Top tips on how to improve your internet connectivity

For Remote Teaching, Learning and Working, video calling can be essential to get your work done and have a positive experience. However, when you have low or variable internet connectivity, video calling can be frustrating and ineffective. There are some simple ways you can check to see if your connection is fast enough to participate in a video call.

Before joining a video meeting or lecture, check and improve your internet connectivity by following these seven tips:

Tip one - *Check your speed*

To understand and fix a potential internet speed problem, you will first need to understand how much speed you're actually getting. You can find a speedtest online, an example is the one of google, when you go to google.com and type in "speedtest" you will get an internet speedtest at the top of your screen, execute that test (it will take about 30 seconds, so wait for it to finish). It will then tell you if your speed should be good enough to stream and video call.

Ideally, you will want to run your speed test during the hours you would normally be using your internet. Be aware that data intensive activities of you and people in your household have an effect on the measured internet speed.

Note that per tool the requirements can be different. Some tools (like Kaltura Live Room) provide their own speed test and requirements. At the end of this document you can find tips per Leiden University supported tool.

Tip two - *Connect your PC to your modem*

Wireless internet (WiFi) is often slower than if you connect your computer or laptop directly with your modem. In a lot of computers you can plug in an ethernet cable directly from your modem to your laptop or computer. If you don't have an ethernet access point on your PC you can buy an adapter for this, which you can for example plug into your USB portal. To find this search for "USB to ethernet adaptor"

Tip three - *Align your internet needs with the people in your household*

The more devices that are running, the slower your internet speed will be. If for example somebody in your household is gaming or video calling, this can significantly slow your internet speed. So align with them when you are attending or conducting online classes or video meetings, so they are aware of your internet needs at that time.

Tip four - *Get the most out of your internet connectivity*

The following tricks can help you get the most out of your internet connectivity:
1. If you cannot connect to your Modem directly **sit close to your modem**. The closer you are the stronger your signal. Wifi amplifiers can improve your wifi in rooms that are far away from your modem.
2. **Reset your modem frequently.** Your modem holds memory and background processes and caches information. Reset helps clear that, and after a reset, it will

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reconnect to various data channels, often resulting in landing you on a more efficient, less-crowded channel. How to do this? Turn off your modem for one minute and turn it on again.

Tip five - *Check and update your hardware*

Old equipment could be the direct cause for slow internet connection. This refers to old wireless router or modem, as an old wireless router, for example, may not be using the newest wifi standards.

But this also refers to outdated computers, laptops, mobile devices, or other equipment. Hardware requirements per Leiden University Supported tool are noted at the end of this document.

Tip six - *Healthy habits to improve the performance of your remote meeting*

These healthy habits can improve your remote teaching, learning and working, experience:
1. **Regularly restart your PC**, if you don't your start-up disks can get full and have an effect on the performance of your PC.
2. **Close of all other browsers and apps** when attending or conducting an online meeting or class. Too many open apps will slow down your computer while you're on a video call. This is because the call itself requires a lot of resources.
3. **Test when you can**. Before you start or host a video call, make sure to test out the functionalities you want to use. For example see if both your video and audio devices are connected and working properly.
4. **Do you need video?** If video is not needed, turn it off, and make agreements on this in your meeting, as video requires a lot of bandwidth. You can for example agree that only when you speak you turn on your video.

Tip seven - *upgrade your plan*

If all of the above tips did not improve your internet connectivity you can see if it is possible to upgrade your internet. Look at the options available from your internet provider (and other providers) and upgrade your plan to one with higher capacity.

My internet is still not good enough to attend or host an online meeting or class, what do I do now?

If you are a teacher
Teaching: See if other ways of teaching could replace live online classes, For example, pre-record your class using a powerpoint with voice over, or use Kaltura Capture.
It could also be that your internet is fine to teach online but your students' connectivity does not allow them to join, an possible option then would be to record the class so you have the option to share the recoded class with (selected) students later.

Meetings: Ask if video is really needed for online meetings? As turning that off can give a better connection, or calling in by phone can be an option. For more information and tips on remote working go to https://www.staff.universiteitleiden.nl/vr/working-from-home

If you are a student
Notify your teacher or student advisor about your internet connectivity problems.

Tips per Leiden University supported tool:

1. **Kaltura Live Room**
   a. Do a quick tech check: https://smart.newrow.com/room/testPage/
   b. Check if you have the correct system requirements: https://support.newrow.com/en/article/newrow-smart-recommended-system-requirements
   c. Check the internet requirement and do the test: https://blogs.library.leiden.edu/fb-video/docs/manual-videoportal-university-leiden/14-kaltura-live-room/troubleshooting/#minimum-internet-requirements
   d. Find guidelines on teaching with Kaltura Live room here: https://teachingsupport.universiteitleiden.nl/articles/kaltura-live-room

2. **MSTeams**
   a. To have all functionalities of MSTeams, downloading the MSTeams app is advised.
   b. Check if you have the correct system requirements for the MSTeams app: https://docs.microsoft.com/en-us/microsoftteams/hardware-requirements-for-the-teams-app
   c. Find guidelines on MSTeams here: https://www.staff.universiteitleiden.nl/vr/working-from-home/working-with-teams

3. **Skype for Business.**
   a. Find more information on skype for business here: https://www.staff.universiteitleiden.nl/ict/ict-workplace/software-and-collaboration-tools/video-calls-and-e-mail

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