A Guide to Hybrid Classrooms

Centre for Learning Enhancement And Research &

Information Technology Services Centre

The Chinese University of Hong Kong

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Introduction

- Given the current development of the pandemic, it is likely that some courses will be taught in a "hybrid mode" (some students are physically present, while the rest joins the class remotely via a videoconferencing (vc) tool. It is expected that all students undergo the same combination of online and in-person activities together). You may need to conduct hybrid classrooms if you encounter the following situations:
  - Some non-local students may not be able to come back due to travelling restrictions
  - Some students may need to practice self-isolation/ quarantine if they become close contacts of confirmed COVID-19 cases

- This guide aims to present various considerations and potential approaches for configuring a typical classroom for hybrid learning. **The idea is NOT to provide a perfect solution to every possible situations**, but to suggest practical approaches to teach effectively using the traditional classroom space and the currently available equipment.

General suggestions

- <u>Identify your needs</u>: Consider what kind of learning experience you want to create for both in-person and remote students. The set-ups vary widely based on your needs.

- <u>Start simple</u>: Managing interactions in hybrid classrooms is a challenge, especially if you are not very comfortable with technology or do not have extra manpower to assist you. Try to do something simple first to get familiar with the new teaching approach before doing anything ambitious.

- <u>Enlist help</u>: You may pay less attention on what is happening in the virtual meeting while you are talking and interacting with in-person students. That is why remote students may feel neglected and lapse into a passive mode. Therefore, we highly recommend that you enlist your TA or in-person students to monitor the virtual meeting for you. You can also consider hiring student helpers via the University's [Student Helper Engagement Scheme](). Go to Page 7 to see how they can help you in hybrid classrooms.

General suggestions

- <u>Learn your tools</u>: Go to the [AVSU website](#) or the [RES website](#) to check what equipment is provided in the classroom and its setting. Check out the [AV Equipment User's Guide](#) to learn how to use the classroom equipment. Also visit the [eLearning@CUHK](#) website to get the latest updates of eLearning advice and strategies. If possible, visit the site beforehand so that you have a clearer picture of how the equipment (camera, microphone, etc.) can be set up.

- <u>Run a trial</u>: Running a trial helps settle potential problems you may face ahead of the actual lessons. Teachers can arrange a time with involved helpers e.g. class representatives or TAs to try out the equipment/ control panel in a physical classroom first.

- <u>Leave time for set-up</u>: Setting up for a hybrid class takes time. If possible, go to the classroom at least 15 minutes before class time for set-up.

General suggestions

- Communicate with students: Communicate with students before class about the equipment they need to prepare and what they can expect to experience. Listen to their concerns and respond appropriately. To further improve the learning experience, provide enough channels (e.g. WhatsApp, e-mail) to solicit student responses from both in-person and remote students during and after class.

- Record your class: Some students may not be able to attend the live sessions (e.g. students who are in a different time zone). Try to record your lessons and put them on a learning platform so that they don't miss out. If you concern about copyright and data privacy, restricted access to only a few students with genuine need is a possible option.

- Take attendance: To help teachers monitor students' seating in the classrom for pandemic control purpose, we introduced a new "attendance-taking" function on uReply. Please check out the user guide and the video for more details.

- Keep social distancing: Try to avoid sharing equipment (e.g. using the same wireless microphone) and asking students to sit close together.

Supporting roles in hybrid classrooms

Teaching assistants can perform two major functions during the lesson:

- Technical and monitoring support
    - Manage the equipment (e.g. camera, tripod, microphone) and make sure they function normally
    - Attend the virtual meeting to ensure that remote students can see and hear the teacher and the teaching materials clearly
    - Monitor the virtual meeting's chat box to see if remote students are experiencing technical problems and offer help when needed
    - Ensure that the lesson is recorded properly
    - Provide appropriate support to students with special educational needs. We suggest that teachers and support staff closely communicate with the counsellors at the Wellness and Counselling Centre (WACC) to address special needs of a specific student

- Facilitating interaction and engagement
    - Monitor the virtual meeting to see if remote students "raise hand" or ask questions in the chat box. Repeat the questions as appropriate
    - Set up breakout rooms, polls and other online learning activities in the virtual meeting

If you do not have a teaching assistant, you may also enlist in-person students to perform some of the above tasks. To limit their burden, you may designate a very specific role to them (e.g. one student to be a "cameraman", one student to be a "chat monitor").

Basic and advanced requirements – "see", "hear" and "communicate"

- To provide a reasonable learning experience for all learners, the basic requirements listed on the following page must be met. The advanced requirements are optional.

- In short, if you are new to hybrid classrooms, or less comfortable with technology, or you don't have extra devices or assistants, it is better to aim for the basic requirements. You may try to meet the advanced requirements and conduct interactive activities when you are confident in doing so and you have enlisted enough help.

# Basic and advanced requirements – "see", "hear" and "communicate"

	Basic requirements (See Page 10-14 for details of the basic model)	Advanced requirements
See	• Remote students must be able to see the teaching materials • Allowing remote students to see the teacher is preferable	• Remote students can see in-person students in the classroom, in addition to seeing the teacher and teaching materials. (See Page 15-16)
Hear	• Remote students must be able to clearly hear the spoken voice of the teacher, even when he/she moves around the classroom	
Communicate	• Remote students must be able to communicate with the teacher to ask and answer questions	• Teacher, remote students and in-person students can communicate with each other using online tools (e.g. uReply, polls, etc). (See Page 17)

The basic model

What I need:	How to set up?
• Classroom computer and the webcam connected to the classroom computer* • Classroom microphone^ • Projector + screen *If you use your laptop, make sure it is connected to the classroom's Central Control System properly (e.g. HDMI/ VGA input) ^If you prefer to use a private microphone, learn the connection steps [here](#)	1. Use the vc of your choice and start a virtual meeting with a computer 2. Turn on the camera 3. Join in with computer audio and turn on the microphone 4. Mute remote students to avoid disturbance but allow them to unmute themselves if you want them to voice out whenever they encounter a problem or they have any questions 5. Share the computer's screen and project the computer image on the screen as usual 6. Ask your assistants to monitor the virtual meeting and the vc's chat box. Pause regularly to ask the assistants to repeat the questions in the chat box 7. When in-person students speak or ask a question, repeat/ summarize what they said so that remote students can follow

The basic model: What if I need to move around the classroom?

- Consider using a mobile device (e.g. your mobile phone) or an additional webcam to capture yourself, if showing remote students what you are doing is important. The following pictures show two set-up examples. See Page 15 to learn more about the set-up of example 1.

- It is better to have a supporting staff to pan the camera while you move, so the video looks more natural. If not, set up the camera using a tripod to capture a wide shot of the stage/ classroom.

- Remember to join in the virtual meeting with a wireless/ handheld microphone.
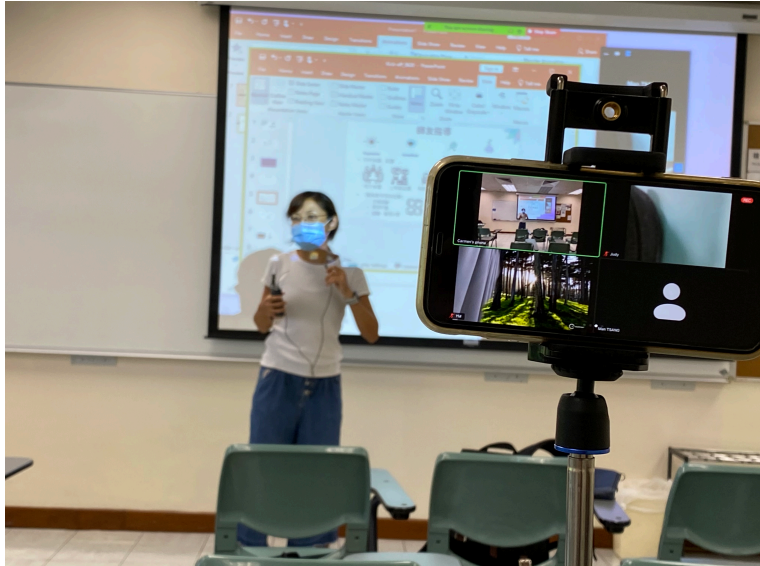
Example 1: Use a mobile phone to join the virtual meeting as an extra camera

Example 2: Use an additional webcam to capture yourself. You should connect the webcam to the computer and choose this as the camera source in the virtual meeting.
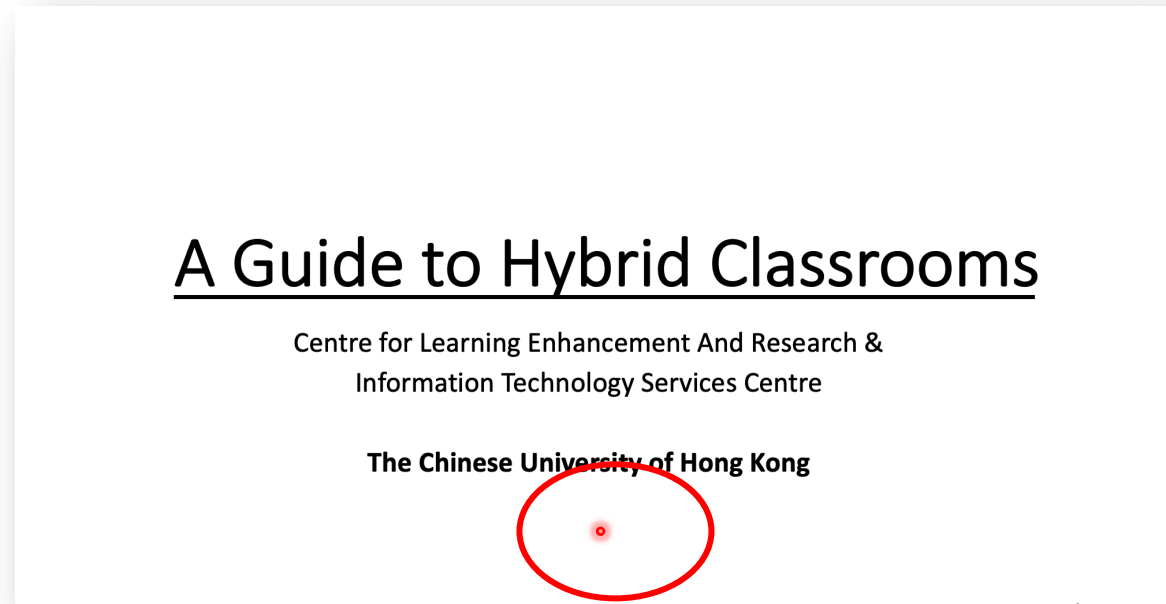
The basic model: How can I keep track of the virtual meeting when I am presenting a PPT?

- When presenting a PPT in full screen, the vc's windows (chat box and thumbnails) may be hidden. You can go to the vc's main panel and turn them back on. However, they will block some of the content of the PPT (just like the top picture).

- To avoid the problem, you can show the PPT by individual window instead (See the bottom picture). In this way, the windows will not block the PPT if you place them properly. Here are the steps: Open the PPT > Go to the "Slide Show" tab > Click "Set Up Slide Show" > Click "Browse by Individual (Window)".

- In fact, it is difficult to look after the virtual meeting if there is only one monitor. If possible, bring a laptop/ tablet and use it as an additional monitor.
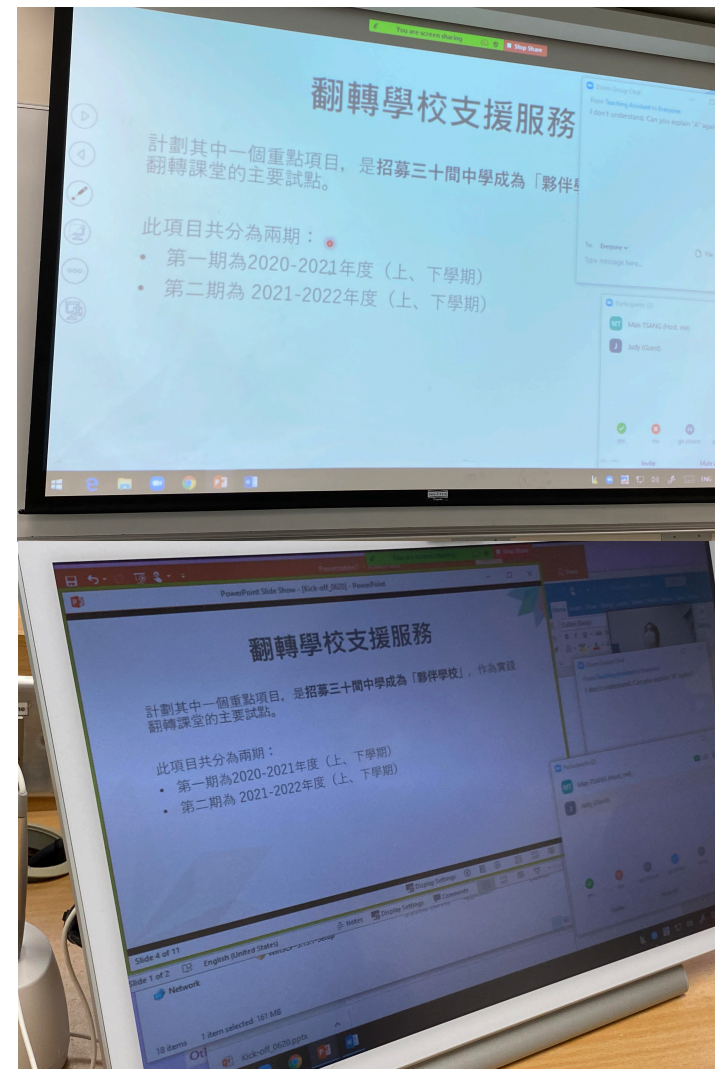
The basic mode: I often use a laser pointer while I am presenting. How can I do it in hybrid classrooms?
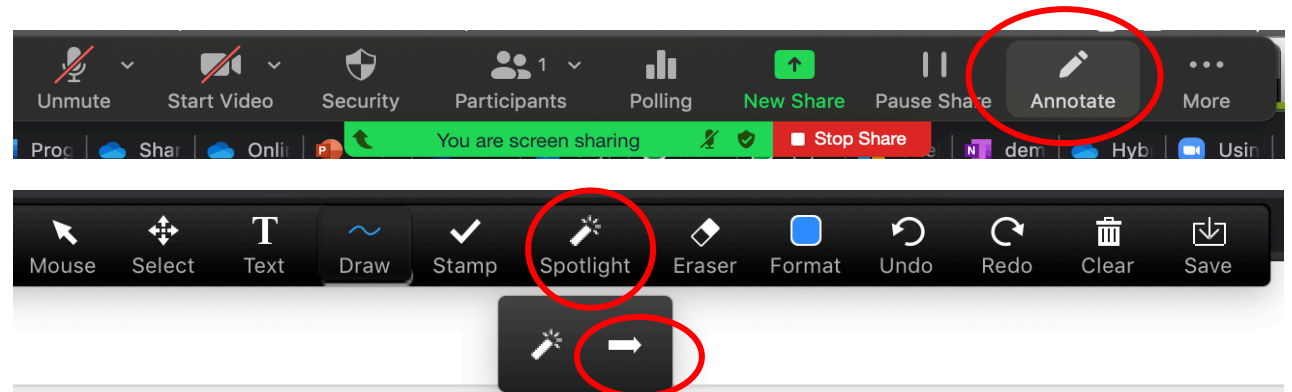
- Both PowerPoint and Zoom has a built-in feature that works as or similar to a laser pointer.

- In PowerPoint, you can turn your mouse cursor into a laser pointer by following the steps [here](#).

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The basic mode: I often use a laser pointer while I am presenting. How can I do it in hybrid classrooms?

While in Zoom, an annotation tool called "Spotlight" works similarly to a laser pointer. Below shows the steps:

- When sharing screen, click "Annotation" on the control panel.

- Choose the arrow under "Spotlight".

- Your mouse pointer will then be displayed as a small arrow.

- Every time you click on the screen, an arrow will be shown with your Zoom's username. Each subsequent click will remove the previous arrow so that students will know where you are pointing at.

Advanced: Remote students to see in-person students

- When conducting interactive activities, showing what is happening in the classroom and their classmates may make remote students feel more inclusive. However, it may also create a burden to them because there may be too many "screens" to look at.

- If the lessons are recorded, it is better to obtain consent from in-person students.

What I need?	How to set up?
- The teacher's mobile device that has a built-in camera (e.g. mobile phone) - Tripod	1. Set up a mobile device to use as a camera 2. Fix the mobile device in a tripod to capture the wide shot of the classroom if you don't have an assistant; or ask a supporting staff to manage the device 3. Open the vc app on the mobile device and join the virtual meeting* 4. Turn on the camera on the mobile device 5. To avoid audio feedback, remember to turn this device into silent mode *If your virtual meeting does not require authenticated sign-in, you can simply join in as a visitor. If it requires authenticated sign-in, you should use another account to join the meeting. Ask your supporting staff/ student to join the meeting using their account. Or, contact ITSC to apply for an additional Zoom account in advance. To apply, see here for a department/project account and here for an external user account.

Advanced: Remote students to see in-person students

A mobile phone is set up to capture in-person students

What will be shown in remote students' screen when the camera is spotlighted

# Advanced: Teacher, remote students and in-person students to communicate with each other using online tools

- Using the vc's built-in tools such as "Poll" and "Chat" is the easiest way to facilitate interaction between two groups of students as it doesn't require extra equipment and too many configurations.

- Ask in-person students to join the virtual meeting as usual to interact with other students. Remind them to mute themselves to avoid audio feedback. Ask them to turn off the camera if you concern about connection speed.

- If having in-person students in the virtual meeting is difficult, you can also use other classroom interaction tools such as uReply to engage students. Learn more about uReply [here].

Active learning activities: Problem solving with annotation

- When you annotate a problem solution, you invite students to get involved in the problem-solving process too. However, remote students cannot see the steps clearly if you write on a classroom's whiteboard.

- Vc tool such as Zoom has a built-in whiteboard. You can draw using a mouse or the classroom's writing panel.
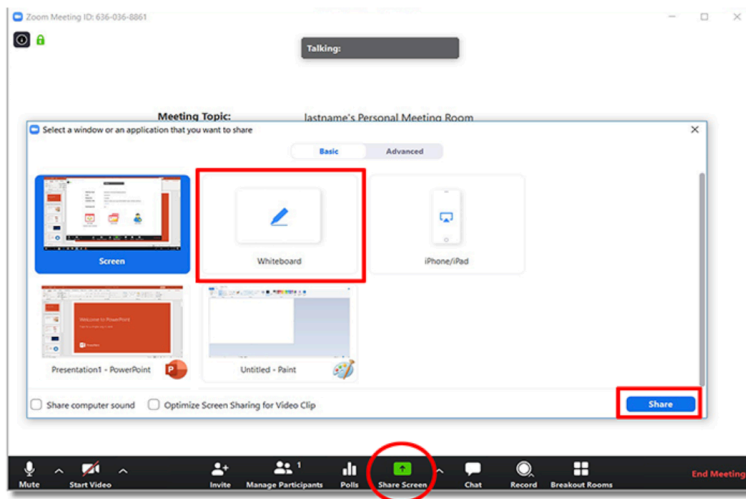

Click "Share Screen" and select "Whiteboard"
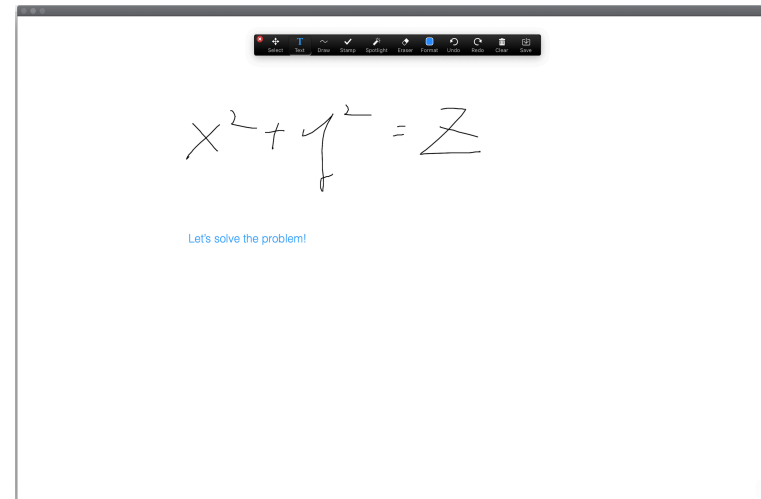
You can now draw or type on the Whiteboard

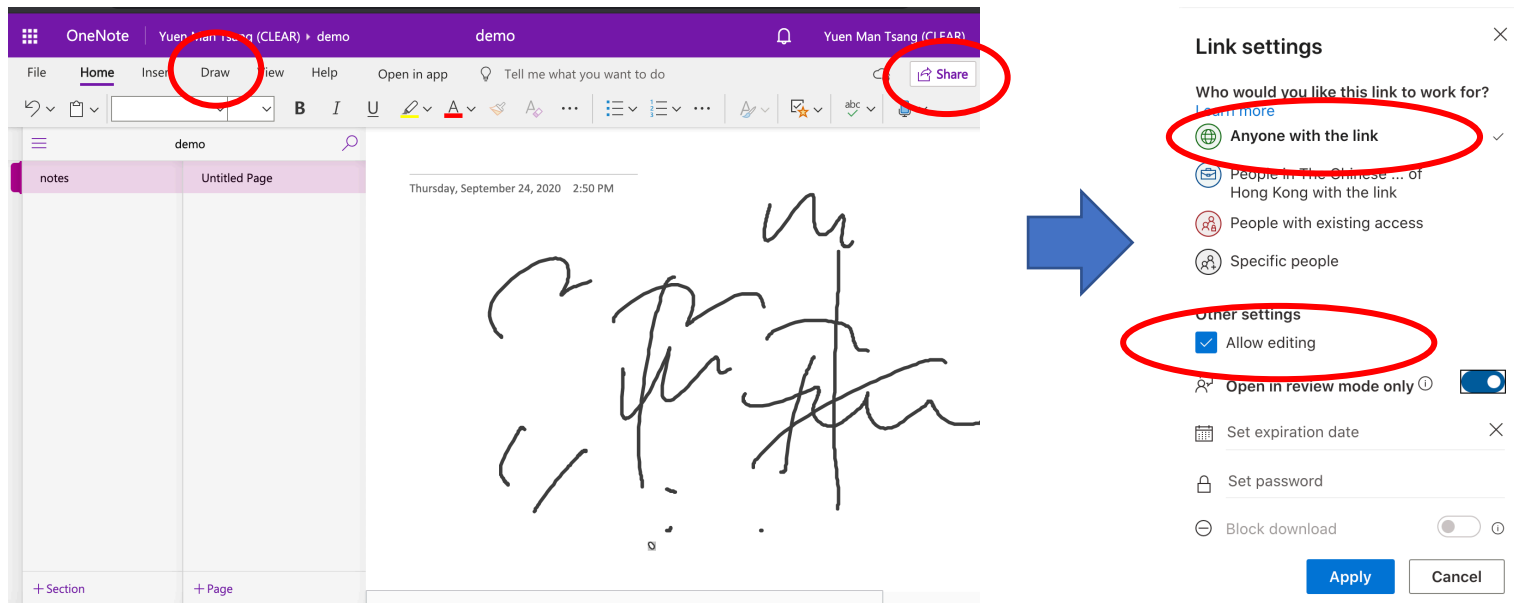# Active learning activities: Problem solving with annotation

- If you just want to make a quick annotation on the slides you are presenting, you can do it either with the built-in annotation feature in Zoom or PowerPoint.

- In Zoom, annotation tools are available when sharing screen: click "Annotation" on the control panel to access the tools (see the annotation panel below). Detailed instructions can be found in here.
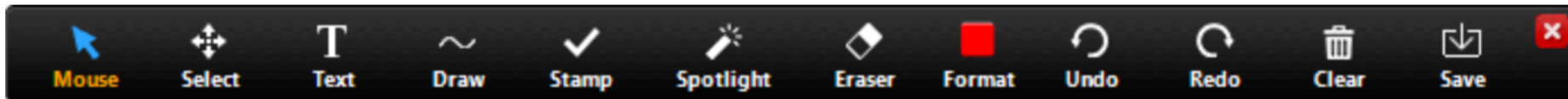
- In PowerPoint, annotation is available when you are showing the slides. Detailed instructions please find here.

- If you do not wish to switch between applications to make a quick note, you can simply add a new slide in your PowerPoint and let it serve as a whiteboard.

Active learning activities: Problem solving with annotation

- You can also use Microsoft OneNote to show your handwriting. It creates smoother strokes, and the note can be made available for students to collaborate on when it is shared.


Apply sharing setting as you desired. You can also create a shareable to all and editable link for students to collaborate on OneNote. It works the same as using Microsoft Word for group work.

Active learning activities: Problem solving with annotation

- You can also use a mobile phone as a visualizer. The following pictures show a set-up example.

Hold your phone with a tripod; adjust the camera to capture the document you would like to show
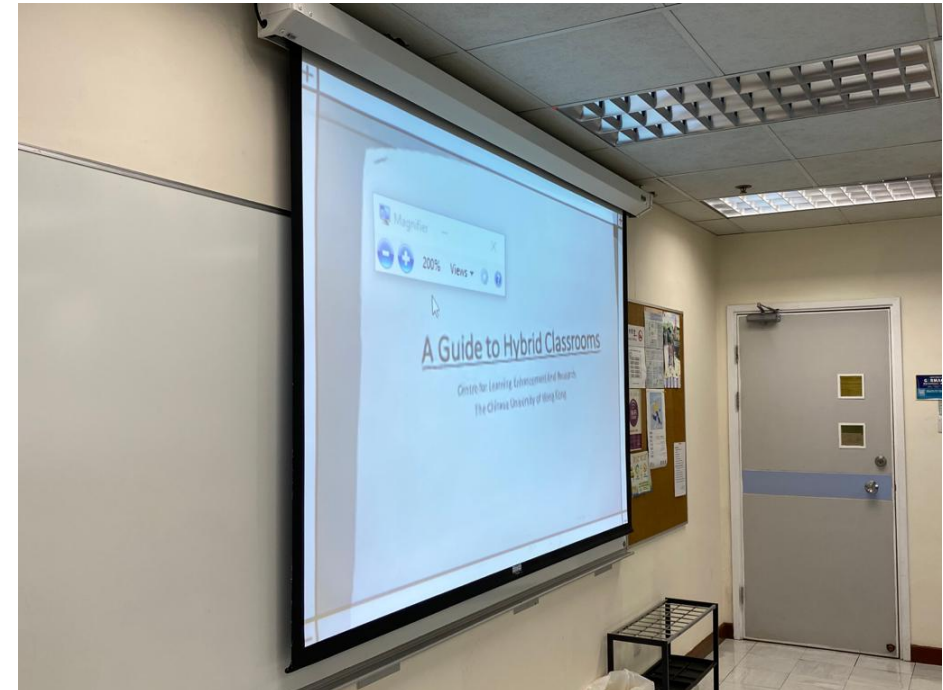
In Zoom, spotlight the view of your phone

Active learning activities: Small group discussion/ group work

- Separating in-person and remote students requires less work. You only need to create various breakout rooms for remote students and ask in-person students to form groups by themselves.

- If it is necessary to mix two groups of students, here are two possible ways for facilitation. The first option is easier to administer, but having multiple devices joining the same virtual meeting in a classroom may cause serious audio feedback unless everyone has their head-set on. The second option can avoid the audio feedback problem, but the teacher may need to re-admit remote students after the activity.

| (1) All students join the virtual meeting	(2) Students use a platform they are familiar with to host the discussion
[remote students]: Stay in the same meeting. [in-person students] All groupmates join the meeting with a headset; or select a representative to join the meeting and other members sit near the device to speak. [teacher/ support staff] Create breakout rooms manually according to the groupings; make use of tools such as Office 365 to facilitate discussion and group work (See next page for details).	[remote students]: Join the discussion using the platform their groupmates choose while staying in the same meeting on the vc. Consider preparing two devices if possible. If not, students may need to be re-admitted to the virtual meeting after the discussion. [in-person students]: Host group discussion using platforms they are familiar with (e.g. conference call on phone, FaceTime, WhatsApp, Skype, etc.). Consider using a headset to minimize distraction from the noise going on outside. [teacher/ support staff]: Re-admit students back to the virtual meeting after the discussion, if needed.

Active learning activities: Small group discussion/ group work

- Here is an example for a small group activity. Suppose you have some problems for each group to solve and you decide to use Microsoft O365 Word to facilitate the group work. The following steps show one possibility for conducting this activity:

1. Set up various Word documents
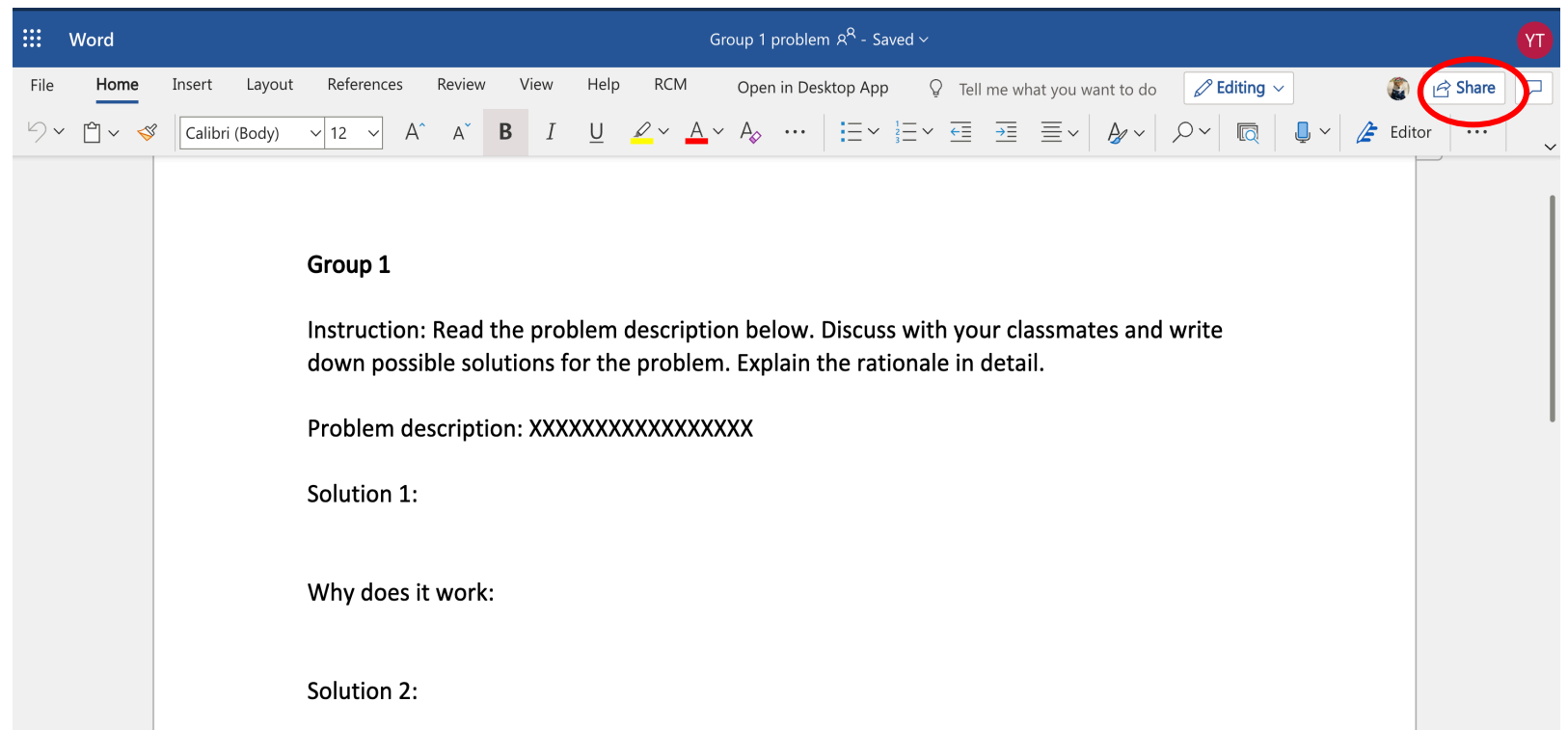
Active learning activities: Small group discussion/ group work

2. Create a **sharable to all** and **editable** link for each document

3. Assign a problem to each group and share the related document link

4. Give students enough time to discuss and work on the document

5. While the students are working, you can keep an eye on each document to monitor the progress. If all your students are in the same virtual meeting, you can go into their breakout room to provide feedback and further instruction

Active learning activities: Class-wide discussion

- Conducting a class-wide discussion in hybrid classrooms is challenging because it is difficult for remote students to hear what in-person students say if there is no extra microphone to pick up the voices of the students in the classroom.

- Due to hygiene reasons, we do not recommend passing a wireless microphone among in-person students to pick up the voices.

- However, a class-wide discussion may be feasible if your class size is small (10-20 people). You may place the wireless mic or a conference mic in the center of the room, and then instruct students to sit near the device to speak. Remember to mute other devices that are used to connect to the same virtual meeting to avoid audio feedback. Be aware of the latest social distancing and protective measures.