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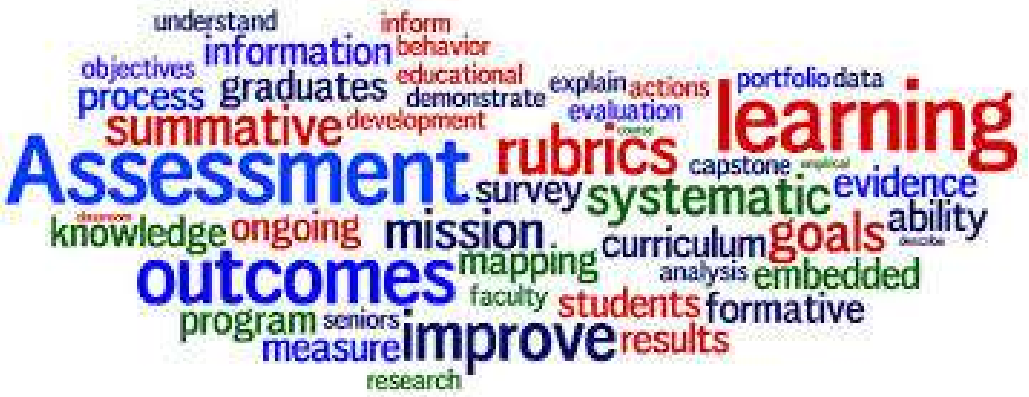

VIDEO DEMONSTRATION FOR PRACTICAL ASSESSMENT

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CADe
Online learning for all
21 April 2020

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Content Overview

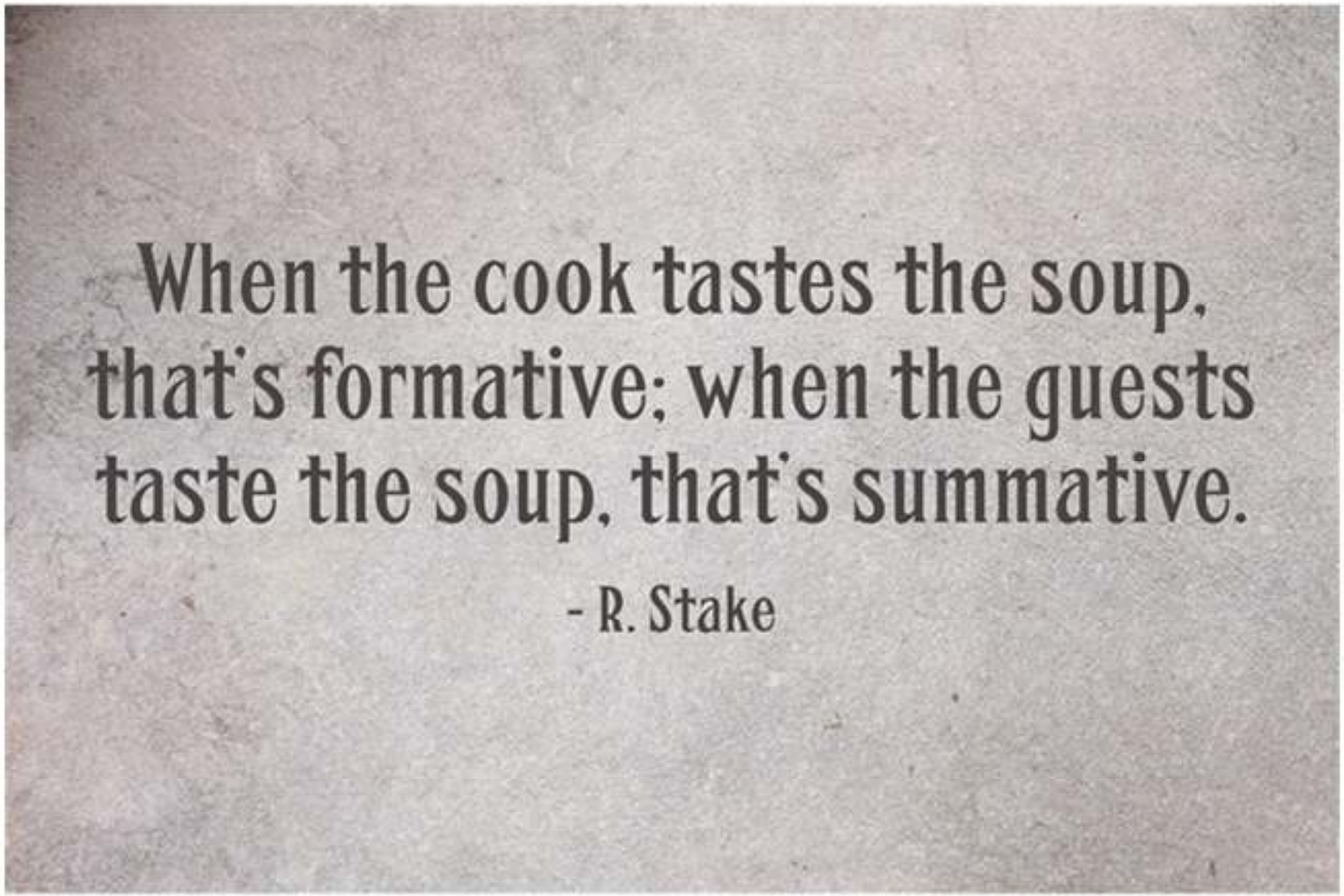
AIMS:

- Evaluating students' skills and behavior, where they are required to complete defined sets of work tasks
- guide to evidencing knowledge, skills and behavior through recorded videos of students completing tasks.
- means for demonstration of learning outcomes unconventionally, utilizing the power of digital media.

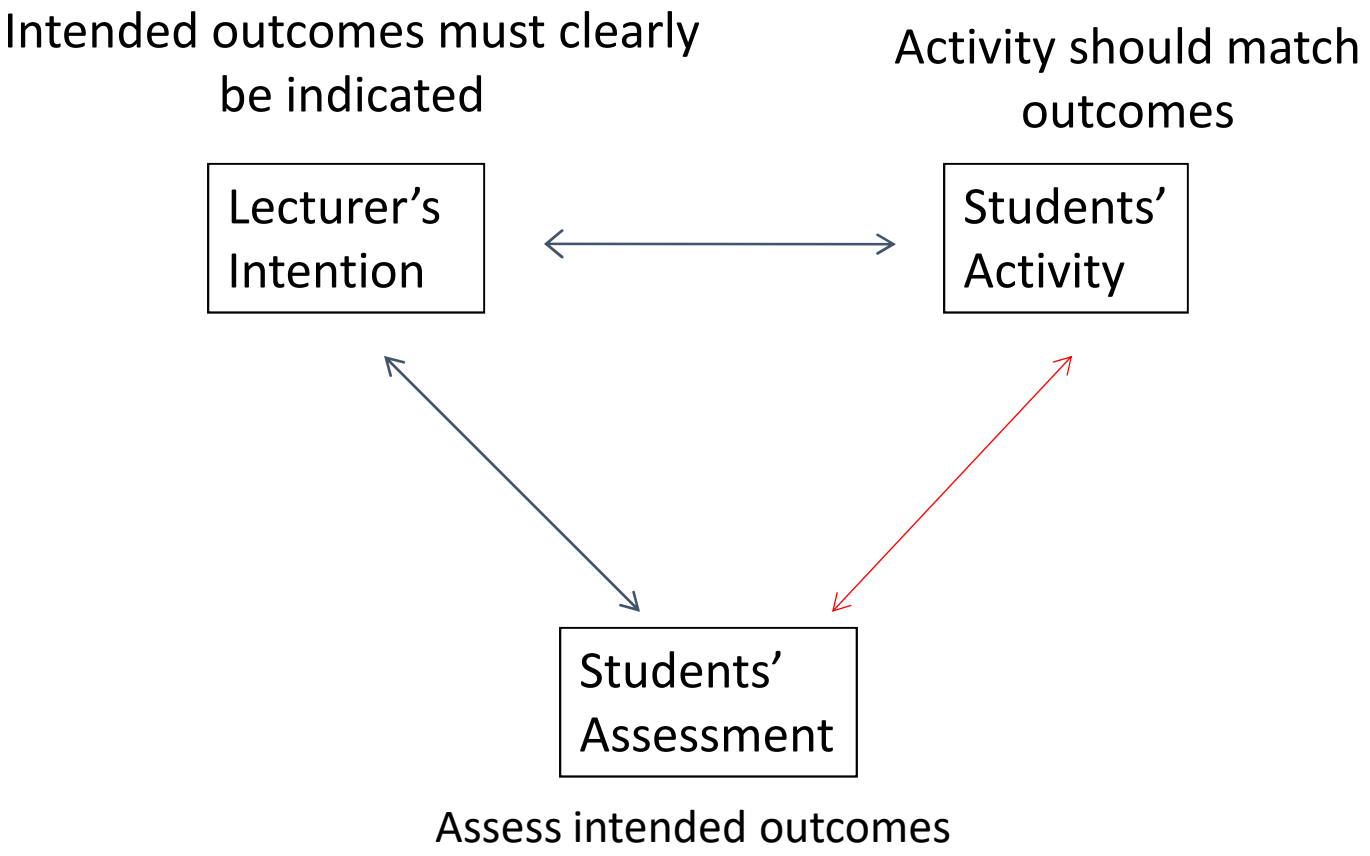
Recap: Assessment the OBE-way – key questions

- How will you know if learners have achieved the outcomes?
- What will you accept as evidence of understanding and proficiency?
- How might learners use the outcome in real world?
- What are the relationships among your outcomes?
- At what level do you expect the learners to demonstrate each outcome?

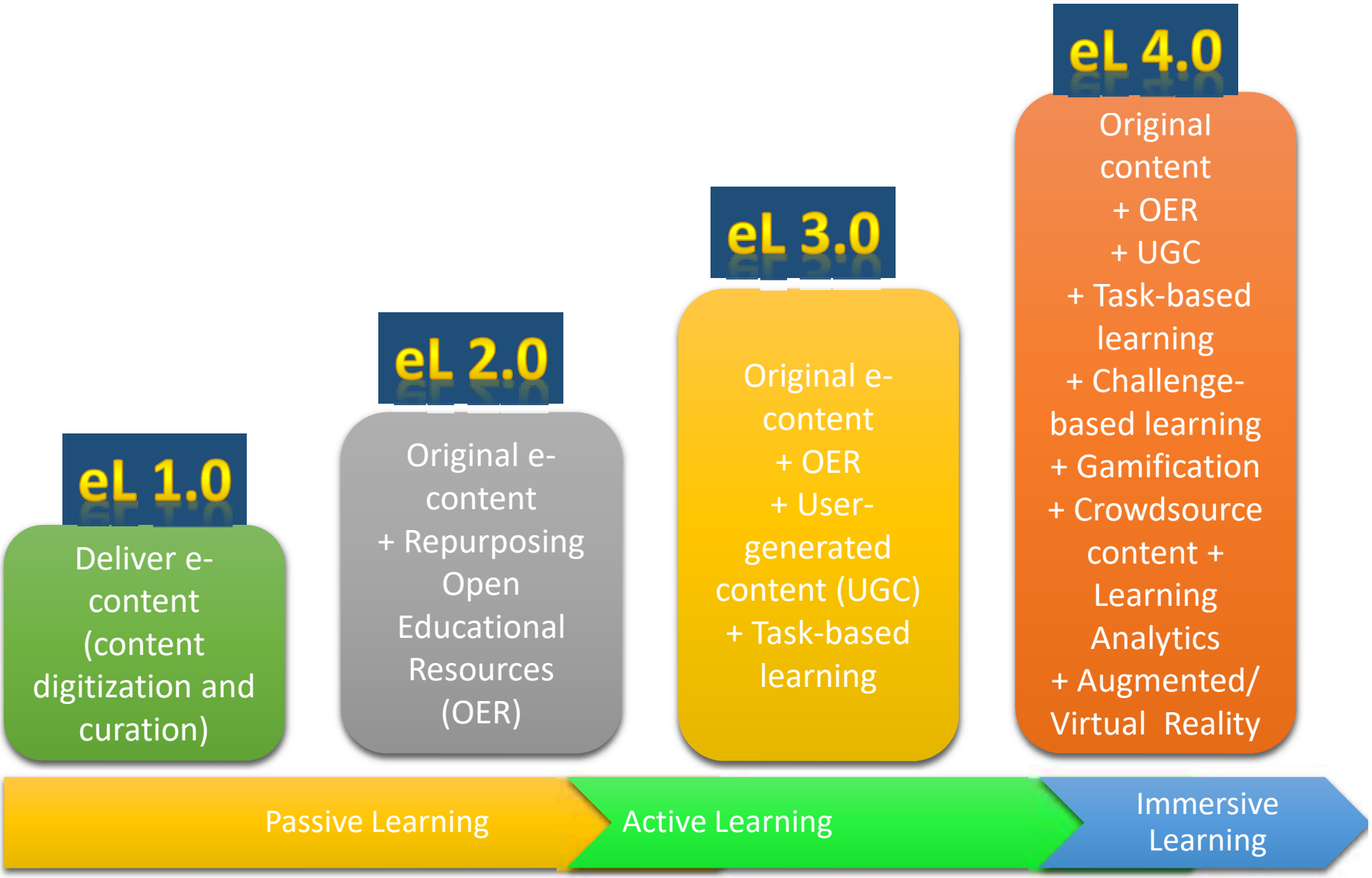
FORMATIVE VS SUMMATIVE



CONSTRUCTIVE ALIGNMENT



EVOLUTION OF E-LEARNING IN MALAYSIA



LEARNING BY DESIGN - LEARNING ARTEFACTS (1)

ARTEFACT

product of human activity – it is what is left behind as a trace or consequence, product or evidence of that activity

LEARNING BY DESIGN - LEARNING ARTEFACTS (2)

- collecting samples of student work, photographs, films, audio recordings and others - capture evidence of Before (baseline-data), During (process-data), and After (outcomes-data)

- to collect, create, analyse and discuss artefacts

LEARNING ARTEFACTS: E-PORTFOLIO

- An ePortfolio (electronic portfolio) is a digital collection of work that documents and **showcases knowledge, skills, and abilities, and their growth over time**.
- An ePortfolio may include such things as:

HOW DO YOU ASSESS SPECIFIC SKILLS?

PRACTICAL SKILLS?

Psychomotor domain

- The psychomotor domain (Simpson, 1972) includes **physical movement, coordination, and use of the motor-skill areas.**
- Development of these skills requires practice and is **measured in terms of speed, precision, distance, procedures, or techniques in execution.**

P7 ORIGINATION (*LAKUAN TULEN*)

Creating new movement pattern to fit a particular situation.

P6 ADAPTATION (*ADAPTASI*)

Skills are well developed and can be modified.

P5 COMPLEX OVER RESPONSE (*RESPON KETARA KOMPLEKS*)

The skilful performance of complex movements. *(performance is quicker, better, more accurate etc. compared to P4).*

P4 MECHANISM (*MEKANISME*)

Learned responses have become habitual.

P3 GUIDED RESPONSE (*RESPON BERPANDU*)

Early stages in learning a complex skill - imitation and trial and error.

P2 SET (*SET*)

Readiness to act. It includes mental, physical and emotion sets

P1 PERCEPTION (*PERSEPSI*)

Ability to use sensory cues to guide motor activity.

(Source of reference: Pamphlet entitled *Learning Taxonomy* (English version) *& TaksonomiPembelajaran*(Malay version), Centre for Academic Development (CADe), UniversitiPutra Malaysia.

Psychomotor Domain

Psychomotor objectives usually focus **on change and/or development in behavior and/or skills.**

What do you really want to assess?

Source: “Kurashiki Central Hospital | Surgeon Tryouts (english sub)”
https://www.youtube.com/watch?v=HVSCTOIXBUs

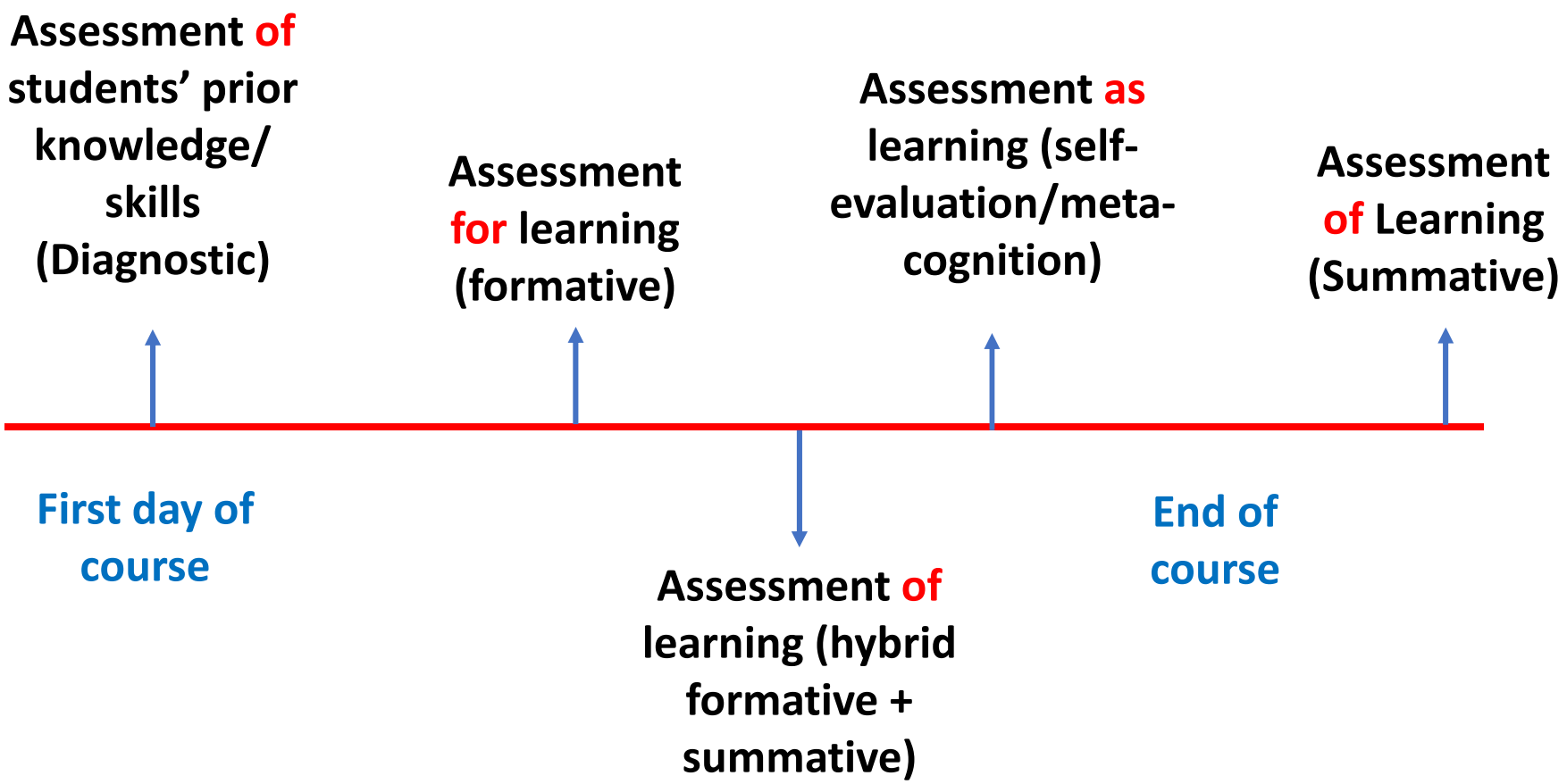
ASSESSING PERFORMANCE

measure skills that cannot be measured using conventional method (pencil and paper test)

Measure process and product

OBSERVATION

Assessment during a course



Example of Diagnostic Assessment through video - ECC 4502: Antenna and Propagation

START WITH WHAT YOU KNOW AND IMAGINE TO INNOVATE!

COME ON! LET'S GET OUR HANDS DIRTY

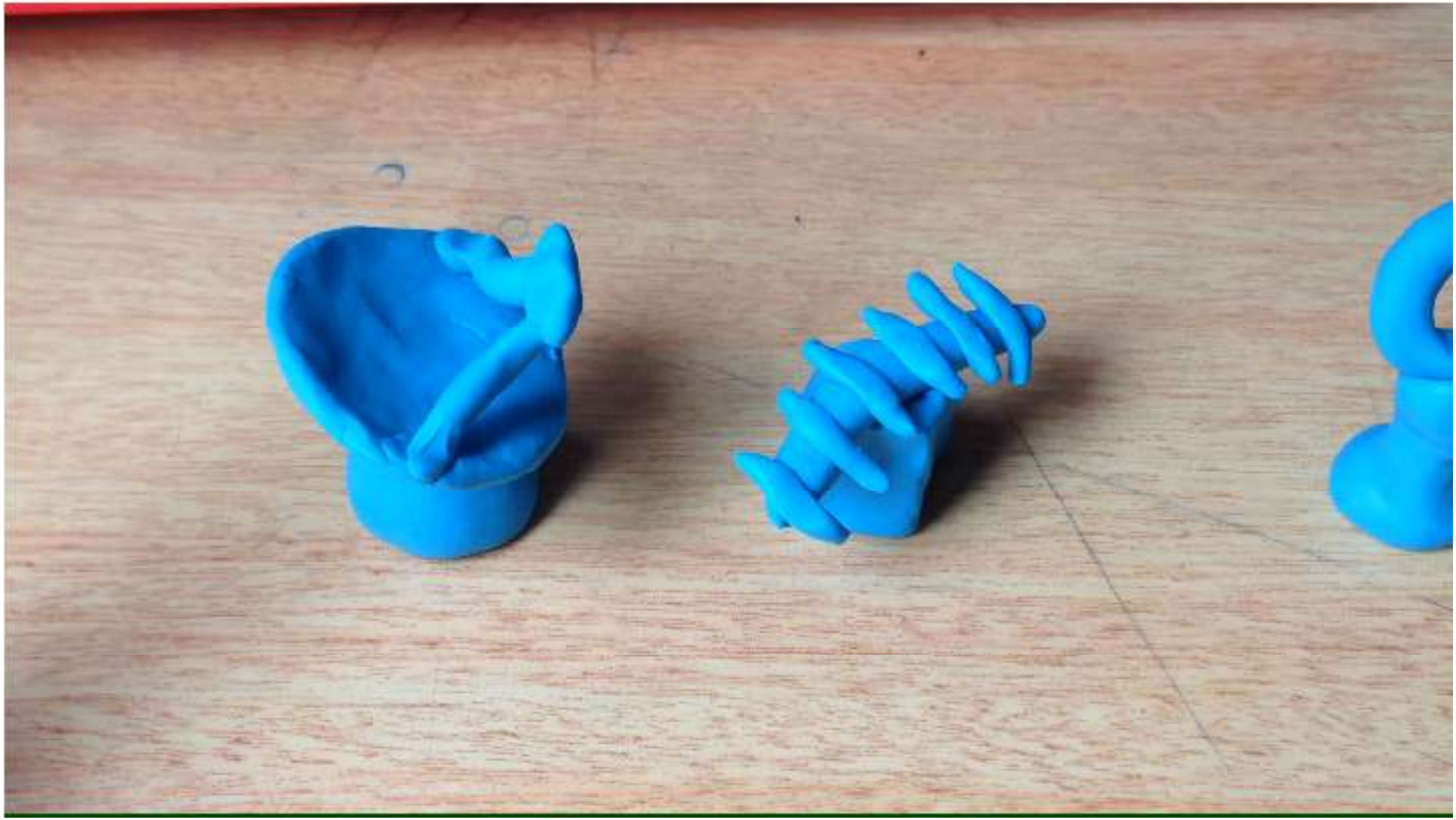
1) Create the shape of an antenna that you have seen before using the clay provided

2) Create the shape of an antenna that you have NOT seen before

3) Record a video using your mobile phone explaining your shapes

4) Share your video with others. Upload in this assignment submission (in our LMS, Putrablast)

ECC 4502: Antenna and Propagation
Assessing Students' Prior Knowledge/Skills Using Videos



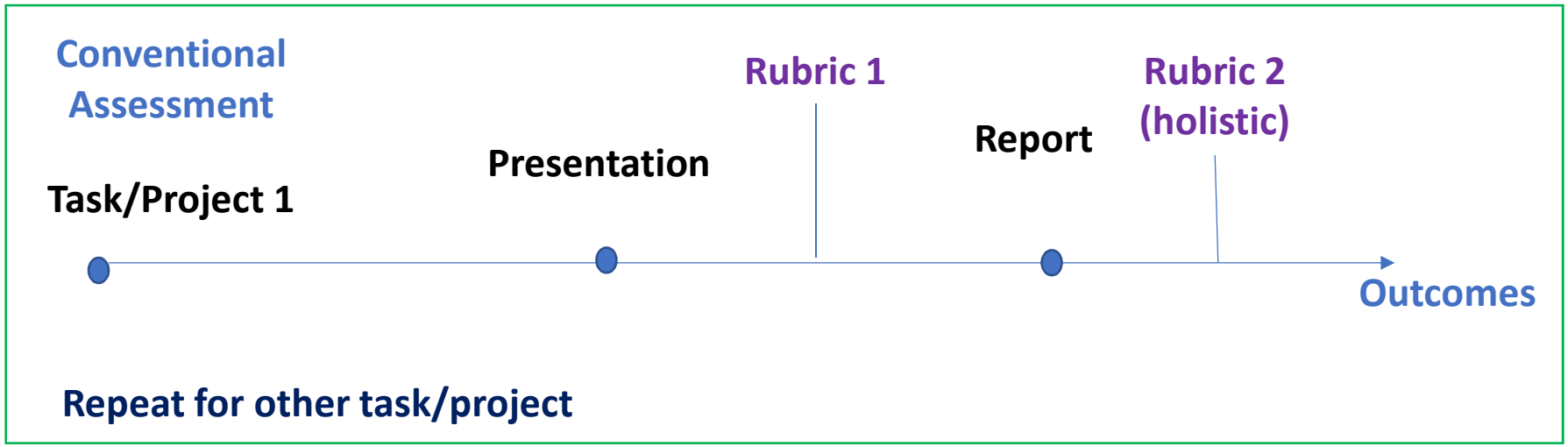
What do I get?

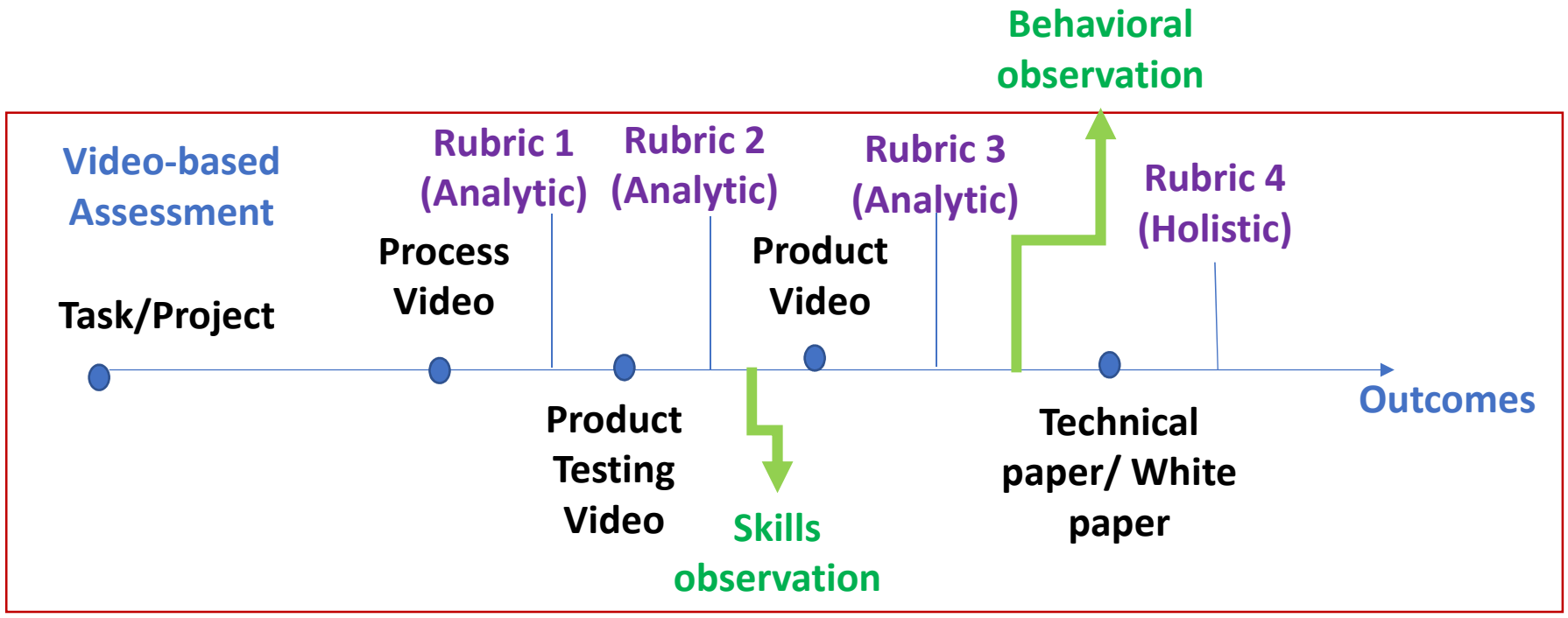
- Artefacts
- What students know about antenna shape and applications
- Level of English proficiency
- Level of confidence
- Level of creativity
- Level of curiosity
- Level of imagination
- And more….

What can I do?

- Analyze
- Give Feedback
- Build expectations
- Spark interest
- Plan for next
- (and remember their name and face)

Assessment checkpoints





Example of product testing video

Example of Product Video (how it works, fundamentals behind it)

PRACTICAL ASSESSMENT – CHALLENGES OF PERFORMANCE BASED ASSESSMENT

CONSIDER THIS:

- Time consuming?
- Reliability? Can you give score objectively?
- Observe the process until the students complete task. Do you have observation skills and memory?
- Situational?
- Students level of confidence?

During MCO/Social Distancing period, make sure:

- Students have access to materials to complete the tasks (within reach) – eg: data, readily-available materials

- Design and development process are recorded – eg: time-lapsed videos

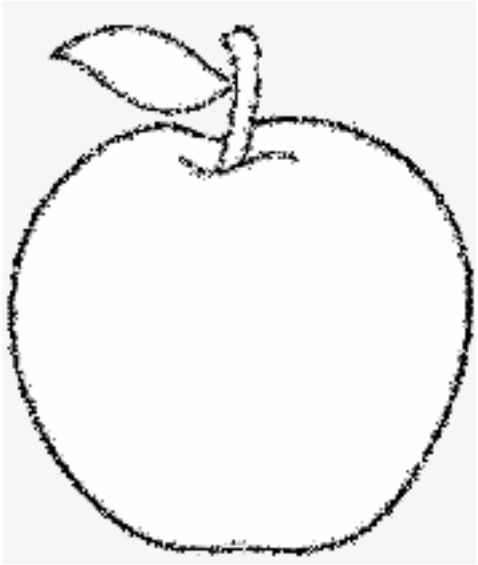
- Safety and security in completing the task

THIS CAN BE CHALLENGING, BUT BE CREATIVE

#newnorm

Instruction: Draw an apple.
Creative and interesting drawing will be given extra marks

Students' submission: A and B



A

B

1. Which one is correct?
2. Which one would you give more marks than the other?

CLARITY OF INSTRUCTION MATTERS

CONSISTENCY OF SCORING MATTERS

Common Features of Rubrics

Rubrics can be created in a variety of forms and levels of complexity, however they all contain three common features which:

- Focus on measuring a stated objective/domains/dimensions (performance, behavior, quality)
- Use a range of scales to rate performance
- Contain specific performance characteristics arranged in levels indicating the degree to which a standards has been met

Analytic and Holistic Rubrics

- **Analytic** rubrics identify and assess components of a finished product/ performance.

- **Holistic** rubrics assess student work as a whole.

Example of rubrics

PO6	Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering problems, with an understanding of the limitations			
	Not Demonstrated F	**Marginal C,C+,B-**	**Meet Expectations B, B+,A-**	**Exceed Expectations A**
	0-4	**5-6**	**7-8**	**8-10**
Modern Engineering Tools Selection	Identifies only basic tools for possible use in design with no supporting documentation	Identifies hardware and/or software tools that may be used in the task at hand with some supporting documentation	Identifies hardware and/or software tools that may be used for the task at hand with supporting documentation and discussion	Identifies new and most current hardware and/or software tools that may be used for the task at hand with supporting documentation and discussion
Modern Engineering Tools Application	Cannot use engineering tools to perform tasks even with guidance.	Uses appropriate engineering tools to perform tasks in a complex engineering activity with significant guidance.	Uses appropriate engineering tools to perform tasks in a complex engineering activity with minimal guidance.	Uses appropriate engineering tools to perform tasks in a complex engineering activity independently.
Evaluate Limitation	Unaware of tools error and limitation	Identifies the limitation of tools but does not account for them	Identifies the limitation of tools and accounts for some of the tools limitation	Identifies the limitation of tools and justify the use of a particular one and critically evaluates the limitations of tools

Developed by the Faculty of Engineering, UPM

There are many rubrics available online.

EXPLORE. ADAPT

"Learners need endless feedback more than they need endless teaching."

-Grant Wiggins, Less Teaching and More Feedback?, ASCD Inservice,

THANK YOU