Each iLab module offers a guide explaining the didactical approach of the entire course and a glossary containing the central items and terms used by the development team.

Give Teaching2030 a try and have fun!

Your development team:

CREATE 21st century GmbH

Eszterházy Károly Egyetem Eger

Fachhochschule Burgenland GmbH

Faculty of Tourism & Hospitality Management

Universidade de Aveiro

Universita degli Studi di Perugia

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What to expect

Welcome to Module 7!

Virtual Classrooms, inside digital learning environments, provide a wide range of possibilities to connect with students in different space and time situations. Nevertheless, these advantages require teachers to perform new roles: they should become experts in communication, moderators of the learning process, designers of engaging tasks and masters of VC tools. These roles are to be applied not only while teaching in the VC, but also during the preparation of the sessions and after they finish, evaluating their performance for future improvements. All these issues will be tackled in this module, making a special effort to present the possibilities of the VC software and how they can improve teaching quality and results in many different knowledge areas.

1. Let's go in virtual classrooms (VC)

Now it is the time to move from traditional to online! The availability of digital technology in an easy and affordable way is turning the teaching paradigm upside down, providing software such as Learning Management Systems (LMS) – covered in **Module 4** – and web conferencing a preeminent place, since the advantages they provide to the teaching process are abundant. In particular, this module covers the role of the Virtual Classroom (VC) and how it can be properly applied in a transition from a traditional, face-to-face setting.

1.1. Virtual classroom characteristics

For the purpose of this module, the VC is characterised as the video conferencing application which enables participants to communicate and interact via different tools, such as chat or whiteboard, and to share and view materials in one common setting. Some examples of this technology that can be used are WebEx, Adobe Connect or Zoom, among others. We offer yu a comparison of 10 VC software alternatives with a free version, together with the most remarkable features and some opinions of users, prepared by Learn.G2 (2019).

This teaching alternative provides plenty of advantages. First of all, it gives the possibility to **break the borders of space and time while teaching:** now knowledge can be made available asynchronously, as well as anywhere in the world. Alternatively, the class **can take place simultaneously in all members' devices**. Digital technology also allows one-to-one interaction in written or oral format, opening the possibility to personalized feedback to each student. Furthermore, the implementation of this methodology does not have to be aggressive;

it can be **easily integrated with other traditional, in-class methods through a blended learning approach**. In order to adapt to the necessities of different students that have other personal or professional obligations, lessons on demand can be organized. And do not worry about complexity: VC interfaces are becoming more and more intuitive and easy to use, showing few differences between software alternatives.

The VC also provides a series of advantages in terms of communication between teachers and students. The possibility to connect in different times and spaces, as well as the personalized interaction between users, allows applying a less traditional classroom setting in which students can actively participate and have greater responsibility over their own work. This does not mean, however, that the figure of the teacher is not important anymore, just different! Now you are in charge of moderating the debate, monitoring the developing of the course and planning for and solving potential issues.

Want more advantages? Then, take into account the possibility to adapt the pace of teaching to each student according to their specific needs. You can provide personalized feedback, or even organize individual meetings for specific support. Finally, the VC format is less expensive and makes communication much more comfortable for students and teachers. Imagine that your students cannot be at the office or at home during one specific session. Thanks to the VC, they have more options available: they can other watch the session from their mobile phone, since the VC software can be integrated within multiple devices or, alternatively, they can access to the recorded video later on. This alternative becomes the most practical, user-friendly and adaptable option for teaching and learning in different circumstances.

1.2. Particularities of virtual classroom teaching

We think it is important to explain how does the VC work and how it can be organized in comparison to other teaching alternatives, namely traditional face-to-face training and self-paced e-learning. In the following table, you can find a summary of the differences between these three learning techniques.

Component	Traditional face-to-face learning	Self-paced e-learning	Virtual Classroom training
Information flow	Two-way information flow between facilitator and learners	One-way information flow between technology and learner	Two-way information flow between facilitator and learners
Facilitator	Physically present with participants	Not applicable	Physically separated from participants
Location	Physical classroom or meeting room	Accessed via a computer or mobile device	Accessed via a computer and sometimes a mobile device
Materials	Handed out during class	Downloaded from course site	Emailed or mailed to participants in advance or downloaded from VC
Typical exercises	Facilitated discussion; small group work	Drag-and-drop exercises; online simulations	Facilitated discussion; small group work in breakout rooms and polls
Duration	Varies from an hour to multiple days	Modules broken into small chunks of time, such as 30 minutes	Typically chunked into 60-90 minute sessions

With respect to the exchange of information between teacher and students, the VC permits a constant communication and knowledge building between the teacher and the students, contrary to the case of e-learning self-learning programs, where the student can only access the contents without a response. In the case of the teacher, he is an important figure in the learning process as it is in the traditional classroom, but with the difference that he does not share the same space that the students; all interaction is made through digital technology and internet connection. The classroom also looks different to the classical room with desks and chairs, now we can find a common space, which can be accessed via a PC, laptop or even a smartphone, where the blackboard and projector are changed by a streaming connection and a chat. With respect to materials, they can be uploaded in advance by the teacher, allowing a previous, organized preparation by the student.

One very important thought that is kept all along this course, and that we introduce now, is that the task follows the tool. An adaptation to the means provided by VC software is mandatory to develop activities for students. In this sense, moderated discussions are a good alternative, always trying to gather small groups so that the organization is made possible. The duration of sessions typically lasts from 60 to 90 minutes, time enough to generate knowledge and interact with students without overwhelming them or causing any burnout effect.

1.3. Virtual classroom tools

Now it is time to get down to business. The first step once you have decided to use the VC for teaching, you need to get familiar with the different tools that the VC offers you. You can find more depending on the specific software you are using, but for sure these ones will be present at all the alternatives you can find in the market.

Let us start with the video function. The audio and image streaming allows teachers and students to get in touch in a more personalised way, partly avoiding the lack of human direct interaction that technology-mediated learning entails. Nevertheless, video connection it is not necessary, as it can be highly internet consuming; in cases of low-quality internet connection, only-audio interaction is possible. This function allows inviting guest speakers in a more convenient way.

Next to the video screen, you will always find a chat that is available all along the session. The chat function allows participants to communicate synchronously by writing, either with a specific user (e.g. the teacher, a team colleague) or with all participants. It helps to overcome initial hurdles and is especially useful in all subjects where writing is essential, for example in language teaching. It can also be used as a resource to share important information related to the course, as all messages can be saved.

The best option for time management in a VC course is the use of the schedule function. Usually in the form of a calendar, it notifies new events to students, allows the possibility to record the video sessions and also to make them available through download or a streaming link. The VC facilitates teamwork with the sharing function. Participants can work commonly of documents, show and comment on presentations, watch videos and share websites and online materials, among other activities.

Both, the teacher and the student, can display visuals and information that is easier to recognise and eases student motivation through the whiteboard function. Eventually, the polling or questionnaire function allows teachers to create tests with different types of questions. This functionality is important for different purposes: it can evaluate in a standardised way the performance of students as well as of teachers, working as an effective tool to check the perceptions about the VC performance and suggest future improvements.

Exercise

Which is the VC software for your classes? Which are the features that you need the most? List the advantages and disadvantages of the different software alternatives to choose the alternative that best suits your teaching! You can take as a reference the review provided by Educators Technology (2018).

Activity: Becoming familiar with the VC software

Now, let us put in practice this initial knowledge about the VC. This exercise intends to get you familiar with the most relevant synchronous Virtual Classroom (VC) software and their interface.

- ✓ Go and enter the WebEx, Adobe Connect or Zoom websites and create your own profile
- ✓ Check the different tools and functionalities that it provides.
- ✓ How would you proceed if you had to…?
    1. Send an assignment to be completed individually and returned online
    2. Establish a debate for the next lesson through the VC
    3. Answer to the questions of the students after a lesson through the VC

You should write down the steps, making reference to the employed VC functionalities and the role of the lecturer and the student in each of them (e.g. uploading or downloading a document, intervening in the debate, raising questions, etc.).

References

Christopher, D., & Hyder, K. (2014). *The successful virtual classroom: How to design and facilitate interactive and engaging live online learning.* Amacom, New York, NY.

Educators Technology (2018). *"5 Good Video Conferencing Tools For Teachers".* Available at: https://www.educatorstechnology.com/2018/12/5-good-video-conferencing-tools-for.html

Learn.G2 (2019). *"10 Best Free Web and Video Conferencing Software in 2019".* Available at: https://learn.g2.com/free-video-conferencing-software

2. Skills and abilities of the VC teacher

So far, we have introduced the VC, its characteristics with respect to other teaching methodologies and the possibilities offered by its different tools. Nevertheless, if we put the focus on the teacher who is going to implement and manage this technology, it is necessary to develop a series of skills and abilities deriving from the technological setting. This has already been a topic of interest as the EU Business School (2018) has reflected. A part of the traditional classroom that deals with the face-to-face interaction and body language has to be combined with the wording elaboration. What if the video function is turned off? You do not see the immediate reaction of students – so language is of utmost importance!

2.1. Key skills of virtual classroom teachers

To make it easier, we can group the desired skills in four different aspirational roles that have to be undertaken by the teachers who want to master the VC. First of all, the teacher has to become an **expert in communication**. It is fundamental to communicate clearly for a successful teaching outcome, prioritizing the respect and constructive discourse when providing feedback to students. Some advice: try to repeat and remark the most important outcomes or agreement achieved during the class, highlight the positive performance at the same time in which you remark the improvement points to your students, and try to foster concise responses, going straight to the point in order to manage the time and allow everyone to participate.

Secondly, it is equally important to move from the provider of knowledge to the **moderator** during the classroom dialogue. The teacher is up to guiding the student through the learning process, encouraging them to share their thoughts and providing personalized feedback to improve individual performance, making use of the available tools in the VC. To moderate the class properly, the teacher has to give clear instructions about how the class time is going to be organized and the use provided to each of the available tools. In order to guarantee equal participation, it is recommendable to use meta-communication to ensure that all the steps are clear, and also to address each of the students by their name. In this way, you will make sure that all of them are involved and feel integrated in the team. All these actions can be planned in advance, but it is during implementation that they have to be decided according to the different needs of the group. You can see the experience shared by a higher education teacher about moderating online sessions in eLearn magazine (2018).

Thirdly, the teacher has to **decide on the tasks** proposed to the student, bearing in mind both, the learning outcomes of the course and the available tools in the VC, as the limits that will shape the final class organization. In this sense, it is important to balance the results and the efficiency, given that class time is limited. For example, if you decide to answer to all questions individually, by chat, your comments will be more effective, but this may for sure be very time-consuming. If you propose a debate to be made by teams, it will be easier to hear all teams' contributions than if it is made individually. Remember: the tools go first and they can be combined to create more interactive and entertaining tasks, and it is fundamental not to duplicate tasks and to control time during the classroom.

Finally, the teacher is required to be the **master of tools** and dominate all the possibilities that the VC can offer. In a computer-mediated environment, it is very important to prioritize collaborative tools in order to compensate the absence of human interaction. Similarly, the rest of tolls can be employed for various purposes, such as the sharing function (to provide notes, presentations and multimedia content) or the whiteboard (in order to generate content and make it instantly available to all students).

2.2. Interacting with students in the virtual classroom

Nevertheless, all these abilities are of no use if we do not consider the role of students in the classroom, and how the teacher can react to unexpected challenges that are new to the VC. Let us use a story in order to make this clear.

Story

Marko: Lucia, let me explain you how I solved some of the problems related to interaction with students during a debate session about ethics in marketing that I proposed. And the first problem comes: one of the teams is not able to upload their presentation and share it with their colleagues. In this case, I was patient and gave understanding to the students, who were already very nervous. I proceeded to enumerate all the steps in order to upload and share the presentation. Fortunately, the team could then upload the materials, but if this was not the case, I knew I had to react quickly and move to the next team, in order to give time to the

students to solve the problem and not to waste class time. Once all the teams had presented, I decided to devote 30 minutes to initiate a feedback round, not only from himself but also from the rest of teams. This is an excellent idea, since all participants are encouraged to give their impressions, but are also open to other colleagues' comments about their work. Nonetheless I found that some not paying attention to their colleagues and taking notes during their presentations. I was very clear when explaining this to students: paying attention to their colleagues is their responsibility, and necessary, since the feedback and the results of them depends in part on the comments provided by the students. What if this happens when they are working for a company? Most likely, the companies they will work for in a few years will require this type of actions, also through video conferencing. This is just the starting point for their future careers!

2.3. Adapting teaching to the Virtual Classroom

To sum up, let us retake which are the roles that the 2030 teacher should master in order to succeed when applying VC teaching. Lucia has made sure that Marko's communication has been refined: now he knows that feedback is important for each student's particular progress, and that it has to be given in a constructive, clear and friendly way, especially online. Marko has now moved to the role of moderator, taking into account that he is up to structuring the learning process, but not being the only one that participates. He has also worked hard preparing new tasks that go along best with tools in my VC, and for that he has gone through a thorough learning process of which are the different VC tools and how they can be used.

Exercise

Create three tasks for your VC sessions that follow these rules:

- Each of them should integrate, at least, two different VC tools (see Chapter 1)
- You should specify which is your role in the development of each task
- You should specify how the communication flow between VC participants is managed.

Activity: Adapting teaching style to the VC

Now we will put you on the side of the lecturer who teaches other lecturers!

Imagine that a lecturer friend of yours has to teach a course on a specific topic through the VC for the first time. Which instructions would you give?

Write a two-page report with the changes to be introduced in the teaching style and the communication with students. You should focus on the changes in terms of:

- ✓ The undertaking of theoretical magisterial lessons through the VC
- ✓ The moderation of debates during the lessons
- ✓ The group assessments in which each group presents its conclusions about a research topic
- ✓ Evaluating the final performance on the course

References

EU Business School (2018). *"The Role of the Teacher in the Digital Age".* Available at: https://www.euruni.edu/blog/future-prof-online-learning/

eLearn magazine (2018). *"Excited by E-Moderation? A Canadian Educator Shares Her Best Hacks"* Available at: https://elearnmag.acm.org/featured.cfm?aid=3313865

VEDAMO (2019). "*Online Tutoring Gen Z and Alpha? Insights for Your Virtual Classroom*". Available at: https://www.vedamo.com/knowledge/online-tutoring-gen-z-and-alpha-insights-for-your-virtual-classroom/

3. Planning an effective VC session

In the previous chapters, we discussed the features of a Virtual Classroom and looked into the skills teachers need. Now, we proceed to outline the steps to prepare the VC session in advance and achieve effective results. Since the teaching process takes place in different spaces, the proof of attendance is more difficult to obtain, and the activities have to take a different approach in order to motivate and engage students. In addition, there are two additional elements: group size and time management, which have to be considered in a different way given the characteristics of the VC. We will now discuss each of these points in more detail, starting with the intended learning outcomes.

3.1. Learning outcomes

The defining factor that explains the contents and structure of the course, together with the tools available in the VC software, are the learning outcomes. The first question that comes to our mind is: what is the intended objective for the students' learning process of the VC session? Depending on this, the subject could be more orientated towards developing soft skills, or maybe acquiring deep, theoretical knowledge about one concept. Similarly, the outcomes are going to affect the activities proposed, and thus the planning of the whole course.

We propose the SMART learning objectives framework in order to help you elaborating goals that are sensible for VC sessions. Learning outcomes should be:

1. **Specific:** Should be clear and understandable, considering previous knowledge and the setting of the entire course.
2. **Measurable:** Students must be able to quantify, analyse, evaluate and report their learning objectives.
3. **Attainable:** The objectives need to be aligned with the proposed activities and tasks.
4. **Relevant:** Your students should see the value in achieving the objectives set so that they maximise their efforts.
5. **Timely and time-bound:** This is particularly important when teaching in VCs: remember to set deadlines.

Following these principles, you will be able to perform effectively in the VC. If, for example, one of the learning outcomes is to be able to present using an adequate hand and facial language, evaluation activities should be proposed, and enough time should be devoted to this principle, which is important for the expression of ideas of the student.

3.2. Adapting tasks to the virtual classroom tools

Once the learning outcomes are defined, the technical part comes into play. You should ask yourself, which are the tools you intend to use, and how you can formulate activities that are adequate. The more tools you combine, the more possibilities you will have to propose attractive and interesting activities.

For example: you can use the whiteboard in order to summarise the key points of discussions, display visuals or simplify complex subject matters by using graphs or schemes. These activities can be implemented in-group, since materials are available for everyone. On the other hand, if you prefer to give individual communication, you can use the chat for giving individual feedback to students; clarifying issues and problems; posing individual questions to students. If you make use of the sharing function, the one who shares a presentation or text can work directly on it and save the copy. In this way, students can take over the role as a moderator and give feedback to other students, which is also relevant for students' training.

3.3. Managing group sizes and class times

Once the outcomes and the tasks are defined, it is time to care about two other elements that are important in the classroom: group size and class time management.

Regarding **group size,** and considering the characteristics of VC communication, groups should not be larger than 20 students and the class should not last more than 1,5 hours as a general rule, as students' attention span is much shorter than in face-to-face teaching. In this sense, you can check the eLearning industry (2019) study on group size considerations in webinars versus VC sessions, according to your teaching approach. We can make this clearer with an example. Imagine the following situation: there are 4 groups in the class and they are asked to prepare a questionnaire during the 90-minute session. Each group has 20 minutes to compile and present the questionnaire (10 questions) and to receive feedback from their peers. One student of each group shares the questionnaire document (Word) and takes over the role as moderator, collecting feedback from the others and inserting it directly into the document. The document is then saved and ready for the final check by the group.

The second issue is related to **time management.** It is important to be conscious about how long does the session last, which structure is going to be followed, and to have a second option in mind in case technical problems arise. The importance of planning with regard to time
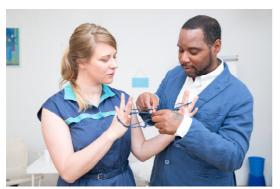
management, as well as some practical tips, are provided by VEDAMO (2018), a particular VC software.

As we commented in Chapter 1, VC sessions usually last between 60 and 90 minutes. Furthermore, due to technology mediation sometimes interaction takes longer than in the face-to-face communication. If you need to make sure that internet connection is working, that all members are present, etc. this will take some time for the development of the session.

The idea is to waste as little time as possible during the session (and not to overcharge you afterwards with private sessions with each student!), so besides keeping an eye on the clock during the whole session to make sure that all activities are properly carried out., it is important to plan in advance an effective time management strategy. This includes calculating a proxy of how much time you will need for each particular activity, but also for the introduction of the content, the summing up of the results. It is not the same either to propose group or individual work (the latter is usually more time-consuming, as it requires more interventions). And a crucial point: you should provide an extensive explanation of how will the session be organized, how much time do the students have to carry out an organization, and finally to provide all necessary materials in advance, in order to minimize unnecessary explanation during the session.

Story

Marko: Could you give me some examples of activities to be carried out through the VC?

Lucia: You could start with a joint essay on a topic as a team activity. You are in charge of uploading some essays to the VC through the sharing function as a reference for the structure and style and dividing the workloads among the team members. Then establish the deadlines for uploading the final essays. The students can create a collaborative document, upload it to the VC, present it to the other team members and give feedback.

M: Can I use other external resources, such as YouTube videos?

L: Of course! Try sharing a TED video that covers the latest trends on a topic (e.g. big data in the financial sector) and asking for a review. First, upload the video and propose some questions to guide the review and also establish the time range to complete the task. A good idea here is to encourage the students to create a common chat thread with all answers, and

give a prize (e.g. extra 0.5 points) to the best answers, explaining why and establishing as a reference for common improvement.

M: Great! And if I intend to invite an expert in a specific knowledge area to the session?

L: You can do so if this person knows the basics of your VC software in advance. It is good to start by introducing the guest speaker, and a way to do that is by uploading the CV previous to the lesson, as well as the topics to be raised during the session so that the students can have this reference and think of interesting questions that can be asked and discussed during the session. In this case, you can introduce the speaker and hand over the development of the session, even though is still important to be there in order to handle unexpected issues.

Exercise

Can you imagine any other activity of interest for the VC? Take examples that you would apply in your own classes and explain how you would put them into practice in the VC.

Activity: Aristotle said

How would you prepare a VC session? The following questions may help:

- ✓ Which software will I use?
- ✓ Do I know and master all the features?
- ✓ What will be the learning outcomes?
- ✓ Which VC tools are best to complete which tasks?
- ✓ What is the size of my group and how will I manage it?
- ✓ Which tasks are possible to complete?
- ✓ How long will the session last and how will it be structured?

As Aristotle said: "Well begun is half done!"

Chapters 4 and 5 will show you how to implement a VC session and evaluate the achievement of the learning outcomes.

References

eLearning Industry (2019). "*Live Online Learning: What Are The Differences Between A Webinar And A Virtual Classroom?"* Available at: https://elearningindustry.com/live-online-learning-webinar-vs-virtual-classroom

VEDAMO (2018). *"Time Management Techniques In The Virtual Classroom"*. Available at: https://www.vedamo.com/knowledge/time-management-techniques-virtual-classroom/

4. Implementing an effective VC session

Along the previous three chapters of this Module 7, Marko is dealing with the challenges of VC. To implement an effective VC session, Marco recommends to concentrate on four main points: (i) we need to be "connected" online with students; (ii) it is important to handle time in VC sessions; (iii) the technology and digital tools are relevant to the VC sessions, but they are facilitators and means to help teachers in the VC environment, and (iv) the moderator role of the teacher. We will now discuss each of these points in more detail. Section 4.1 discusses the virtual communication with students and the importance of time management. Section 4.2. focuses on the role of technology and handling issues. Section 4.3. emphasizes the importance of the moderator role of the teacher.

4.1. Virtual communication with students

The first requirement to implement an effective VC session is "connecting" online with students. The VC is "with" students, not a unidirectional way "to" the students. **The communication with students should be not in a unique moment, not only during the session but also at the start and at the end of the session**. Let's take a look at how communication with students works.

As we have learnt in section 1.3, VC tools allows teachers and students to connect each other in a more personalized way. In virtual teaching, most communication takes place **during the session.** Remember that the chat function is available along the session. We can use the chat function during the session to clarify private issues, check the chat regularly (e.g., every 30 minutes) to check if students understand the session or they would like to ask questions. During the session, to be connect with students, we should be quick and stick to the pre-defined times when answering to students in order to keep them on the track. Don't wait to the end of the session as in the VC teaching to answer students' comments.

Before starting the session, teachers should remember the communication role that we discussed in section 2.1 enhancing the respect and constructive discourse. Therefore, **at the start of the session**, raising awareness and making sure all tools and applications work properly is a good point of departure (Lockhart et al., 2017). To raise awareness an introduction helps to increase students' attention and explain course details. Furthermore, at the start of the session make sure all applications and tools work properly (e.g., audio and video). An advice: Ask the students if they can hear and see you clearly before starting your session.

As in the traditional teaching, the **end of the session** is crucial. Imagine how relevant is in VC environment without physical interaction. After the session, all findings should be wrapped up once again. It is critical to remark the most important outcomes achieved in the class so let's pay attention at the end of the session. Remember that evaluation is reciprocal. What does it mean? It means that as teachers, we learn from our students as much as they learn from us. Maybe students need a supplementary meeting so we need to be aware that some students may have comments or questions that need to be answered. We should specify at what time we will be available online for supplementary meetings.

In the virtual communication with students, feedback is crucial. Our feedback must be polite, constructive and personalised, identifying both weaknesses and strengths. The best way to provide feedback is to point out very common mistakes in public and to discuss each student's individual performance in private. Whenever students do not agree with their feedback, teachers should arrange a meeting to discuss the different points of view.

Together with the communication requirements at the start of the session, during the session and at the end of the session, as we discuss in section 3.3. time management is relevant. Teachers need to train students how to manage their time effectively so that they achieve the learning objectives in the designated time (Broadbent, 2017).

Effective time management –how you allocate and divide time –is important for both teacher and students, as well as the whole class. The basic principles of time management for a virtual session are summarised here:

- Students should prepare for the session in advance and stick to the given time limit. They need to participate during the virtual class – the teacher should address them personally!
- All group members should be given the opportunity to express their opinions.
- For the teacher, when preparing your class, estimate how much time students will need for their presentations. Make sure all students are engaged and set a time limit. Take into account the group size. Keep your eye on the clock during the session. Set aside 10 minutes at the end for questions.

The article by Binkley et al. (2012) on 21st Century Skills deals with these and other issues related to the desirable skills in professionals for the years to come, and also highlights the importance of self-directed learning in students.

4.2. Using technology and handling issues

Teachers use VC technology to promote interactivity, develop community, and reach students at different locations. Martin and Parker (2014) provide an empirical study of the main VC platforms and its main features: archiving the session, viewing the webcam, text chat, audio chat, sharing web links, guest access, e-board, polling, listening to the audio via phone, downloading archives, hand-raising, application sharing, breakout rooms and emoticons.

When getting started for an effective VC session, the selection of digital technology tools and knowing how to handle technological issues are also crucial. As we all know, in-class technological failures happen all the time and can disrupt the flow of a class. We provide some advice of how to tackle these challenges.

1. A **user guide/document** can be uploaded. This guide should provide guidelines regarding (i) students' connection requirements, (ii) features/functionalities of the VC interface, and (iii) basic rules of how to interact and participate during a session.

2. We recommend to ask the participants to **join your classroom 10 minutes before the class.** With this practice, (i) all participants can be ready when the lesson starts, (ii) any questions or unexpected problems can be solved, and (iii) this time can be used to greet students and have a friendly chat.

3. **Check audio and video regularly and make sure they work properly**: (i) make sure that all participants are connected and able to follow the session, and (ii) check that everybody is listening to the teacher.

4. **Ask the participants to stay with their microphone/camera on only when they are intervening.** This allows avoid technological problems as a result of excessive data usage. Furthermore, you can use the muting/unmuting function to structure the session.

5. **Ask students to stick to the time allocated**. Therefore, you need to ensure all participants that there will be time to speak, and stick to the lesson plan introduced at the beginning of the session. This is the way to be fair and even-minded with everyone!

6. **Set aside 10 minutes after the session to answer questions** and ask if there were any problems that need to addressed in the next session. Some issues can be solved during the session, which saves time. The chat function can be very useful for this.

4.3. The teacher as a moderator

In the context of VC, teachers may function as moderators, facilitators, coaches, consultants, or resource providers who provide intellectual guidance for student learning (Shi, 2010). The teacher is immersed in a completely new environment in which digital technology is the main means to establish two-way communication between the teacher, the student and the materials. This situation requires the teachers to develop an extra curriculum of competences related to their performance in these new environments (Bigné, Badenes-Rocha, Ruiz & Andreu, 2019).

Remember that in section 2.1. one of the skills of the VC teachers refer to the moderator role of the teacher. Here we emphasize this moderator role to conduct an effective VC session. The teacher becomes no longer a mere provider of knowledge, but a moderator of the process that guides students using the software and facilitates the debate in a friendly and equable way (Schwartz & Asterhan, 2011). Teachers should manage the time about the time class starts, know how to attract attention to the students, understand what do students expect, among others.

Let 's sum up how the role of the teacher is changing in a virtual classroom. Teaching in virtual classrooms is more about **structuring the communication process**. The VC software allows teachers to carry out group activities with the same or even more efficiency than in the physical classroom: group debates and discussions, students as referees of their colleagues 'work, wikis or presentations created by the students. The teacher is expected to: (1) lay out the ground rules for discussions, (2) give turns evenly to each student, (3) discuss any point that is relevant or not clear, and (4) give feedback in a constructive and positive way.

Teachers can give a part of the responsibility to the students and let them summarise the key ideas of a discussion or ask them to come up with new idea.

We have arrived to the end of this chapter. Bigné, Badenes-Rocha, Ruiz & Andreu (2019) summarize the four ideas for the teacher to get into action: (i) to encourage all students to interact and contribute to the conversation, (ii) to organize class time so as to achieve learning outcomes in the expected times, (iii) to get used to technology and anticipate technical problems that are likely to arise during the sessions and (iv) to know how to carry out group activities in the context of an online classroom.

To **summarize this chapter**, remember the four points that Lucia recommends to implement an effective VC session:

1. Communication is very important for the students` development - before, during and after the session.
2. Time management is very important for the students to meet all learning objectives in the designated period of time.
3. Technological failures can happen unexpectedly. That is why it is important to be prepared and foresee them. Make sure the Internet connection is fine and check audio and video regularly.
4. You are now a moderator organising the structure of the session and guiding the students. Encourage them to be creative and to share their experiences.

All these ideas can be implemented following different learning theories or a combination of them, depending on the content of the class and your preferred teaching style. As Marko stated at the beginning – it's up to you what to do and how!

Exercise

How would you answer to the following comments made by students through the VC chat?

- Some of our team members cannot attend the session in the day of our presentation.
- Some of our team members have technological problems (i.e. WIFI connection does not work)

Activity: Create the schedule for your VC session

You should prepare the timetable for 1 week of a specific course with two lessons a week: one traditional (1:30h) and one debate (1:30h) - that is 2 different timetables. Please, keep in mind that:

- ✓ There should be some preparation just before the lesson starts.
- ✓ There should be some extra time after the lesson to solve doubts or make comments.
- ✓ Check that there are no technical issues.
- ✓ Include interesting and varied activities, using the appropriate VC tools.
- ✓ In the traditional sessions: lecturer-student interaction is prevailing.
- ✓ In the debate sessions: interaction should be fostered.

And what if…? Give realistic answers to the following situations:

- ✓ A group of students has to present his work, but their internet connection seems not to be working.
- ✓ A guest speaker, who has never used the VC, is about to teach a one-hour seminar to your students.
- ✓ Students complain because they wanted to participate during the whole lesson but they did not have the chance.

References

Bigné, E.; Badenes-Rocha, A.; Ruiz, C.; & Andreu, L. (2019). Blended training for teachers of online higher education. *Journal of Management and Business Education*, 2(2), 108-126.

Binkley, M., Erstad, O., Herman, J., Raizen, S., Ripley, M., Miller-Ricci, M., & Rumble, M. (2012). *Defining twenty-first century skills. In Assessment and teaching of 21st century skills* (pp. 17-66). Springer, Dordrecht.

Broadbent, J. (2017). Comparing online and blended learner's self-regulated learning strategies and academic performance. *The Internet and Higher Education*, 33, 24-32.

Lockhart, B. J., Capurso, N. A., Chase, I., Arbuckle, M. R., Travis, M. J., Eisen, J., & Ross, D. A. (2017). The use of a small private online course to allow educators to share teaching resources across diverse sites: the future of psychiatric case conferences?. *Academic Psychiatry,* 41(1), 81-85.

Martin, F., & Parker, M. A. (2014). Use of synchronous virtual classrooms: Why, who, and how. *MERLOT Journal of Online Learning and Teaching*, 10(2), 192-210.

Schwarz, B. B. and Asterhan, C. S. (2011). "E-moderation of synchronous discussions in educational settings: A nascent practice*", Journal of the Learning Sciences,* Vol. 20, No. 3, pp. 395-442.

Shi, S. (2010). Teacher moderating and student engagement in synchronous computer conferences. *Journal of Online Learning and Teaching*, 6(2), 431.

5. Evaluating an effective VC session

Now it it's the time to evaluate an effective VC session. Lucia suggested to Marko some recommendations for an effective VC session. After his VC sessions, Marko thinks he managed quite well using Lucia's tips, but Marco decided to ask his students to evaluate his online sessions. To do that, Marco focused his evaluation on the four points we have analysed in chapter 4: (i) to what extent the communication with students was effective? (ii) how organized were the tasks provided in the VC session and time management? (iii) how went the technological tools along the VC session? (iv) how I did my moderator role as a teacher?

To help us answering these important questions, this chapter focuses on **three main perspectives to evaluate an effective VC session**: (1) self-evaluating teacher performance, (2) evaluating students through the VC, and (3) evaluation tools in the VC.

5.1. Self-evaluating teacher performance

The teachers' evaluation after a VC session should review the performance in terms of the four task:

1. Effective communication: was I a communication expert?
2. Handling tasks and time management: was I a creative designer of tasks?
3. Handling VC tools and technology: was I a master of technology and tools?
4. The moderator role: how good a moderator was I?

The **effective communication** in VC sessions is vital. The core question here is whether the teacher communicated well with students. To what extent I was a communication expert? Remember the KISS formula: "Keep it short and simple!" Plain language and clear wording help students be motivated. Here we have some questions for self-evaluation:

- Did I provide constant, customised, constructive and coherent feedback?
- Did I sum up group discussions?
- Did I transmit knowledge to my students in an interesting way?
- Was I open to students' contributions?
- Did I initiate creative discussions by addressing students personally?

An **adequate handling of tasks and time management** is relevant for the effectiveness of a VC session. To what extent I was a creative designer of tasks? Remember: Make use of technology the best way possible and be creative in designing your tasks. For the evaluation process, it is essential to check if the teacher was able to align the tasks with appropriate tools. Here we have questions for self-evaluation:

- Were the tasks a good means to achieve the learning outcomes?
- Do I know all the VC tools so that I can instruct students on how to complete the tasks?
- Were all the tasks easy to understand and interesting for students?
- Did I manage the time related to the tasks in an appropriate way?

Handling VC tools and technology is also relevant for an effective VC session. For self-evaluation, was I a master of technology & tools? Remember: The task always follows the tools when using technology in virtual teaching. The tool determines if a task can be performed without any difficulties. The ability of the teacher to use the tools and applications successfully contributes to the success of a VC session. Here we have questions for self-evaluation about the technological skills of the teacher:

- Do I know how to use the most important tools?
- Did I use a variety of tools so that the learning process is engaging and comprehensive?
- Were there any tools that students found difficult to use or understand?

As we mentioned in chapter 4, the **moderator role in VC sessions** is also crucial in virtual teaching. For self-evaluation, how good a moderator was I? Remember: Moderating virtual classrooms is more about structure and effective communication than about content. So the first question is whether the teacher moderated the sessions successfully. Other questions that we can use to self-evaluation are as follows:

- Did I instruct students on how to use technological resources and tools?
- Did I explain all tasks clearly?
- How effective was communication?
- Did everyone have a chance to participate?
- How did I include students' contributions in the teaching?
- Did I use meta-communication to structure this process?

5.2. Evaluating students through the Virtual Classroom

In the section 5.1, we have suggested teachers' self-evaluation in terms of the four main dimensions to be an effective VC session. Taking into account the audience of the virtual teaching, the suggestion of Marko to evaluate his performance using students' feedback is a relevant input to improve his performance. Lucia agrees with this idea. Students' perspective helps you get a "bigger picture" of your sessions – if it is high-quality feedback.

Working with new technologies always incorporates some challenges, misunderstandings and feelings of discomfort. In fact, not only teachers struggle with new technologies, students, too, find new tools challenging – and this we need to take into account when asking for feedback (Bigné, Badenes, Ruiz & Andreu, 2018). **Feedback is the means for students to share their views and improve teacher performance.** They should consider the **4 C's: constant, customised, constructive and coherent**. The evaluation of students with these four dimensions is summarized in the following table.

	YES	NO
Constant	I would have needed more support to share my presentation.	I did not get any instruction of how to share my presentation.
Customised	Each student should have the possibility to speak.	Moderation was bad, I did not get a chance to make my point.
Constructive	I would prefer a pre-test so that everybody can check technology.	I do not like this technology, I could not hear you at all.
Coherent	The tool was hard for me to handle because of the many features.	I did not like the whiteboard tool, so it was worth nothing.

According to Blanchard (2015), "Feedback is the breakfast of champions". As Lucia suggested, the **feedback needs to be of high-quality**. Therefore, when fostering personal evaluation skills in the students, you should encourage them to:

- Consider future goals. Current achievements are important, but the best is yet to come if you prepare well in advance.

- Use measurable items. Use indicators that are both quantitative (marks, time spent, number of contributions...) and qualitative (opinions, reflections, etc.)

- Be honest. Stick to reality... If you cheat yourself, you will eventually only be disappointed.

- Focus on themselves. Regardless of whether or not you succeed, do not forget that the one having the sole responsibility is YOU!

5.3. Evaluation tools in the Virtual Classroom

As we discussed in section 5.2, students' feedback is needed to improve teachers' performance. However, using VC, how can this feedback be provided? VC software provides a wide range of possibilities for evaluation. In this section we discuss some of the best alternatives.

- Self-report questionnaires. They can include both, open-ended and closed-end questions. It is easy to answer, its results are easy to tabulate and analyse, and it can be uploaded as a document to the VC.

- Personal online interviews. They allow teachers to analyse students' perceptions through their verbal and non-verbal communication. It can be done in a video conference.

- Group brainstorming. This technique is useful to generate ideas in a short period of time, as well as to identify students' creativity and originality. It can be done in a video conference.

- Personal report. This is a written document in which the students choose the issues they want to address. It can be uploaded to the VC and even shared with other colleagues.

- Interactive quiz. This evaluation tool is entertaining and engaging instrument that allows learning while playing. All participants can take part in a simultaneous vide conference.

These tools can help us to improve our skills in VC. We agree with Marco: "No one is born a master!" We also agree with Marco that "practice makes perfect and this is what virtual teaching is all about: try out new tools and applications and incorporate them into your teaching. If you feel passionate about virtual classrooms, your students will too".

Keep in mind that teaching in virtual classrooms is a reflection of how education has been changing. Virtual classrooms enable students to join classes at any time and from any place.

Technology is rapidly changing the way we think, live, lead, learn and teach. Education is playing an essential role in this transformation process. We need to be prepared for new learning spaces in order to guide students the best way possible – isn't this why we have become teachers in the first place?

Exercise

Create your own feedback test about VC performance

- Which areas would you analyse? (e.g. teacher performance, interface, materials…)
- Which are the questions you will propose (closed-end vs. open-end…)

Activity: evaluation through VC in practice

Imagine that you are in charge of evaluating your students of a blended learning course. Write the outline of the different questions, activities and VC tools you would use in each of these situations:

1) How would you prepare your evaluation through the VC with…?

- ✓ A final written assessment/test
- ✓ Feedback for a group presentation made through the VC

In this exercise you should not focus on the contents of the test, but rather on the way in which this evaluation will be made available for the student and returned to the lecturer through the VC (structure, timing and VC tools used)

2) How would you prepare the evaluation from students to lecturers about the VC software and its use?

In this exercise, you should focus on the content and format of the questions: to identify the relevant points in students' perceptions to know more about and to use the appropriate style to engage with the student and make him feel valuable.

Please, keep in mind that:

- ✓ In the questions for lecturers and VC evaluation, you should ask about contents, proposed activities, the VC interface and communication through it.
- ✓ Pay special attention to the way in which you express the questions and comments: always being positive, constructive and highlighting both the achieved outcomes and the ones yet to be improved.

References

Bigné, E., Badenes, A., Ruiz, C. & Andreu, L. (2018). Virtual Classroom - Teacher skills to promote student engagement, *Journal of Management and Business Education*, 1(2-3), 87-105

Blanchard, K. (January 17, 2015). *Feedback is the breakfast of champions. How We Lead: Conversations on Leadership.* Retrieved from https://howwelead.org/2015/01/07/feedback-is-the-breakfast-of-champions-2/

Glossary

Virtual Classroom: online setting in which classes take place. In this project, it is understood as the video conferencing application which enables participants to communicate and interact via different integrated tools and to share and view materials in one common setting.

Synchronous online conferencing: computer software that allows audio and video communication in a simultaneous manner between two or more participants. There are different software alternatives (e.g. WebEx, Adobe Connect, Zoom…), including some Open Source options (e.g. BigBlueButton).

Self-regulated learning: process by which students take control over their own learning pace. Zimmerman (2001) described this as a "self-directive process through which learners transform their mental abilities into task-related skills", meaning that students become responsible of their own work and achievements in terms of academic performance.

Moderator: New role to be adopted by the Virtual Classroom teacher, in which the teaching focus switches from transmission of knowledge from teacher to student, to the generation of knowledge and skills based on an active interaction and communication between all participants in the teaching process. It draws from Gilly Salmon's concept of "e-moderation".

Feedback: process in which the student and the teacher (or another student), exchange information to improve performance and enhance the weak points. It is understood as an open, two-way and constructive process, in which learners get to know their strengths and obtain insights to enhance their results.

Time management: Applied to learning is the process of planning and allocating the amount of time and effort devoted to the teaching process in order to achieve the most efficient and effective results. From the point of view of the teacher, it refers to the correct organization of the class time to cover all expected learning outcomes, including a planning (pre-class) and evaluation (post-class) stage; for the student, it covers the correct organization of time to complete the proposed tasks at an adequate level.