

Methodology Quick Guide



The Quick Guide is one of the outcomes of the Leonardo da Vinci project (2006-2008) entitled "Communication Technologies and Acquiring Academic and Professional Communication Skills - an Interactive Learning Infrastructure and New Methodology".

It is designed as a tool for videoconferencing skills training in both academic and professional contexts.

1. Introduction*



As classrooms change and become highly developed, multi media environments, video conferencing (VC) extends teachers and students' ability to communicate and collaborate in an interactive classroom environment. But often teachers are traumatised by the idea of going into an electronic environment and teaching a class of busy students, especially in Higher Education. To use the equipment in a video conference suite, teachers do not need to become technical experts, but a brief overview and an understanding of the pedagogical rationale for using the technology can suffice to produce sound teaching practice.

Some trainers believe a thorough understanding of the technology needs to be harnessed to ensure that good quality learning takes place, but we believe that with a little help from technicians, teachers and students can quickly take control of the electronics to be comfortable teaching in the environment to give well thought out appropriate lessons.

Our lessons and courses have been informed by two years of teaching in a video conferencing (VC) environment. We include examples from our experience, where applicable, hoping this will help lower the fear threshold and convince you of the benefits of VC.

** This should be edited to fit venue and target users - culture*

2. Before you start



Become familiar with your VC facilities. Before the first class find out:

Room

- Locate the venue in your institution.
- Determine who controls the booking of the room and VC connection.
- Establish whether you need special permission to use VC equipment and room.
- Establish whether the VC connection is part of a wider network and the ramifications of this.

Equipment

- Familiarise yourself with the equipment.
- Don't be afraid to touch things as most actions can easily be reversed.
- Introduce yourself to the technician responsible for VC and take notes when he demonstrates the equipment.
- Get to know the various telephone numbers for technicians in all venues and keep them close (you will be surprised how reassuring these numbers are).
- Know the booking procedure.
- Know IP addresses - ask the technician what an IP address is, then forget all about it.

3. Starting up !

Before the conference begins take a trip to the VC venue and familiarise yourself with the surroundings. Ask the technician to be there so he/she can help you to feel comfortable using the equipment. Move the furniture, where possible, to make the room as comfortable as your classroom. Start a notebook for VC and write down all important information given by the technician and those in charge of booking procedures, such as phone numbers, email addresses, IP addresses, time zones, etc.

3.1 Booking the VC connection: the official route

Booking procedures will vary across different institutions and your organisation may have a booking procedure, or you may be expected to make connections with your VC partners yourself. The examples provided below show how connections are booked at Aberystwyth University in Wales and Masaryk University in the Czech Republic.

This is what the booking information looks like for Aberystwyth University

Video Conference Suite is booked through the Hugh Owen Library, Penglais Campus

Location: D Floor

JVCS Venue ID:

IP Address: Contact us for this should you require a direct connection (*is-vidconf@aber.ac.uk*)

Booking Address: <http://www.info.aber.ac.uk/vidconf/booking.asap>

ISDN: Only through the JVCS booking service. A number to dial will be supplied on completion of the booking.

Type of use: Teaching/Seminar/Meeting. Layout can be adapted.

Equipment: IP Videoconferencing with networked PC, data projector, interactive whiteboard, DVD and Video recorder, document camera, confidence monitors, radio microphone, translation microphone and headsets via the Welsh Video Network Rhwydwaith system.

Capacity: 20 Seats

Room Telephone Number: (01970 ...

Normal Hours: Library opening hours - please check before booking.

Access: The confirmation e-mail needs to be printed out and shown at the Loans Enquiry Desk to gain access to the studio. You may also be asked to produce some form of identification e.g. library card.

Once you have finished with the studio please inform the Loans Enquiry Desk staff.

This is what the booking information looks like at Masaryk University

Please contact *studovna@rect.muni.cz* to book the VC connection. Please make sure you know the IP address of the contacted partner, the time of the connection and all the information necessary for a successful connection.

Masaryk University Language Centre
Video Conference Suite,

Location: Rector's Office, 5th Floor, Room 555

IP Address: 147.251...

ISDN: Contact *studovna@rect.muni.cz* if you need to connect by ISDN

Type of use: Teaching/Seminar/Meetings/Presentations. Furniture layout can be adapted.

Equipment: IP Videoconferencing with networked PC, data projector, DVD and Video recorder, document camera, radio microphone.

Capacity: 15 Seats

Room Telephone Number: (+42054949 ...

Normal Hours: 7am-6pm (CET/CEST) or other if approved by the Rector's Office staff.

Access: As arranged with the VC suite staff.

Once you have finished with the studio please inform the VC suite staff.

We usually contact the VC technician who helps with the connection. The connection is dialled in with an IP number. This is a number dialled in through the VC equipment which connects one VC venue to another. The IP number looks like this: 123.123.12.123

4. Dealing with Anxiety

It is very important for teachers to feel comfortable in their surroundings. This does not mean you need to know all the intricacies of the VC equipment, but you do need to know how to activate the screens and where to place the touch pad, microphones and most importantly, who to call when the connection doesn't work. All this should be familiar to you before you meet your students.

It is a good idea to have the first VC class in the VC room without any point to point contact. This familiarises students and teachers with the electronic equipment and software without the extra stress of cameras and audio. Let students walk around and make the room theirs by moving furniture, mikes, cameras etc. Let them make notes about good VC practice and etiquette. Later in this session film the students so they will be less shy when they see themselves on a VC screen.

Important reminders for teachers and students

Teacher

If it is your first VC, make sure a technician is present if only to give you confidence.

Ask the technician to demonstrate how the controls and equipment work.

Read the technical advice in the VC room.

If possible, have another (backup) connection open with the other VC venue - e.g. know how to get in touch with each other using Skype or e-mail addresses on a laptop.

Make sure you have mobile phone numbers and landline numbers for your technical support.

Check student familiarity with VC equipment and how it is used.

Be aware that some students may not speak within a VC.

To set classroom protocols first contact should be without students.

Students

First lesson attendance is very important.

Photos and cultural background knowledge are very helpful.

Student should have been in contact through e-mail, blog, forum, LMS, (e.g. Moodle) before a VC session.

All students need to have enough L2 to communicate on a TV or projector screen.

Students need to be aware that their large screen profile/view may initially put them off or make them feel shy.

Students may want to operate the equipment after one or two sessions, which is a good idea as they are usually more familiar with electronics than teachers and quieter students may feel they are participating if they are 'doing something'. The more able can also trouble shoot when problems occur, e.g. ask them to describe what is going on and make it part of the lesson.

Once students have signed-up for a VC class and understand what is involved they should not be encouraged to drop out. But if it is clear they are not comfortable they should not be compelled to continue.

5. Teaching practice



All the teachers who are part of a VC class should be in constant communication. Have a mobile number or email ready to deal with technical problems as soon as they occur. There are times when you can see the participants but not hear them which means you need another form of contact.

The reason for using a VC classroom must be established and discussed with the students. In the case of Masaryk and Aberystwyth universities we established contact mainly to provide intercultural communication for our students. Masaryk University students were almost exclusively from the Czech Republic and Aberystwyth University students were mostly from Asian countries. Both groups found the international input to be very desirable.

6. The classroom



Numbers of students

To facilitate maximum student talking time both in VC sessions and during their preparation classes, we have found that ten students at each point is an optimum for maximum effective communication. When VC classrooms are too large students become bored and quickly lose interest.

Room layout

All participants should be able to see each other (and themselves). Students should feel comfortable with as much classroom normality as possible.

Ability of students

We have found that weaker students are more liable to be inattentive during the VC lesson or to stop coming altogether. We suggest students should be B2 (CEFR) and above, unless you have very small classes and more than one teacher.

The level of English of the Czech students was much higher than that of Aber students, which was initially intimidating for the Aber students. Masaryk students were very helpful and quickly the barriers were lifted and students began emailing and contacting each other.

7. The Class

7.1 Vary activities

Lessons need to be carefully planned to enable optimal learning opportunities. This includes:

- allowing equal individual student input,
- enabling equal airtime for both venues,
- ensuring change of pace for each activity.

This is more difficult within a two dimensional environment as physical movement needs more careful orchestration. Students can be encouraged to work with each other, one side (muted) and then present their findings to the other venue.

7.2 Make eye contact with the camera not the screen

Provide clear guidelines about making eye contact with those in the room and those on the screen (via the camera). Look at the camera not at the screen. Let students take a good look at themselves on screen before the VC takes place. This will help students to adapt to not looking at the screen when talking.

7.3 Turn taking

One of the most important differences between a VC and a face-to-face class is the class dynamic. During a VC, active students are “seen” because they are in the “spotlight”, while the timid or shy are more invisible. For the teacher it is not as easy to engage less active students in point to point activities as it would be during a face-to-face lesson. Therefore it should be made clear from the beginning that teachers and students must encourage everyone to take turns during each interactive activity.

Taking into account feedback from some student groups, it is also important to give participants more and more freedom to “control” the turn taking and the teacher, where possible, should become less active or visible. The more participants interact without the teacher’s intervention the more independent VC users become and the more they perceive turn taking as a natural part of the VC communication.

7.4 Noise Level

It is important from the start to inform students and teachers of the types of noise that can interfere with communication within a VC room. Many of these noises are those that may not be noticed in face-to-face interactions, e.g. tapping a table or clicking a pen.

The microphones in a VC room are very sensitive, which means they not only pick up the sound of the speakers, but also pick up interference from students engaged in side talk. Whispering is magnified through the microphone and often those at the other end can clearly recognise what is being said. It is especially important to stress to students in inter-cultural classes that comments in the language the others do not understand, may be considered rude. As such, during a VC session, only the agreed language of communication should be used.

Ancillary noise (e.g. tapping or rustling paper) in a real classroom tends to be ignored, but unfortunately microphones tend to blend noises together and they cannot distinguish what is interesting from what is not. They magnify all the noises we normally ignore. Participants should be informed that such noises can be very disruptive.

On the other hand, based on our experience we can never eliminate all noise, so we should prepare students for the possibility of “unexpected” reactions from the other end - e.g. outbursts of laughter, shocked faces, outspoken comments, or even disgust. We found the best policy to be explanation: after such a noisy situation the “reacting” end should explain what they heard and through this the “noise” end will understand and learn what to avoid next time. We have found in general that students are polite with each other but initially make intercultural mistakes. Cultural awareness-raising is recommended for all.

7.5 Time

Though the time delay is miniscule compared to a few years ago users should be aware that there is a delay which initially disturbs/interferes with communication. A time delay can work in favour of more pensive (quieter) students but disrupt the flow for many who are used to a face-to-face classroom. Students should allow speakers to finish what they are saying before trying to interrupt.

7.6 Time Zones

Teachers need to know the time differences, including summer/autumn time changes, to be able to arrange exact times of connection that are suitable and acceptable for both ends. Time differences can interfere or change the energy level of the classroom, e.g. if one end begins early in the morning, the students can be still sleepy; or if the connection takes place in the morning at one end, and in the late afternoon or early evening for the other, the evening students may be tired after a day of learning.

Climate differences should also be considered. Similarly, students in warmer climates may have more energy than those from colder zones, or vice versa. Storms and other bad weather can reduce attendance or result in cancelled classes or an inability to connect to VC user.

7.7 Length of sessions

As suggested earlier, VC can be used for many purposes; therefore the length of each session depends on the reason for the session.

a) First sessions with students should be very short as the aim of the VC contact is to familiarise everyone with their surroundings. 20-30 minutes may be adequate to introduce one another, introduce the two or more ends, and introduce VC etiquette and the course overview.

b) Regular session times can be the usual face to face (F2F) classroom sessions (60 minutes, 90 minutes, 120 minutes) but we should point out that many activities take a much longer time to complete in a VC session. We found that the slower communication is due to the time delay, technical issues such as zooming in and out, and changing from camera 1 to PC or to the document camera. These actions take only a few seconds but collectively amount to significant delays.

Some trainers believe 60-90 minutes to be the maximum time students can concentrate. Our experience suggests that with the combination of effective interactive activities, VC students can focus much longer.

8. Continuing issues in course development

8.1 Different semesters

Different universities may have a different system of academic years, divided into semesters or trimesters, with a variety of beginnings and ends, or different national holidays. We recommend that teachers organise their timetable in advance and make sure the course fits all participants. We found that there were solutions for most differences in academic timetables. The following are three of the problems we encountered, which include our solutions.

1) One of the credit bearing modules at Aberystwyth University had set learning outcomes prior to the introduction of a VC class. This meant a reduction in available time to organise a VC. In this module only two or three VC sessions were timetabled into a term. There was some intercommunication during the rest of the term via, for example, email, blog, LMS forums, chats. We would not recommend less than two VC sessions per term as we found cases when problems occurred, for example one of the sessions was cancelled or disrupted and there was little time to fit another session into a tight schedule.

2) When few compatible times could be found for two classes to come together for VC sessions we encouraged students to meet and arrange their own VC timetable during the harmonious parts of the terms (including verifying the teacher's availability).

3) When Aberystwyth and Masaryk universities began to VC we found there were many times when one side did not have scheduled classes. For example, Aberystwyth students usually met every two weeks but during reading week and a longer Easter holiday, when we were not in session, Aberystwyth teachers gave interactive seminars to the students from Masaryk University, who still had classes. This was repeated when Masaryk had no classes without any imbalances in teaching times.

8.2 Feedback

Feedback is essential for the success of any course and particularly for a new course. Feedback can be used for many purposes and in VC courses there are many forms of feedback. The following is how we provide feedback to the students.

Recording

Recorded sessions helped students to become familiar with seeing themselves on a screen. Students watched their own performances and realised their strong and weak points. Weaknesses included looking at the screen instead of the camera, mumbling instead of speaking clearly, or clicking a pen throughout a presentation. Filming can be done either via VCR or DVD recording and then put online via streaming server, or simply by digital camera and then recorded onto a CD/DVD or put online. Students need access to the recording as soon as possible after the session. During non-VC sessions teachers identified examples of good practice, and gave feedback on language and non-verbal communication.

Students feedback after each session

There should be ample space to facilitate student(s) to student(s) discussion via forum, blog, LMS, chat, email or by text. Sometimes, especially on courses where students meet only during VC sessions, they would like more opportunities to communicate. However, there is no time or they are shy. The forum space makes it possible to ask questions, comment on topics, discuss methodology, or 'chat'.

Feedback forms

Students complete university feedback forms at the end of each VC course. The question of whether feedback information is shared between teachers needs to be negotiated in advance. For example, the type of feedback to be used at the end of the course should be made clear in the overview.

8.3 Evaluation

Each venue will have different systems of aims and methods for evaluating students on their courses. Evaluation could have some input from both sides when it comes to mixed point presentations with both teachers evaluating the students performance they have observed, but with the 'home' teacher still writing the final evaluation for his/her students.

9. Technical issues

9.1 Unusual occurrences

A VC connection is hardly ever trouble free, therefore 5-15 flexible minutes should be allowed for unexpected occurrences, e.g. technical problems of any kind:

- failed connection
- static interference
- incompatible computers (with VC interface)
- disruptive latecomers
- activity that needs rearrangement of the classroom
- activity that needs excessive zooming
- changing from cameras to PCs and other devices

For a 90 minute session we usually plan our activities for 80 minutes, allowing time to deal with unusual occurrences without being stressed and subsequently failing to achieve the set aims of the sessions.

N.B. Always have a non-VC lesson prepared for times when all connections fail and the hook-up is aborted.

9.2 Connection

We recommend that the venue with the more sophisticated technical support should initiate the link so in the event that a problem occurs there is a higher probability that it can be fixed (e.g Aberystwyth has the support of the Welsh Video Network, but such a system does not exist in the Czech Republic therefore Aber calls Masaryk University). Both ends should have all contact details and understand the method of calling. For self-assurance, have the following contact details available in all video conferences:

- point to point contact telephone numbers
- teacher to teacher mobile phone numbers
- teacher email addresses

Our experience is that the point to point connection is usually the most reliable part of the whole communication process. Masaryk University reported that in their three year experience of VC classes, with two or three sessions per week between various institutions from Europe and the US, they had only one disconnected session due to technical reasons.

9.3 Sound

To ensure audio quality, it is always good to set up two microphones; e.g. one on the table, a portable one, or the ceiling type. Using a ceiling model though means students need to control their verbal behaviour more than with a table mike. A portable microphone is recommended when one voice needs to be heard above the others. For instance in situations where students discuss an issue in groups and the teacher needs to clarify a point, a portable mike is needed to transmit the message clearly to both ends. When they are more comfortable with the VC environment, a portable microphone can be put closer to shyer students or those with weaker voices.

An essential function of all VC facilities is “muting the mike”. This can be useful when group work needs to be organised on one side of the connection before collaborating. Activities can be arranged with a muted mike for one side to prepare something for the other side to work with when the mike is reconnected.

Check all connections when there is no sound or when there is excessive static between venues as it may be a loose cord or disconnected mike. Finally, have a paper and pen on hand in case you need to communicate, ‘our mike is not working!’.

9.4 Picture

Teachers should know how to operate the camera. To zoom in and out, and pan right to left; to switch from one camera to another; to show the computer screen; an electronic white board or an overhead projector. Switching from one electronic device to another takes time. Pictures often freeze for a second so prepare students for delays. After a little time students accept that sometimes the connection freezes or jerks but it is good practice to remind the other end when they are not visible. Usually it is because a teacher has not switched from a device back to camera. Students usually continue to communicate until problems are solved.

Sometimes there can be problems with the contrast. Teachers should know how to adjust this so ask the technician to help you find the controls. When you first send a PC image to the other side it is our advice to check the technicalities with the technician as there are a variety of small things, e.g. compatible resolution on both sides, which can interfere with communication. The same is true for the document camera and especially the electronic white board.

9.4 Picture (cont'd)

There are three ways of using a PC during a VC session.

When one side wants to use a Power Point, it can be sent straight across via the VC screen.

If this is not possible, Power Point, pictures, videos or any other materials can be emailed in advance to the other end and both ends can show it simultaneously.

If during the VC session you discover it is impossible to send a PC image to the other side you can put the camera close enough to the PC screen so both ends can view the presentation. Use only in emergencies as it may not be readable or the PC screen may reflect the light(s) in the room and the students at both ends may have difficulties reading or following the flow.

10. End of VC contact



Keep an eye on the time as it is extremely disconcerting to be 'cut off' mid sentence.

Allow five minutes for leave-taking.

Recognise the end of a session ('We have 5 minutes left...')

Discuss what will be happening between sessions, e.g. meeting and exchanging information on a moodle, forum, blog or by e-mail.

Set homework, group activities, next session overviews, etc.

Make sure students on both sides formally close the point to point session.

Say goodbye formally -we usually wave.

Mute the mike immediately to make sure it is over at both ends

Disconnect the visuals

Close your own classroom session

Check all the equipment is turned off in the VC room

Check it is tidy

Inform the technicians or help desk so they can lock-up

References and Acknowledgments

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Notes



For more information about the project
and other materials see the project website at:
<http://invite.lingua.muni.cz>

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