



# Hybrid Learning Essentials

Assoc. Prof. Ts. Dr. Nurfadhlina Mohd Sharef  
Centre for Academic Development (CADE)

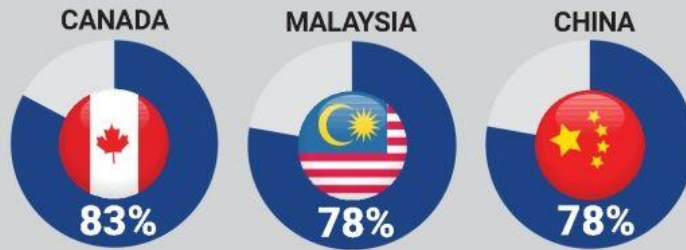
UPM

17 February 2022

## Global Student Survey



Tertiary students said they prefer more online learning if it means cheaper fees.



Students said their professors are effective online facilitators.



Students said that if it were cheaper, a shorter duration to complete their degree is preferred.



**44%** Malaysian students said the problem of unequal wealth distribution (the rich getting richer, while the poor get poorer) is the biggest issue facing their generation



**25%** Malaysian students think ethnic minorities are well represented at their universities.

# A hybrid horizon

<https://www.thestar.com.my/news/education/2021/03/21/a-hybrid-horizon>

Learning outcomes

---

Identify the characteristics of hybrid learning delivery

---

Apply best practices of hybrid learning delivery

Part 1:  
Characteristics  
of hybrid  
learning

Space

Equipment

Environment

# MoHE Immersive Learning Spaces (MILES)

COLLABORATIVE CLASSROOM (non-conventional classroom with mobile chairs and desks)

HYBRID CLASSROOM (Classroom with monitors, audio-visual facilities for both face-to-face and synchronous online learning)

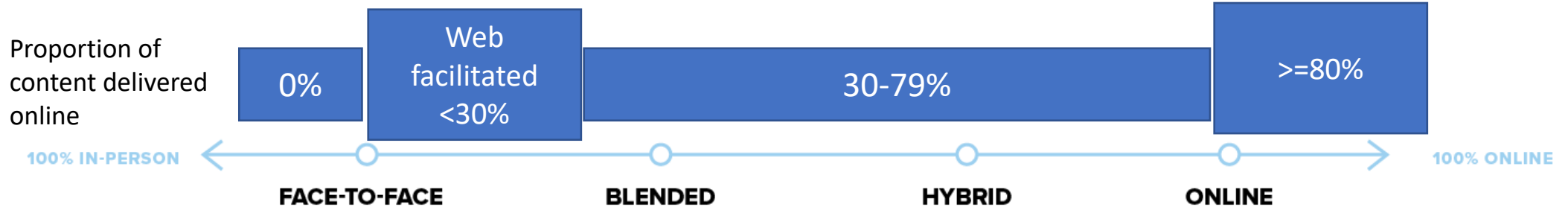
TRANSDISCIPLINARY MAKERSPACE ( mix facilities e.g. textile, wood, digital. etc)

FAB LAB (a makerspace that is built around a selection of digital fabrication tools)

SMART CLASSROOM (classroom with high-tech features that includes smart technologies such as Internet of Things)

AR-VR SIMULATION LAB

COMPETENCE CENTER FOR TRAINING (IR4.0 center)



Learning takes place in a traditional, brick-and-mortar classroom.

Technology is used to complement traditional classroom learning.

Learning takes place online and offline with online learning replacing some face-to-face instruction.

All learning takes place online.



# HYBRID LEARNING

1 synchronous lesson

Combination of in-person and virtual teaching. ●

Takes place simultaneously. ●

In-person and remote learners are different individuals. ●

# BLENDED LEARNING

All education, 1 semester

Technology used to supplement in-person and remote learning. ●

Takes place asynchronously. ●

In-person and remote learners are the same people. ●

**VS**



switch

AI camera

Glass board



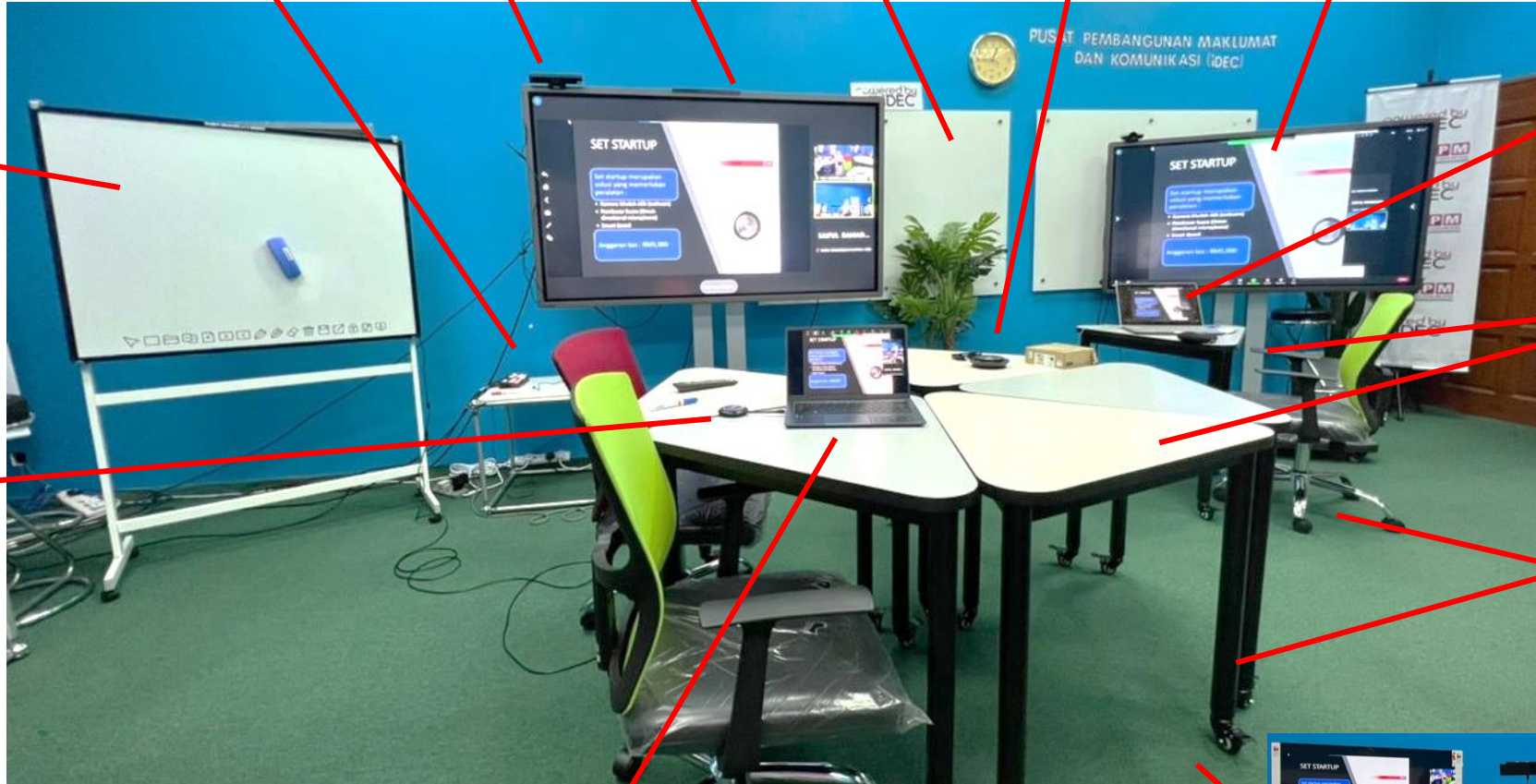
Speaker

Horion panel

Samsung smart TV

Student's laptop

Swipe hybrid board



Group of students

Mobile furniture



Wireless mic

Lecturer's laptop

Students in groups equipped with more screens (behind photographer)



Tracking camera (behind photographer)



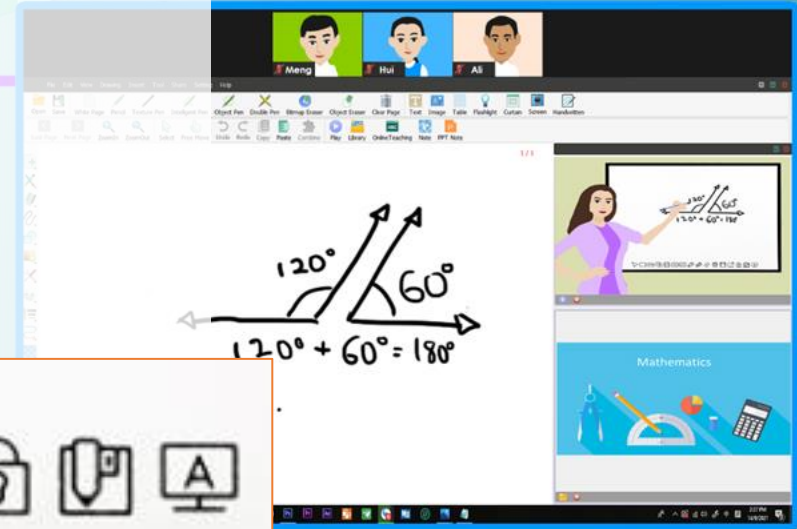
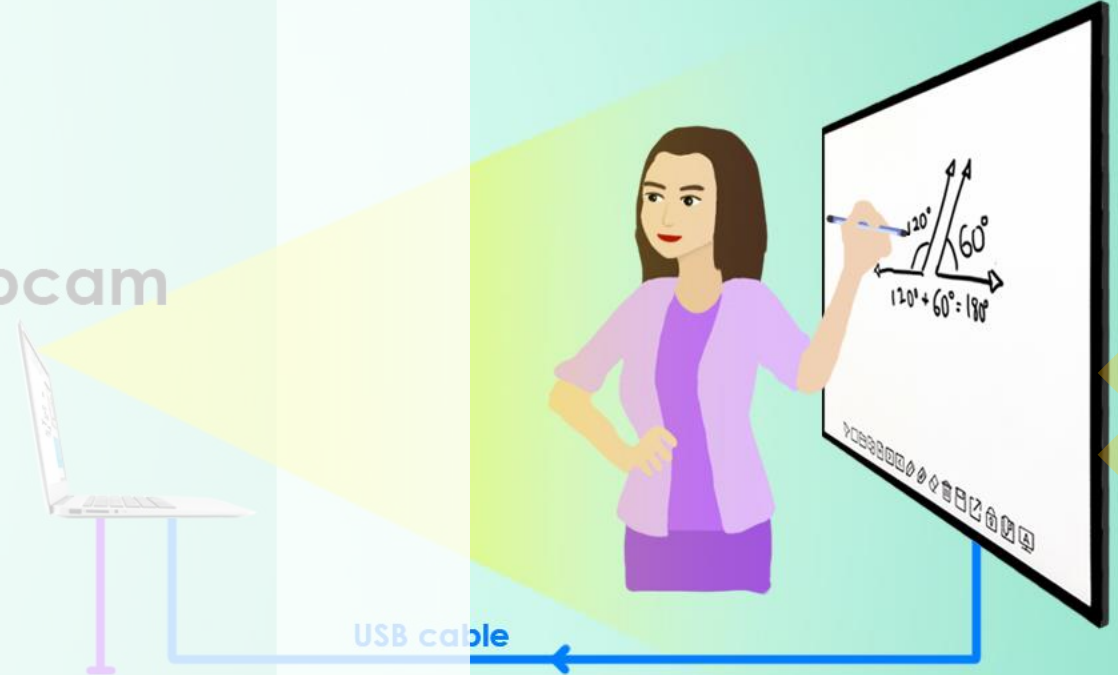


# Swipe Hybrid Board

- Connect with USB
- Write on the board
- Write on the laptop
- Can save
- Can create several pages
- Can erase

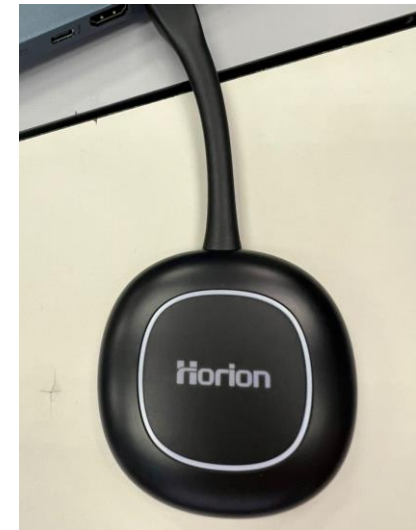
## Broadcast Using Webcam

Webcam



# Horion smart board

- Super interactive flat panel
- Like a super giant tab/ipad
- Can connect with other laptop/pc
- Mirroring function
- Can be used to control synchronous display
- More expensive than swipe hybrid board



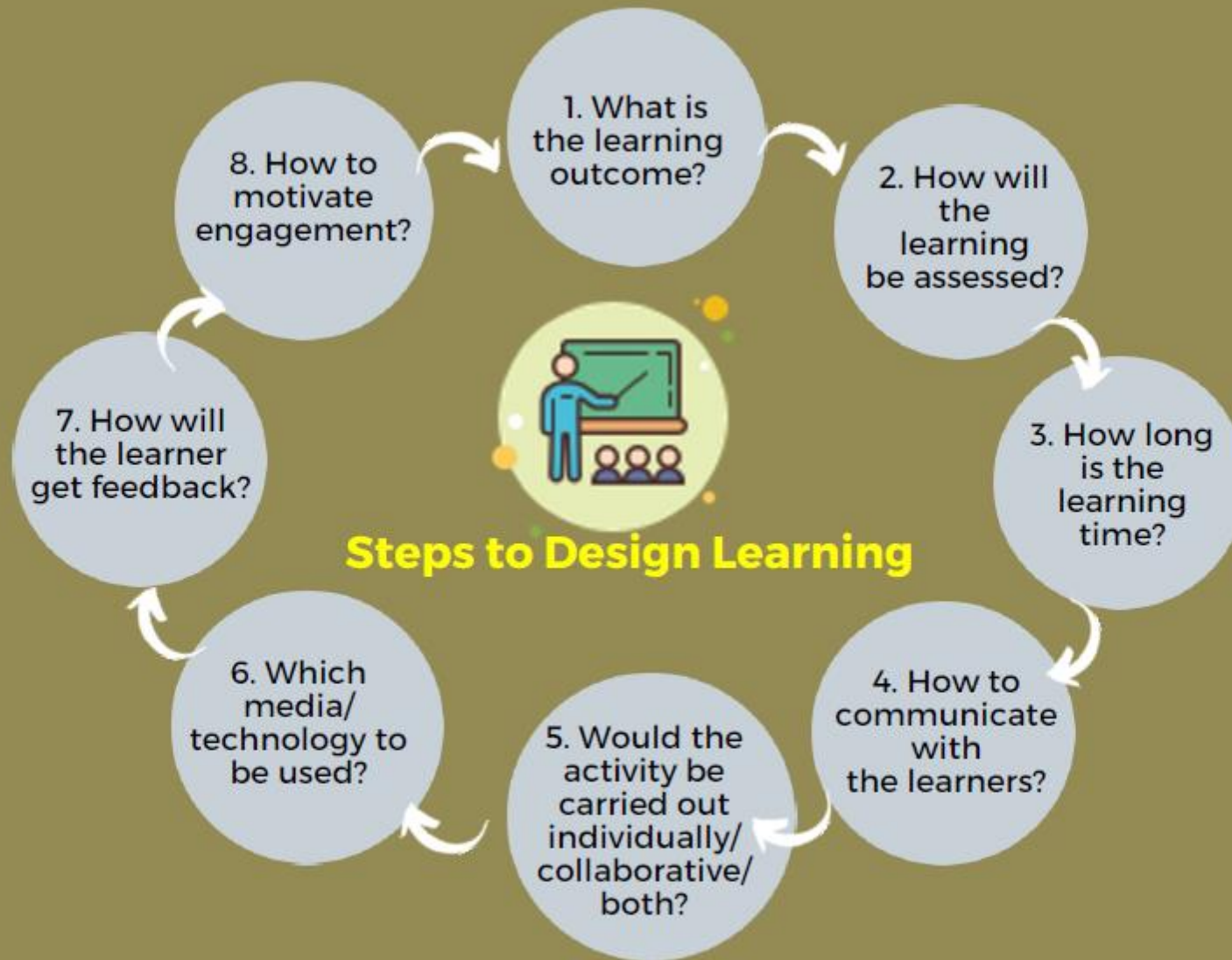
# Part 2: Best practices of hybrid learning delivery

Planning






Conducting the session

Assessment

Feedback



# Planning a Meaningful Lesson

1. Set a **Clear Objective** for the Lesson 
2. Incorporate **Visuals**,  
Visuals, and More Visuals  
3. Add **Assignments** and Homework 
4. **Evaluate, Reflect and Revise** 

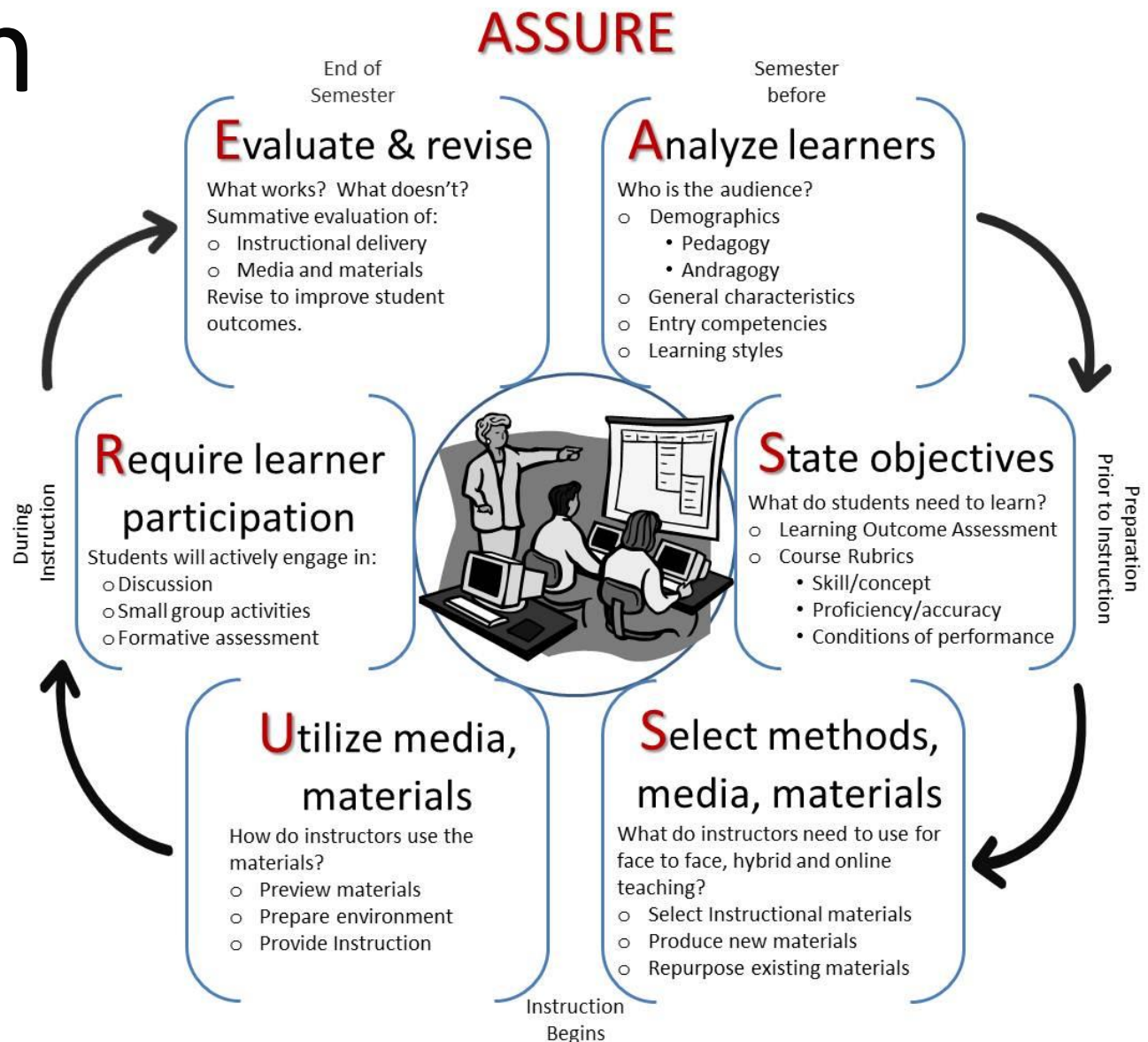
[See more here](#)

<https://theconversation.com/coronavirus-14-simple-tips-for-better-online-teaching-133573>



# Lesson Plan

Designing an impactful teaching requires a well-thought teaching plan to ensure the learning outcome is achieved and maximised student attainment. Lesson plan is a tool to design each interaction session (be it face-to-face or online lesson). The ASSURE model is one of the most popular used to construct a lesson plan.



Make the objective clear

Chunk your content into microlessons

Design your microlessons

Engage your learners (F2F and online)

Use technology intentionally

## Example flow

- content (10 mins)
- activity (10 mins)
- break(5 mins)
- feedback (5 mins)
- diagnostics assessment (5 mins)
- break (5 mins)
- content (10 mins)
- summative assessment (10 mins)

# Designing activities

- Utilize active learning techniques such as composing quick writing responses, working in pairs to answer questions, searching online for relevant information or clarification, or simply having students compare their notes with or quiz their neighbor.
- Consider time-on-task for both online and in-class activities; make sure the online components do not simply make the course more time-intensive.

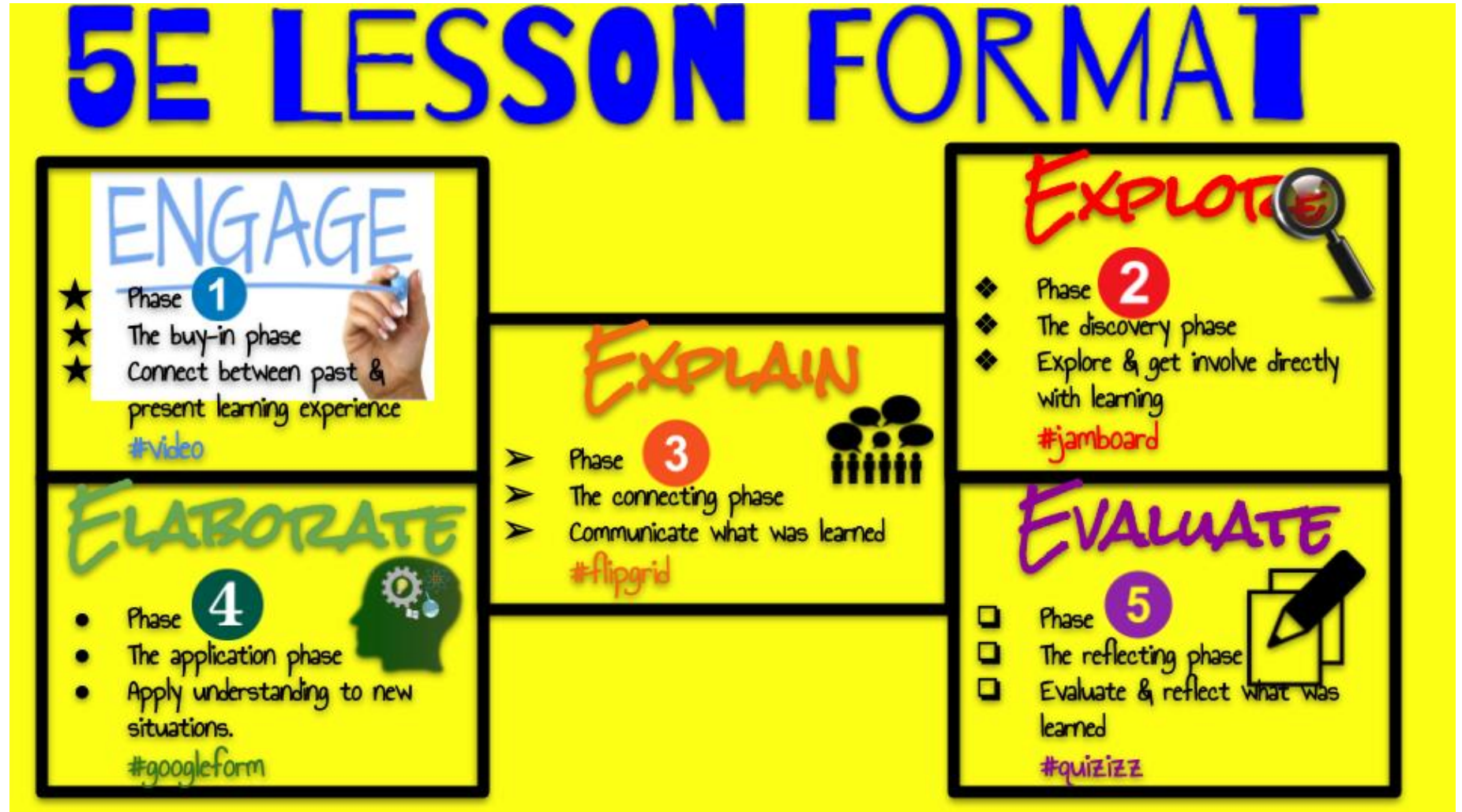


# 5E Instructional Model

The 5E instructional model is a student centered and inquiry-based lesson format designed to help students progress through each phase of the lesson.

Students will be able to **engage**, **explore**, **explain**, **elaborate** and **evaluate** the material, ask questions, discover, and investigate content in a more meaningful way.

Although this model follows a progressive format, it is not linear, however, each phase informs the other while guiding students from one phase to the next.



# 5Es Instructional Model

Go to: <https://ngss.sdcoe.net/Evidence-Based-Practices/5E-Model-of-Instruction>



## Evaluate your 5Es:

1. How does it provide students the opportunity to explore, investigate, and explain the phenomenon or identify the design solution to a problem?
2. How does it help students demonstrate their understanding of the learning goals and outcomes?
3. How does it ask for students to demonstrate and explain a phenomenon or design solution?
4. How does it ensure access to learning for all students through universal design and best first instruction?

Phenomenon/Problem:					
Essential Question(s):					
5E Phase	Activity	What the Students Do	What the Teacher Does	Concept(s) Learned	Evidence Gathered/ Connection to Phenomena
Engage					
Explore					
Explain					
Elaborate					
Evaluate					

*Note: Depending on the number of activities, additional rows for a 5E phase may be added.*

Lesson Elements	What does it look like?	What tools can I use?
Engage	Brainstorm <ul style="list-style-type: none"> <li>What do you think?</li> </ul> Ask questions <ul style="list-style-type: none"> <li>What do you wonder? What are you curious about?</li> </ul> Access prior knowledge <ul style="list-style-type: none"> <li>What do you know? How did you learn it?</li> </ul>	Padlet Google Classroom Question Mentimeter
Explore	Research Watch videos Read Articles Discuss Crowdsource	Google Search YouTube Newsela, Smithsonian Tween Tribune InsertLearning Google Classroom Question Schoolology Online Discussion Shared Google Slide Deck
Explain	Live Synchronous Sessions  Video Lessons <ul style="list-style-type: none"> <li>Instruction</li> <li>Modeling</li> <li>Scaffolding</li> </ul>	Google Hangout or Zoom <ul style="list-style-type: none"> <li>Use the chat feature to ask questions and engage the group</li> </ul> Screencastify (Chrome Extension) <ul style="list-style-type: none"> <li>Share videos directly from Google Drive</li> </ul> QuickTime + YouTube <ul style="list-style-type: none"> <li>Create online playlists</li> </ul> Edpuzzle <ul style="list-style-type: none"> <li>Engage students around your video content with questions and monitor their progress</li> </ul> FlipGrid <ul style="list-style-type: none"> <li>Allow students to teach each other concepts by recording videos</li> </ul>
Elaborate	Make connections <ul style="list-style-type: none"> <li>Connect concepts</li> <li>Connect concepts to life beyond the classroom</li> <li>Connect concepts to art, literature, music</li> </ul> Apply learning to new or novel situations <ul style="list-style-type: none"> <li>Tackle quirky real-world problems</li> <li>Document your process as a group</li> </ul> Explain how <ul style="list-style-type: none"> <li>Articulate the process you would use to solve a problem or approach a particular situation</li> </ul> Student-created study materials and resources <ul style="list-style-type: none"> <li>Take the information and design a review resource</li> </ul>	Quizizz Shared Google Docs, Slides, Drawings, Spreadsheets FlipGrid Quizlet Kahoot!
Evaluate	Formative assessments Quizzes Video reflections Digital exit tickets	Quizizz Kahoot! Schoolology quiz Google Forms Socrative

Source:  
<https://catlintucker.com/2020/03/designing-an-online-lesson/>

# Interactive Simultaneous Learning

- **Ensure that both groups have a similar learning experience**
- **Make sure that both groups interact**
- **Have a plan B if technology fails**
- **Keep things simple**
- **There may be noise and interference, so encourage usage of headphones and chats**
- **Establish a collaborative, trust-based learning environment**
- **Get a Pulse on Student Progress: performance and skills-based**
  - Synchronous group brainstorming sessions
  - Communicate class expectations and outline individual responsibilities
  - Call and response presentations
  - Provide immediate feedback to students

# Use webinars effectively

---



## **Screen sharing**

- Show presentation/open a file
- Play a video on a video channel
- Shows a students' written work and elicit corrections

## **A whiteboard function**

- Write something (draw or type)
- Highlight the text
- Change text color
- Brainstorm ideas and information
- Invite students to write ideas on the board

## **A chat box**

- Elicit answers to questions and exercises
- Ask students to produce an example sentence
- Encourage the class to interact and bond

## **Breakout rooms**

- Complete pair or group work together and feedback to class
- Practice their speaking with partners
- Work on a task together to decide an outcome
- Create projects together and present to the group

# Engaging hybrid learning activities

---

- Collaborative concept mapping – Jamboard, Google Slides
- Collaborative word clouds – Mentimeter, Google Slides
- Think, pair, share – Zoom breakout room
- Fishbowl (similar to group presentation) – Zoom screen sharing
- Discussion – Zoom Annotate
- Game show – Quizizz, Kahoot
- Online poll – Zoom
- Internet scavenger hunt – Goosechase



# Forum

- A social space for students to get to know each other
- For course **announcements** (using a news forum with forced subscription)
- For **discussing** course content or reading materials
- For continuing online an **issue raised previously** in a face-to-face session
- For **teacher-only** discussions (using a hidden forum)
- A **help centre** where tutors and students can give advice
- A **one-on-one support area** for private student-teacher communications (using a forum with separate groups and with one student per group)



Debate

Social  
forum

*Frequently  
asked question*

Interview

Group  
discussion



# Fair assessment

Online only

Higher order thinking + cheat free

Self-paced learning and activity completion

Automatic grading programs (especially for formative assessment) such as multiple choice of True/False quizzes

Asynchronous group discussions (prepare students for project, case study, portfolio, presentation, etc)

Written critical analysis and thoughtful discourse

Estimate time for video or aural content consumption (view only, with interactive activity, co-curate, co-create, individual)

Provide rubrics

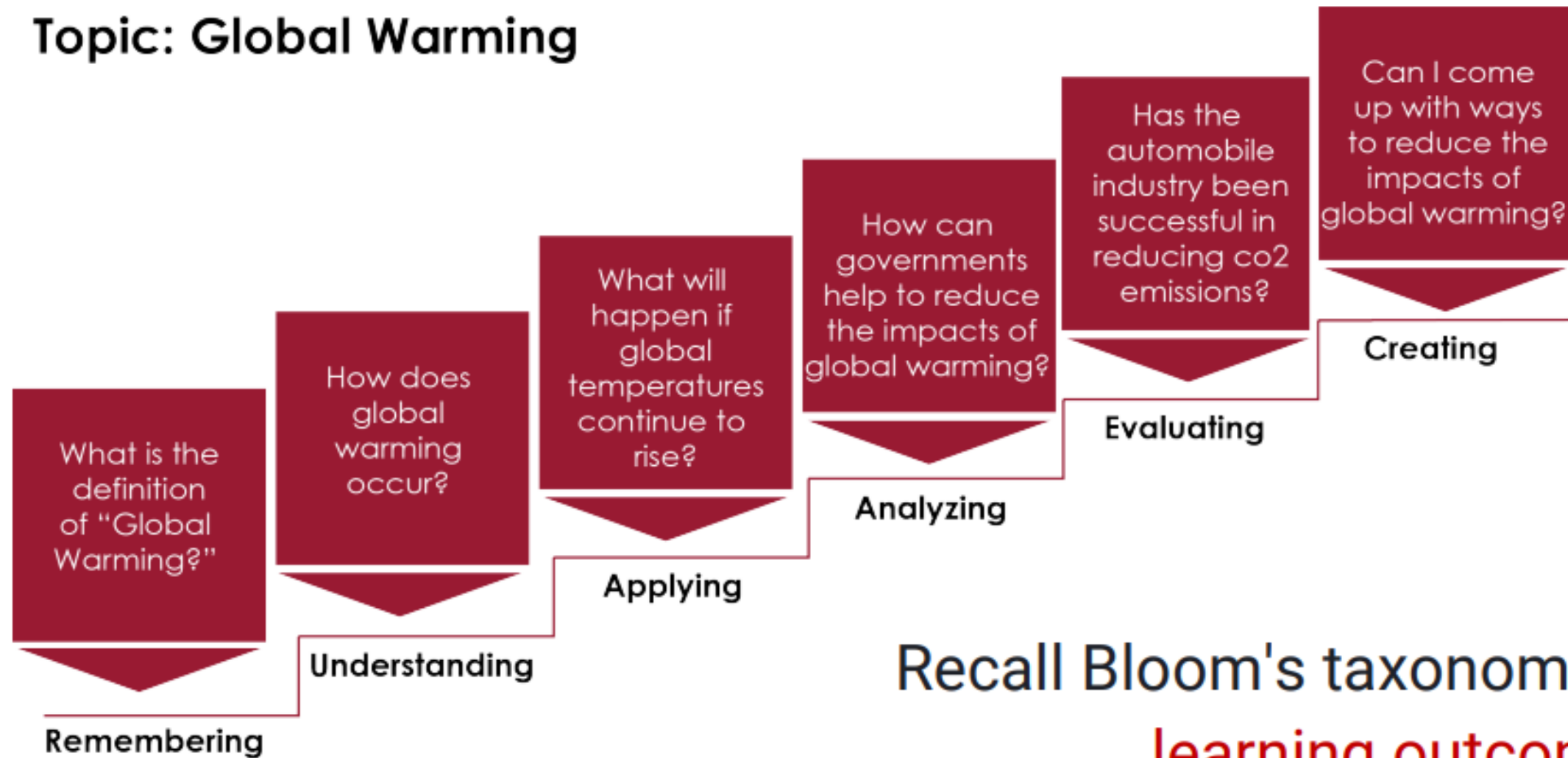
**Which of these learning activities or assessments would best lend themselves to an online format and which to a face-to-face format?**

**What combination of online and in-class activities would best address the course teaching and learning objectives?**



# WRITING GOOD QUIZ ITEMS?

## Topic: Global Warming



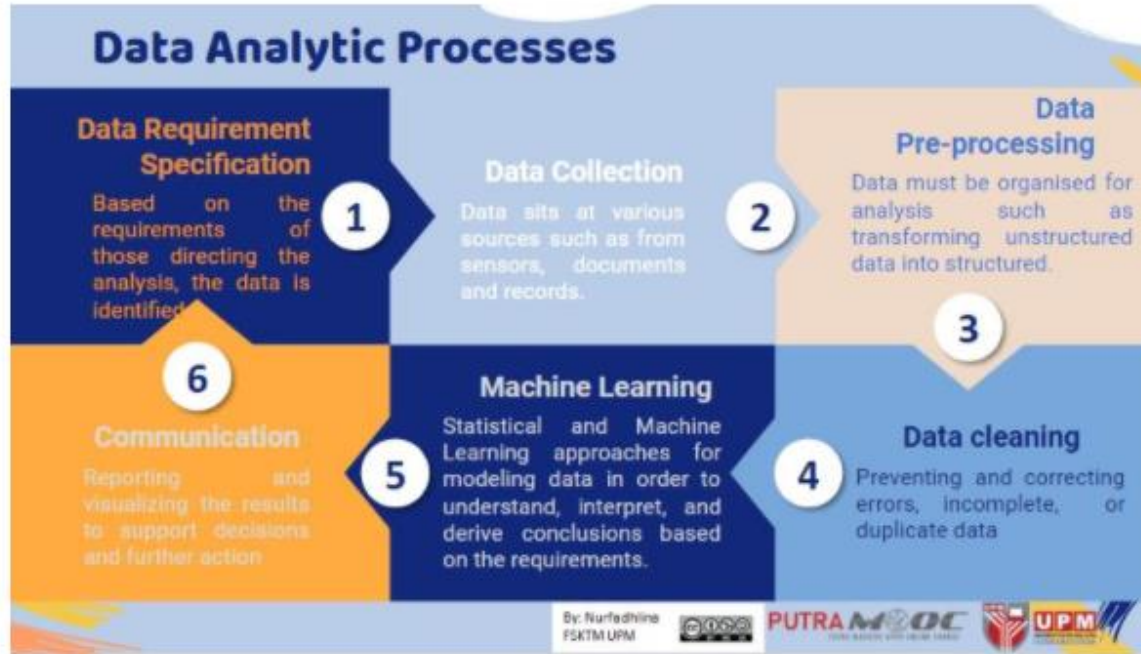
Recall Bloom's taxonomy of  
**learning outcomes**

Section title

## Module 2-Data Analytics Processes

Description of the topic. Suitable instruction can be placed here

As you recall, there are two types of data mining, namely descriptive and predictive. **Descriptive** analysis is used to mine **data** and provide the latest information on past or recent events (e.g., clustering and association rules). On the other hand, the predictive analysis provides answers of the future queries that move across using historical **data** as the chief principle for decisions (e.g., classification and prediction).



Infographic that depicts the content of the topic. It is also advisable for topic learning outcome to be displayed here.

Forum encourages critical thinking and collaboration

Lecture Notes - Data Analytics Processes

Notes can be uploaded and downloadable as a file or displayed in a page

Activity 1- Data Analytic in Action

Hidden from students

The url of other applications to support learning can be provided and embedded as a page

Activity -Test Your Understanding - Quizziz

Activity-Self assessment on Data Analytics Processes

Extra reading-examples of data analytics

Activity - Find the Pairs!

Interactive learning can be conducted using H5P

Completion tracking

External url can be displayed

- 
- 
- 
- 
-

# Your feedback matters!

Help learners understand readiness and monitor progress, such as pre-assessments and online quizzes, can support self-direction, engagement, and reflection.

Post-assessment student reflection questions include the following:

- Did you feel prepared for the assessment?
- What strategies did you use to prepare for the assessment?
- What would you do the same and what would you improve?
- Do you think the assessment gave you an opportunity to showcase your knowledge of the topic?

**Make it Visual!**  
**Three Ways to Structure Learning Interactions**

**1 Independent Reflection**  
Encourage and foster metacognitive reflection, inquiry, and goal setting with prompts.

*I used to think... Now I think...*

**2 Peer-to-Peer Interaction**  
Connect students to each other for reactions, perspectives, and ideas with structures.

*I am thinking of... from the viewpoint of...*

**3 Whole Class Collaboration**  
Gather evidence for learning and take the group pulse.

*What... Excites you? Is Worrisome?  
Do you Need to know? Is your Stance?*

globalonlineacademy.org  
Global Online Academy © 2020

# Instructor's presence and support



Assure students about equal attention to both groups of students

Analyse student engagement in learning platform

Move around physical space and communicate with students in both spaces

Use gestures, expression and intonation

Allow interactions in various modality – oral, chat, forum, email, on the screen

Praise and give comments generously

Provide mentoring and coaching

Engage all students

# Preparing students for hybrid learning



## Explain

- Explain the **rationale** for using a hybrid learning approach and list the learning **benefits** (expect some resistance as students are pushed out of their learning comfort zones).

## Orientate

- Provide an orientation to the **technology** required in the course and inform students of where to go for additional support.

## Start

- Start with a “**low-stakes**” assignment to familiarize students with what is expected.

## Discuss

- Discuss **time management strategies** and communicate expected time-on-task for online learning activities.

## Create

- Have students create a **learning plan** for the course.

## Explain

- Explain how students will be **assessed** and what kind of feedback they can expect from you and their peers.

## Provide

- Provide **structure** for online activities. For discussions, assign students to respond to certain posts, or for peer feedback, provide guidelines or a rubric.



# Summary

---

- Hybrid learning ecosystem setup
  - Equipment
  - Layout
- Best practices for delivery
  - Planning
  - Conducting simultaneous learning
  - Assessment
  - Feedback

# Best Practices

## on Engaging Online Learning





# Meeting ALL Students' Needs



www.theowlteacher.com



## Gagne's Nine Student Events

1. **Gain attention** of the students –with stimuli that catch and engage their brain (novel ideas or thought-provoking question, etc.)
2. **Inform students** of the **objectives** – Establish the expected outcomes and criteria for measuring achievement.
3. **Stimulate recall** of prior learning –Leverage existing knowledge before introducing new knowledge and build on it.
4. **Present the content** – Deliver the content in easily consumable chunks.
5. **Provide learner guidance** – Guide them with examples, case studies, and other instructional support to supplement the content.
6. **Elicit performance** – Engage them with different activities that recall, utilize, and evaluate knowledge.
7. **Provide feedback** – Reinforce knowledge with immediate feedback (informative, remedial, corrective, etc.)
8. **Assess performance** –Test their knowledge with established (and transparent) criteria.
9. **Enhance retention and transfer to the job** – Use content retention strategies (concept maps, rephrasing, summarizing, job aids, etc.)

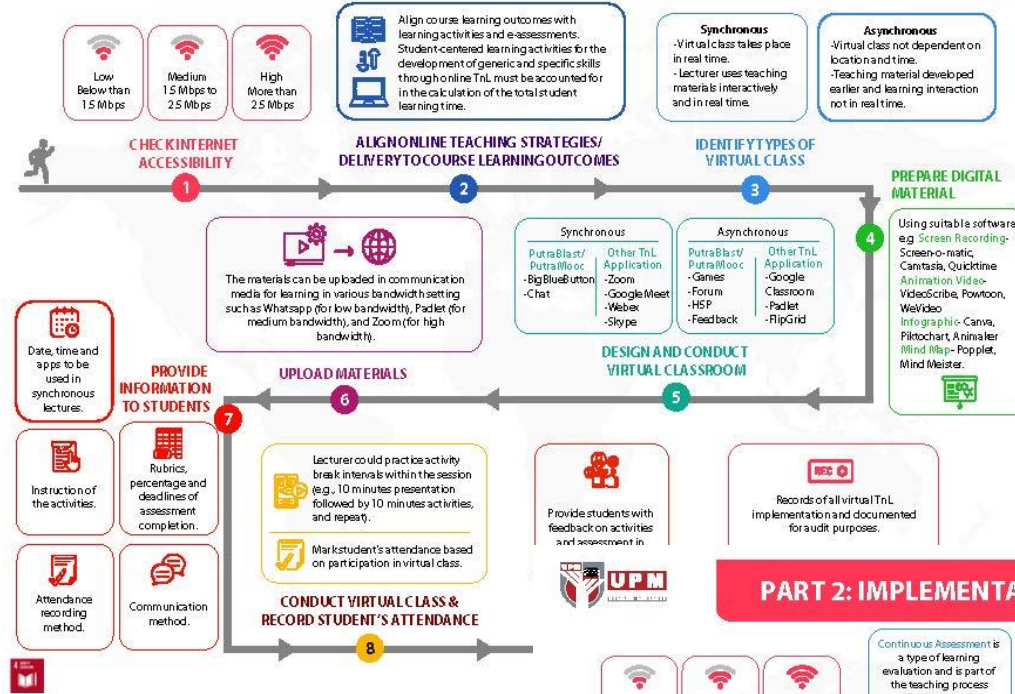




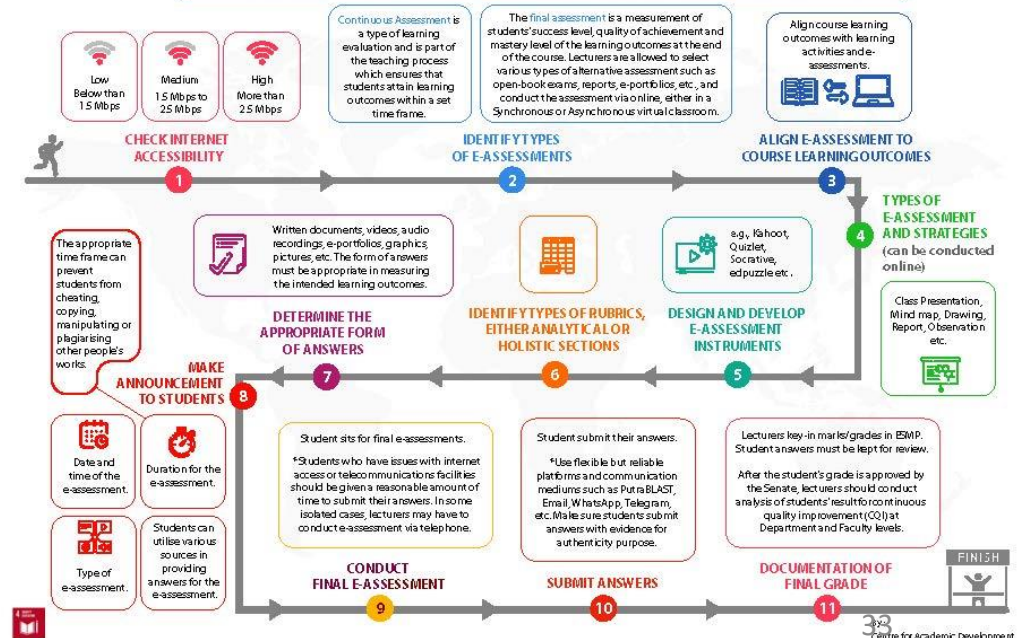
# UPM VIRTUAL CLASSROOM AND E-ASSESSMENT GUIDELINES



## PART 1: IMPLEMENTATION OF THE VIRTUAL CLASSROOM IN UPM



## PART 2: IMPLEMENTATION OF E-ASSESSMENT IN UPM



## DALAM MELAKSANAKAN KULIAH MAYA

### Synchronous

Kuliah maya *segerak (synchronous)* berlaku pada masa nyata

Pensyarah menggunakan bahan pengajaran yang disampaikan secara Interaktif dan masa-nyata

KELEBIHAN	KELEMAHAN
<ul style="list-style-type: none"> <li>Penglibatan pelajar</li> <li>Pembelajaran dinamik</li> <li>Kedalaman pengajaran</li> </ul>	<ul style="list-style-type: none"> <li>Jadual tidak menentu</li> <li>Kesulitan teknikal mungkin berlaku / Bandwidth tinggi</li> </ul>



Item PutraBLAST & PutraMOOC

Aplikasi lain

BigBlueButton  
Chat

Zoom  
Google Meet  
Skype

Webex  
Socrative  
Formative

Kuliah maya *tidak segerak (asynchronous)* tidak bergantung pada lokasi atau waktu

### Asynchronous

Bahan pengajaran dibangunkan lebih awal dan interaksi pembelajaran tidak secara masa-nyata

KELEBIHAN	KELEMAHAN
<ul style="list-style-type: none"> <li>Fleksibiliti</li> <li>Ketepatan</li> <li>Kebolehpercayaan</li> </ul>	<ul style="list-style-type: none"> <li>Tidak selari</li> <li>Pelajar tidak responsif</li> </ul>



Item PutraBLAST & PutraMOOC

Aplikasi lain

Games  
Forum  
HSP

Questionaire  
Feedback  
Workshop

Assignment  
Quiz

Google Classroom  
Google Site  
FlipGrid

Padlet  
Open Learning

- Merancang penyampaian pengajaran menggunakan elemen dan aplikasi yang bersesuaian
- Memuatnaik bahan berkaitan topik sebelum melaksanakan kuliah maya
- Pensyarah perlu menyediakan maklumat aktiviti pembelajaran kuliah maya.
- Melaksanakan kuliah maya secara *segerak (Synchronous)*.
- Melaksanakan kuliah maya secara *Tidak Segerak (Asynchronous)*.
- Merekod kehadiran berdasarkan penyertaan pelajar dalam kuliah maya
- Memberi maklum balas kepada pelajar mengenai aktiviti dan penaksiran yang dilaksanakan

"Have Clear Objectives. Participants must believe their online interactions is time well spent."

(Dr. Zane L. Berge, 1995)

