

**Table S1:** The detailed breakdown of face-to-face and online PBL process.

	Face-to Face PBL (process)	Online PBL (process)	Face-to-Face PBL (tools)	Online PBL (tools)
<b>PBL 1</b>	Introduction to the problem - Distribute page 1 of case study - Select one student to read - A student records the key information of the WB	Introduction to the problem - Project page 1 of case study online - Select one student to read - A student records the key information on a shared PowerPoint presentation	- Printed handout - WB and markers	- Webex meetings (Share screen) - OneDrive to share the PPT
	Generating/Ranking Hypothesis - Brainstorm and generate hypothesis (justify using given information) - A student records the Hypothesis on the WB - Rank your hypothesis on the WB	Generating Hypothesis - Brainstorm and generate hypothesis (justify using given information) - A student records the Hypothesis on the shared PowerPoint - Rank your hypothesis on the shared PowerPoint	- WB and markers	- Shareable PPT
	Generating Questions - Identify open-ended questions to help distinguish between hypotheses and record this on the WB	Generating Questions - Identify open-ended questions to help distinguish between hypotheses and record this on the shareable PPT	- WB and markers	- Shareable PPT
	Continuation of the Case (page 2) - Record Key information - Brainstorm - Re-rank hypothesis - Start thinking about potential mechanisms	Continuation of the Case (page 2) - Record Key information - Brainstorm - Re-rank hypothesis - Start thinking about potential mechanisms	- WB and markers	- Shareable PPT
	Continuation of the Case (page 3 ... n) - Repeat as above	Continuation of the Case (page 3 ... n) - Repeat as above		

	Identifying gaps ins knowledge and recording of Learning Outcomes - Through-out the PBL - Record on the WB - At the end of the session review and agree on final LOBs	Identifying gaps ins knowledge and recording of Learning Outcomes - Through-out the PBL - Record on the shareable PPT - At the end of the session review and agree on final LOBs	- WB and markers - Take a photo the WB	- Shareable PPT
<b>Independent Study</b>	Study all LOBs and take notes.	Study all LOBs and record findings on Moodle	- Personal notes on paper /computer/any other mode	- Upload LOBs on Moodle
<b>PBL 2</b>	Summarize the case using student notes	Summarize the case using shareable PPT	- Student notes or photo of the WB	- Shareable PPT
	Report-back on LOBs from PBL 1 - Capture notes on the WB	Report-back on LOBs from PBL 1 - Capture notes on the shareable PPT	- WB and markers	- Shareable PPT
	Receive new patient information and repeat the process as for PBL1	Receive new patient information and repeat the process as for PBL1		
<b>Independent Study</b>	Study all LOBs and take notes.	Study all LOBs and record findings on Moodle	- Personal notes on paper /computer/any other mode	- Upload LOBs on Moodle
<b>PBL3</b>	Summarize the case using student notes	Summarize the case using shareable PPT	- Student notes or photo of the WB	- Shareable PPT
	Report-back on LOBs from PBL 1 - Capture notes on the WB	Report-back on LOBs from PBL 1 - Capture notes on the shareable PPT	- WB and markers	- Shareable PPT
	Conclusion of the case	Conclusion of the case		

WB: Whiteboard; PPT: PowerPoint.