

ODEL TRAINING

PRESENTER:

DR. DAVID M. NZUKI

davidm.nzuki@gmail.com

(E-Learning Consultant)

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Highlights

1. Interactive E-learning Facilitation
2. Web conferencing Applications: Pros & Cons
3. Virtual Laboratories (VLAB) and Open Educational Resources (OERs)
4. Administration of Online Exams
5. Interactive Content Development
6. Quality Assurance Tools for e-Content

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1. Interactive E-learning Facilitation

ODEL/STD/11: A university shall provide an interactive Learning Management System (LMS) that effectively supports e-learning.

The LMS shall provide for;

- 1) student-to-student interactions;
- 2) Student and instructor interactions; and
- 3) Evaluation of interaction

Commission for University Education (2014)

1. Interactive E-learning Facilitation

1. Categories of interactions;

- a) Asynchronous eg. Discussion forums, Wikis
- b) Synchronous: eg. Chats

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2. Evaluation of interaction: eg. Assignments, Quizzes

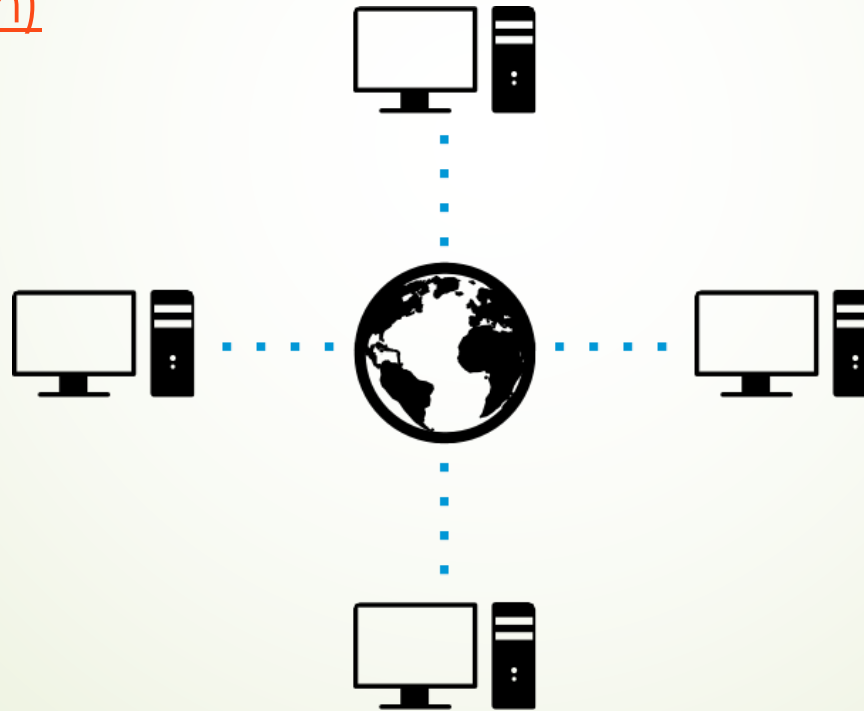
Task 1 : Create the following online activities

1. Add content
2. Assignment,
3. Forum,
4. Chat
5. Quiz
6. survey

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2. Web conferencing Applications: Pros & Cons

- ✓ Web Conferencing applications provide for online services in which users are enabled to hold live meetings, conferencing, presentations and trainings via the internet.
- ✓ Users connect to the conference either by telephone or computer's speakers and microphone through a VoIP connection
(www.3CX.com)



2. Web conferencing Applications

ODEL/STD/10: A university shall specify the media that are to be used for basic delivery of the programme and support to the learners.

Focus areas;

- A**: How **Accessible** the media is to the learners;
- C**: **Cost** of using it, both by the institution at installation and maintenance as well as learner cost;
- T**: It's **Teaching** strengths in relation to specific content;
- I**: Its capacity in creating **Inter-activity**;
- O**: **Organizational** requirements for development
- N**: How **Novel** it is
- S**: **Speed** within which it can be set up

Commission for University Education (2014)

2. Web conferencing Applications

Some Examples;

1. Cisco WebEX

- ✓ Free version provides for free video conferencing for up to 3 participants
- ✓ WebEx meetings participants' capacity is up to 1,000
- ✓ WebEx is preferred by business organizations of any size that prioritize on security

2. Microsoft Teams:

- ✓ Can host up to 300 participants
- ✓ Free plan with a sign-up of an email address though with limited benefits
- ✓ Other Teams plans: Business Basic & Business standard

2. Web conferencing Applications

3. Google Meet:

- ✓ Regular (100), G Suite Business 150, and the G Suite Enterprise 250

4. Zoom

- ✓ Basic (100), Pro (100), Business (300), Enterprise (500), and Enterprise Plus (1,000)

Task 2: Demonstrate usage of the following features;

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1. White board
2. Polling

2. Web conferencing Applications: Pros & Cons

Pros:

1. Reduced cost
2. High attendance
3. Saves time
4. Enhanced feedback
5. Ease of engaging resource persons

2. Web conferencing Applications: Pros & Cons

Cons:

1. High speed internet required
2. Lack of physical contact benefits
3. Limited control over audience
4. Reduced view of the audience
5. Possible health challenges

3. Virtual Laboratories and OERs

1. Virtual Laboratories:

- Refers to a computer-accessible laboratory which may be simulated by running software package or which may involve real remote experimentation
- The Internet is used to provide for the following:
 - i. Delivering content from a course web site where various teaching materials and course management functions are hosted.
 - ii. Delivering programs where multimedia animation or simulation is provided to replace physical experiments.
 - iii. Providing access to a Web-based laboratory that enables students to set up parameters and undertake experiments from a remote location

3. Virtual Laboratories

Examples of Virtual Experiments:

1. Physics:

- ✓ <https://phet.colorado.edu/en/simulation/faradays-law>
- ✓ <https://phet.colorado.edu/en/simulation/bending-light>

2. Maths

- ✓ <https://phet.colorado.edu/en/simulation/graphing-quadratics>

3. Virtual Laboratories

Benefits of Virtual labs:

1. Applicable in wide spectrum of fields
2. Safety
3. Reduced cost
4. Unlimited time to experiments
5. Ease of simplifying abstract concepts

3. Virtual Laboratories

Challenges :

1. High internet speed
2. Infrastructure
3. Low VL awareness among stakeholders
4. Attitude

Open Educational Resources (OERs)

OER Definition:

- Refers to the teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions ([UNESCO](#))

Creative Common (CC) Licenses

- CC licenses give everyone from individual creators to large institutions a standardized way to grant the public permission to use their creative work under copyright law



4. Administration of Online Exams

ODEL/STD/32: A university shall put in place appropriate assessment procedures that will ensure proper assessment of the learner's ability and achievement and communication of results to the learners.

Guidelines: The assessment procedures shall include:

1. Clear guidelines on setting, moderating, marking and processing examinations results.
2. Examination regulations;
3. Documented student assessment and achievement in the course with respect to e-learning, the institution shall document student assessment;
4. Performance of online students against intended learning outcomes;
5. Examination Security;
6. Personal Information Security

Commission for University Education (2014)

4. Administration of Online Exams

Strategies;

1. Open book exam
2. Isomorphic questions – Same questions with varied parameters
3. Randomization of questions
4. Browser lockdown to prevent the students from accessing other sites
5. Remote Proctoring technique: Exams system with capability to monitor students' behavior
6. Audit logging
7. IP-based authentication and authorization
8. Data encryption

4. Administration of Online Exams

Benefits:

1. Cost-effective
2. Scalable way to convert traditional exams to online mode.
3. Independent of the type of computing devices used by the candidates
4. Ease of marking, grading, moderation, and generation of reports

Challenges:

1. Electricity
2. Students devices' faults
3. Exams System failure
4. IT literacy

5. Interactive Content Development

ODEL/STD/16: For each media in use the university shall have in place a clear process of preparation of course materials and orientation to ensure quality material is “fit for purpose”.

Guidelines:

1. Identification of the course team to include:
 - i. Course writer;
 - ii. Media producers;
 - iii. Editors/instructional designers;
 - iv. Reviewers

5. Interactive Content Development

Guidelines *(Continued)*;

2. Training of the course team on writing for ODEL students by expert in structural designers;
3. Writing and illustrating the course materials;
4. Reviewing the course materials by peer and other experts;
5. Editing the course materials;
6. Pre-testing of the materials on a trial basis; and
7. Production of the course materials ready for use

5. Interactive Content Development

Attributes of quality of an e-learning course:

- 1. Learner-centred content:** E-learning curricula should be relevant and specific to learners' needs, roles and responsibilities in professional life.
- 2. Granularity:** e-content should be segmented to facilitate assimilation of new knowledge and to allow flexible scheduling of time for learning.
- 3. Engaging content:** Instructional methods and techniques should be used creatively to develop an engaging and motivating learning experience.
- 4. Interactivity:** Frequent learner interaction is needed to sustain attention and promote learning.
- 5. Personalization:** Be customizable to reflect learners' interests and needs; in instructor-led courses, tutors and facilitators should be able to follow the learners' progress and performance individually (FAO, 2010)

5. Interactive Content Development

Constructive Alignment:

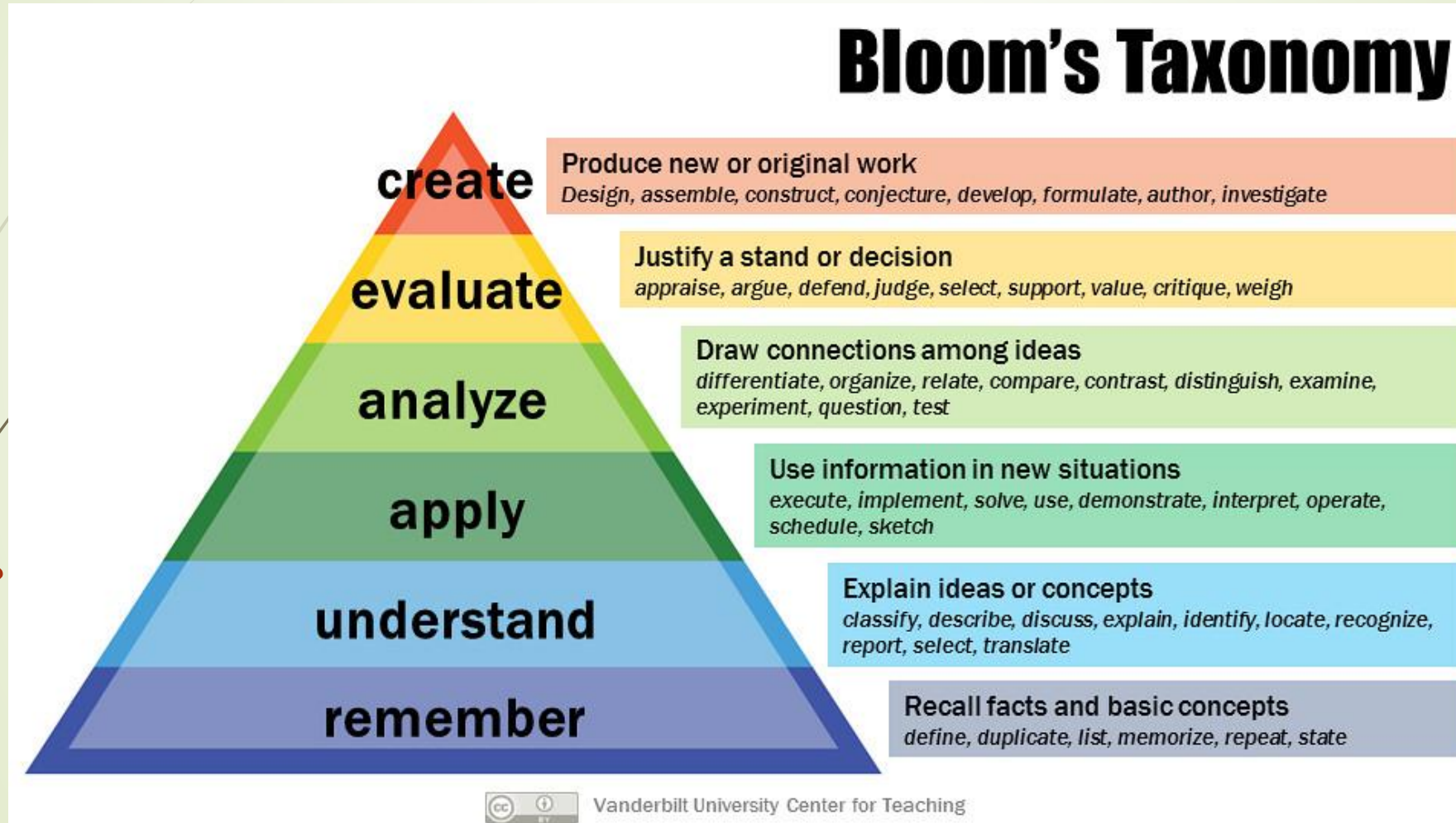
- This concept has two aspects;
 - i. “**Constructive**” aspect: refers to the idea that students construct meaning through relevant learning activities (Biggs, 2003).
 - ✓ This is informed by the Cognitive Psychology and Constructivist theories which links new content to concepts and experiences in the learners memory, and extrapolation to possible future scenarios (Wikipedia, 2019)
 - ii. “**Alignment**” aspect: refers to what the teacher does to support the learning activities appropriate to achieving the desired learning outcomes

5. Interactive Content Development

- Constructive alignment is the underpinning concept behind the current requirements for programme specification, declarations of learning outcomes (LOs) and assessment criteria, and the use of criterion based assessment (Wikipedia, 2019)

5. Interactive Content Development

Blooms Taxonomy



5. Interactive Content Development

Using Constructive Alignment to Foster Teaching Learning (Preeti, 2019).

Levels of Learning with Description		Measurable verbs with Possible Question stems		Potential Activities
Create	The ability to develop a new structure or pattern from diverse components.	Generate, Plan, Produce, Compose, Construct, Design, Develop, Devise, Design	What do you predict will be the ending? Judge whether.....is good or bad. Defend your opinion. If you were given a choice how would you solve theProblem?	Compose a job application for an advert. Produce a resume Create a new report Plan a proposal for a business/service in future Construct a role play Devise potential solutions for a given problem Design a PPT presentation
	<i>Learners build segments together to construct a whole, with focus on creating a new structure.</i>			

5. Interactive Content Development

- **Learning Outcomes (LO):**
- The root LOs root statement should address the learner directly;
 - ✓ Eg. *By the end of this lesson, you will be able to;*
- The LOs should be stated in terms that require students to demonstrate their understanding
- The LOs should be clear about the levels of understanding required from the learners in regard to the content. Examples;
 1. *Define the concept of organizational culture*
 2. *Construct a right-angled triangle*

5. Interactive Content Development

Task 1: Identify a suitable topic/sub-topic in one of the units that you teach

- a) Write a possible introduction to the lesson
- b) State at least two Learning Outcomes of the lesson

15. Interactive Content Development

E-TIVITY:

- This is a framework which describes the facilitation of active learning in an online environment.
- E-tivity involves learners interacting with one another and with the course tutor (i.e. e-moderator) in an online communication environment in order to complete a particular task (Salmon, 2002)

<i>Numbering and pacing and sequencing</i>	Number as follows: week. sequence of task. (e.g. 2.4 would be week 2, task 4)
Title	<ul style="list-style-type: none"> • Enticement to open the invitation to take part. • Very brief descriptor. • Be inventive and creative but keep it very short.
Purpose	<ul style="list-style-type: none"> • Explain. If you complete this activity you will be able to... • You will understand better how to... • You will find it essential for assignment X... • Use verbs! • Link directly with your outcomes and/or objectives for the unit, module, course, and programme.
Brief summary of overall task	<ul style="list-style-type: none"> • If you find you have more than one major activity or question, divide into more e-tivities. • Clear brief instructions on how to take part and what to do. • One question or task per message. • When you have written this part, check that the task is self-contained.
Spark	<ul style="list-style-type: none"> • Spark to light the fire for the topic, interesting little intervention. • Directly link with topic for this week. • Opportunity to expose 'content' but with the purpose of a <i>spark to start a dialogue with others</i>.
Individual contribution	<ul style="list-style-type: none"> • Give clear instructions to the individual participant as to what he or she should do in response to the spark. • Specify exactly what you are expecting the participant to do and in what media (e.g. Wiki, discussion board, audio file etc.) and by when (i.e. the day and date). Tell them the length of contribution expected. • Create a link from this part of the invitation to the location for posting.
Dialogue begins	<ul style="list-style-type: none"> • Request response from an individual to others, what kind of response, how long, where and by when. • Key point: students come online to see if others have read and responded. Make this happen • Create a link from this part of the invitation to the location for posting the response to others.
E-moderator interventions	<ul style="list-style-type: none"> • Clearly indicate what the e-moderator will do and when. • Explain that the e-moderator will: summarise, give feedback and teaching points and close the e-tivity, and when this will happen.
Schedule and time	<ul style="list-style-type: none"> • Total calendar/elapsed time allowed for this e-tivity. • Completion date, • Estimate total study time required (e.g. 2 x 1 hour)
Next	<ul style="list-style-type: none"> • Link to next e-tivity • You can suggest additional resources to help with the task-indicate whether they are required or optional, place the links at the end of the invitation.

Lesson Heading

Example;

- ✓ Lesson One: Volume of a Cylinder

1.1 Introduction

- ✓ The introduction about the lesson should be brief
- ✓ This section should address the learner directly

Example:

This lesson introduces you to the basics about the volume of a cylinder. You will learn about how to construct a cylinder and how to determine its volume.

1.2 Learning Outcomes

- ✓ The root sentence that acts as a prelude to the learning outcomes should address the learner directly

Lesson Structure (Continued)

Example: By the end of this lesson, you will be able to;

- ✓ The learning outcomes should be measurable, hence the correct verbs that clearly imply the cognitive level

Example:

1.2.1 Construct a cylinder by using the provided materials

1.2.2 Calculate the volume of a cylinder

Brief introduction section about the content covered under every learning outcome

1.2.1 Construction of a cylinder

- ✓ The learner should be introduced to the concept related to the construction of a cylinder

Example:

You learn how to construct a cylinder by using the provided dimensions and materials.

E-Tivity 1.2.1: Construction of a cylinder

ODeL Training

<A detailed E-Tivity table should be reflected in this section>

1.2.2 Volume of a cylinder

- ✓ The learner should be introduced to the concept related to the determination of the volume of a cylinder

Example:

You will learn how to determine the volume of the cylinder that you have constructed in section 1.2.1.

E-Tivity 1.2.2: Volume of a cylinder

<A detailed E-Tivity table should be reflected in this section>

1.3 Assessment Questions

- ✓ This section should reflect questions which will enable the learner to gauge his/her level of mastery of the content
- ✓ The questions should adequately cover the content covered in all the learning outcomes of the lesson
- ✓ Provide the possible responses to all the questions for purpose of enabling immediate feedback to the learner.

1.4 References

- ✓ The references of all resources that have been used in this lesson should be reflected in this section

5. Interactive Content Development

Task 2: Refer to Task 1 then;

- a) Write an introductory section for the first Learning Outcome (LO)
- b) Search for a suitable spark for the LO
- c) Develop an e-tivity for the LO
- d) State at least two assessment questions

6. Quality Assurance Tools for e-Content

- The tools are useful in ensure adherence to e-content development guidelines.
- An institution can develop such a tool or adopt/adapt an existing quality assurance tool.

Example: Quality Assurance Rubric for Blended Learning
(Commonwealth of Learning, 2020): [Link](#)

- ✓ The tool is issued through Creative Commons License

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