

# Virtual Exchange Toolkit for Teachers

## U.S. Department of State Bureau of Educational and Cultural Affairs



*Do you want to connect your classroom with other classrooms around the world, using technology as a tool to enhance students' educational and cross-cultural experience? Do you want your students to engage with their counterparts on projects that promote tolerance, mutual understanding, and collaboration to solve shared challenges? Participating in a virtual exchange creates opportunities for students to learn from one another, whether meeting for the first time online or sustaining relationships made in-person. This toolkit will provide some guidelines and principles to help you design and execute a virtual exchange, as well as some tips for technical troubleshooting.*



### What is a virtual exchange?

Generally speaking, a virtual exchange is a tech-enabled exchange program. While virtual exchanges are still evolving, a person-to-person connection is at the heart of all exchange programs—whether virtual, in-person, or a blend of both.

Exchanges make an impact because they are personal, immersive, and sustained, which differentiates them from a one-time webinar. A virtual exchange has an arc with a beginning, middle, and end. In a classroom-to-classroom virtual exchange that is several months long, a common model, the exchange is built and centered around the students,

who work together on a collaborative project. The NGO iEarn identifies 5 Steps to Success for classroom-to-classroom exchanges: 1) Identify a Broad Theme for a Global Project; 2) Plan for a Collaborative Final Project; 3) Prepare and Practice Online Dialogue with Students; 4) Spend Time Building Relationships; and 5) Engage Local and Global Communities.

### What do virtual exchanges look like?

Virtual exchanges come in many shapes and sizes depending on your goals, audience, technical capacity, and subject matter. The program formats and technology platforms can range from informal discussions via Google Hangout, to more complex and formal online presentations and Q&A sessions between a virtual speaker and a large audience via, for example, Watchitoo. Other platforms include Skype, Adobe Connect, YouTube, ooVoo, Ustream, Livestream, and Zoom.

Virtual exchanges do not have to be live-streamed. Many teachers use email, text chats on social media, and even phone calls to supplement live-streaming, or to bridge large differences in time zones. You do not have to have high Internet bandwidth to build a virtual exchange. The important thing is to tailor the exchange to the students, rather than attempting to tailor the students to the technology.



## How can I get started in designing and planning a virtual exchange?

The process of creating a virtual exchange can be relatively straightforward and simple or as complex and time-consuming as planning a whole course, mostly depending on the duration of the exchange. If you've never done a virtual exchange before, you might want to start with a three-lesson arc. Evaluate what worked and what didn't, and then build from there. Of course you'll be coordinating closely with the teacher at the other end of the exchange. Especially if he or she is from another culture, you may want to discuss teaching philosophies and styles as you begin to work together.

Note that students' attention spans will be shorter for a virtual engagement than they may be in the classroom. Plan for interactions that are about 45 minutes long.

Some of the classes should be in small-group format with a group size of no larger than five so that as many students as possible get a chance to interact directly. One way to do this is to use a computer lab so that you can monitor the groups. You'll also want to work with students to establish ground rules regarding respectful communication. Many teachers avoid one-on-one sessions because of concerns over, for example, bullying, but you know what will work best in your situation.

Your exchange will have a more lasting impact if it goes beyond talk to action. We recommend that you design your exchange so that students create and execute a joint project together that each group will carry out separately. In comparing the process and the results, they will have some of their richest conversations. You'll also want to have some sort of culminating event, whether it's a virtual party, an awards ceremony, or something similar.

## Technical Tips

If you have designed an exchange that will use two-way video, make sure you test your connection before starting the exchange. The ideal time to test would be one week before at the time of the exchange, since it will most closely match what you can expect on the big day. And always have a backup plan, even if it's just a phone at the ready. Also, make sure you have a strong hard Internet connection, ideally via Ethernet rather than wi-fi for more stability. Also, make sure that the microphone is only on for the person who is currently speaking. All other microphones for participants should be muted. This step will eliminate feedback and greatly increase sound quality.



## Technical Troubleshooting Cheat Sheet

Virtual exchange programs are a challenging blend of audio, video, internet, and technology troubleshooting. Two “rules of thumb” you may find helpful are eliminating variables, and working your way backwards from the problem.

**Eliminating variables** requires looking at all of the possible factors that could influence your problem and testing each one. By eliminating all of the variables that are not influencing your problem, you also simplify the set of solutions available.

**Working your way backwards from the problem** involves reviewing the cause and effect chain. That is, returning to each step along your process of connecting cables, turning switches on, accessing internet, and running your program. Only you can know the particular process and variables at play with your program, but we have a list of general questions and tips to help you.



## General Check List and Questions:

### Troubleshooting for Computer & Internet Access

- Is everything turned on? Check every piece of equipment.
- Are the equipment and computer charged and/or plugged in?
- Are all of the cables connected and plugged in tightly? Follow each cord.
- Have you tried connecting from another computer?
- Are you connected to the internet?
- Are you accessing the correct URL/website link?
- Have you tried using a different web browser? Chrome, Safari, Firefox, and IE may work differently for you, depending on the platform you use.
- Have you tried refreshing the web page?
- Have you disabled your browser pop-up blocker for the particular website or application?
- Is there a system firewall blocking your website?
- Have you cleared the browser's cache?
- Do you have the latest version of Adobe Flash, Java, etc.?
- Have you downloaded and installed all necessary software or application plug-ins?
- Are you using the most updated version of your browser?
- Have you closed all other programs, applications, or processes running in the background that may slow your connection or your computer?
- Do you have any other programs running that use your webcam and mic and might interfere, such as Skype?

## Troubleshooting for Audio and Video

- Is an audio or video problem being experienced by all users, or only a problem for one particular user?
- If a particular user or counterpart is having difficulty with the audio, ask:
  - If the participant's speakers are unmuted, turned on, and turned up,
  - If the participant has another program operating that could steal audio, or
  - If the participant can check his/her system preference settings AND those of the online platform being used. Sometimes having different settings in each location can create a clash.
- Are the speakers turned on and volume up?
- If your device connection or sound keeps dropping out, then you may have a bad cable. Try replacing it with a different cable if one is available.
- If your microphone requires batteries (such as wireless mics), are they new batteries? Try changing them.
- Is the microphone too far away from the audio source?
- Is the microphone too close to the audio source?
- Do you need external speakers to amplify audio?
- Are all cell phones in the vicinity turned off?
- Is there a piece of clothing or jewelry interfering with the audio source/microphone?
- If you have a USB microphone plugged into your computer, did you try restarting the computer?
- Is the USB microphone selected as your input in the virtual webchat room settings and computer system preferences?
- Is your webcam or video camera turned on, and are all of the cords securely plugged in?

- Is your camera recognized on the computer AND within the virtual webchat platform?
- If the video is buffering and too slow:
  - Have you tried adjusting your video quality by right-clicking the video player and picking a lower resolution?
  - Close all other browser tabs, websites, and video/audio players to ensure a faster speed.

### Remember:

1. Always allow ample time for testing and setup beforehand. Be ready at least an hour before the live event.
2. Always test the microphones before you begin ("Testing, check 1, 2, 3...").
3. Relax. Even if there are a few technical bumps, the students will remember the exchange itself rather than what happened with the microphone.