

**Table 1 HyFlex Teaching: A Comparison of Three Methods**

Center for the Promotion of Excellence in Higher Education

March 29, 2021 (Update: March 31, 2021)

|                           | <b>1) Using Classroom Equipment</b>   | <b>2) Using an iPad</b>   | <b>3) Using BYOD</b>  |
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| <b>Features</b>           | <p><b>Classroom equipment (plus laptop) is all you need.</b></p> <ul style="list-style-type: none"> <li>- Connect the laptop to the AV equipment via HDMI.</li> <li>- In classrooms without AV equipment or microphones, use of a portable USB speakerphone is required.</li> </ul> | <p><b>Only an iPad and a tripod are needed (additional laptop computers can be used).</b></p> <ul style="list-style-type: none"> <li>- Can be used in classrooms without AV equipment or microphones.</li> <li>- Can pick up a lot of what's going on in the classroom and the voices of the students behind the iPad.</li> </ul> | <p><b>All face-to-face participants need to bring their own device (laptop, etc.) and headset (earphone with microphone).</b></p> <ul style="list-style-type: none"> <li>- HyFlex class can be held in the same way as full online class (easy interaction regardless of face-to-face or online)</li> <li>- Be careful of the time lag between your own voice and the Zoom speaker's voice (talk at a distance, whisper, remove earphones, etc.)</li> </ul> |
| <b>(Suitable classes)</b> | <ul style="list-style-type: none"> <li>- Always use a laptop.</li> <li>- Mainly face-to-face</li> <li>- Medium to large lecture rooms</li> </ul>  | <ul style="list-style-type: none"> <li>- Not always use a laptop (more flexible in teaching)</li> <li>- Can deliver what's going on in the classroom</li> <li>- Small to medium lecture or seminar rooms</li> </ul>   | <ul style="list-style-type: none"> <li>- Can have a mixed discussion between face-to-face and online participants</li> <li>- I want to maintain the same level of quality for remote participants as for face-to-face participants.<br/>Classroom with low density</li> </ul>   |
| <b>Class materials</b>    | <p>[F2F] Projection of PC screen / handout of materials<br/>[Online] Zoom screen sharing<br/>*Better to hand out materials via PandA for both</p>   | <p>[Not using a laptop] Hand out materials<br/>- Paper materials for F2F and digital materials (via PandA) for online participants<br/>[Using a laptop] Same as 1) (Note: Turn off Zoom's microphone and speaker of teacher's</p>   | Same as 1)  |

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|                                      |   | laptop ("Exit from Computer Audio"))  |   |
| <b>Writing on the board</b>          | Set up a laptop on a desk about 3 meters from the blackboard. Write on the board within the shooting range.<br>*Make sure the screen is not in the shooting range.  | Place the camera several meters from the blackboard. Write on the board within the shooting range.<br>*Can capture a wider area than 1)   | PC-based board writing only (using iPad, pen-tablet, Zoom whiteboard, etc. is also acceptable)  |
| <b>(If you want a clearer image)</b> | iPad, pen-tab, Zoom whiteboard, etc.  | iPad, pen-tablet, Zoom whiteboard, etc.   |   |
| <b>Voice &amp; Sound</b>             | [F2F] Using classroom microphone<br>[Online] Pick up the sound of classroom speaker with the laptop (Zoom) microphone / Deliver online participant's voices to the classroom with the laptop (Zoom) speaker (HDMI connection /If the HDMI cable is not long enough, place a microphone next to the laptop speaker.<br>*To prevent audio feedback, students cannot connect to Zoom / Turn off Zoom's microphone and speaker ("Exit from Computer Audio") | [F2F] Using classroom microphone or participant's natural voice<br>[Online] Classroom speaker sound (or natural voice) picked up with iPad's built-in microphone / Online participant's voice picked up with iPad's built-in speaker<br>*To prevent audio feedback, students cannot connect to Zoom / Turn off Zoom's microphone and speaker ("Exit from Computer Audio") | Both face-to-face and online participants use Zoom audio.   |
| <b>Teacher-student interaction</b>   | [F2F] Using classroom microphone<br>- Students can also use a microphone (the teacher should hold the microphones) or teachers can recite.<br>[Online] Voice only, no chat basically<br>*Online participants' voices are delivered with the laptop (Zoom) speaker.  | [F2F] Using classroom microphone or in participant's natural voice<br>- Students can also use a microphone (the teacher should hold the microphones) or teachers can recite.<br>[Online] Voice only, no chat basically<br>*Online participant's voice is delivered with iPad's built-in speaker.  | Both face-to-face and online participants use Zoom audio. Chat is also available.   |
| <b>Student-student discussion</b>    | Split into face-to-face and online participants.<br>*Online participants may use the breakout room.<br>*No mixed discussion between face-to-face and online participants.   | Same as 1)  | Mixed face-to-face and online discussions are allowed.<br>*Breakout room sessions are also allowed (Note: Face-to-face participants should sit together |

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|   |   |   | in groups).  |
| <b>Recording</b>  | Use Zoom Cloud Recording<br>- Publish Cloud Recordings of Panda "Zoom (KU License)"   | Same as 1)  | Same as 1)   |
| <b>Attendance management</b>                                    | [F2F] As usual<br>[Online] Check the gallery view or attendance list window of Zoom (Zoom log is also available)<br>*In both face-to-face and online sessions, it would be more effective to have the participants submit something (minute papers, assignments, forum posts, etc.) each time.  | Same as 1)  | [F2F & Online] Check the gallery view or attendance list window of Zoom (Zoom log is also available)<br>*In both face-to-face and online sessions, it would be more effective to have the participants submit something (minute papers, assignments, forum posts, etc.) each time.   |
| <b>*On-demand participation</b>                                 | The above "online" is based on the principle of simultaneous interactive participation. In a HyFlex class, on-demand participation (participation by watching class videos) should be kept to a minimum. In the case of on-demand participation, in order to fulfill the class requirements, it is necessary to check the level of understanding through separate assignments, forum posts, etc.  |   |  |
| <b>Resources (Reference videos, materials, &amp; documents)</b> | [Videos]<br>"Support Videos for Hybrid Classes" (Curriculum Division, Institute for Liberal Arts and Sciences)<br><a href="https://www.youtube.com/playlist?list=PL_1jkLd-G5Tpb52vcjk5seulj5APUAPkv">https://www.youtube.com/playlist?list=PL_1jkLd-G5Tpb52vcjk5seulj5APUAPkv</a><br>*Accessible on campus only / with English subtitles<br>[Materials]<br>"How to conduct hybrid classes: Guides and tips" (Curriculum Division, Institute for Liberal Arts and Sciences)<br><a href="https://fsv.iimc.kyoto-u.ac.jp/public/cx58wApSr8GANL0Bij52CeFkt5kpGbRLRf3s3tzmQyZf">https://fsv.iimc.kyoto-u.ac.jp/public/cx58wApSr8GANL0Bij52CeFkt5kpGbRLRf3s3tzmQyZf</a> | [Video & Documents]<br>"How to Survive a Hybrid Class Using an iPad" (Professor Chigusa KITA, Graduate School of Letters) "My Hybrid/Online Class at Kyoto University" #9 (October 29, 2020)<br><a href="https://www.highedu.kyoto-u.ac.jp/connect/teachingonline/limited/all/information.php#a4">https://www.highedu.kyoto-u.ac.jp/connect/teachingonline/limited/all/information.php#a4</a><br>*Accessible on campus only | [Documents]<br>What is a "HyFlex class"? > (c) All students use headsets<br><a href="https://www.highedu.kyoto-u.ac.jp/connect/teachingonline/hybrid.php">https://www.highedu.kyoto-u.ac.jp/connect/teachingonline/hybrid.php</a><br>[Video & Documents]<br>"Writing on the board in online classes" (Associate Professor Kazunori FUJISAWA, Graduate School of Agriculture) "My Hybrid/Online Class at Kyoto University" #3 (May 11, 2020)<br><a href="https://www.highedu.kyoto-">https://www.highedu.kyoto-</a> |

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|  | * Accessible on campus only / Both Japanese version and English version are available. |  | u.ac.jp/connect/teachingonline/limited/all/information.php<br>*Also available for 1) and 2)<br>*Accessible on campus only |
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\* For inquiries regarding this document, please contact: Center for the Promotion of Excellence in Higher Education (TeachingOnline@highedu.kyoto-u.ac.jp)