LOBE_LITE: Learning Object Evaluation Instrument (Abridged Version)

In this document, you will find all the information necessary for thorough understanding of when and how to use LOBE_LITE.

When to use LOBE_LITE?

Use LOBE_LITE when you want to do a quick evaluation of the quality of the selected learning object. It has 9 questions along 3 dimensions of quality evaluation - content quality (2 questions), pedagogical alignment (4 questions) and technology integration (3 questions). If you want to test the support the learning object provides for collaborative learning, then LOBE_LITE will add an additional question for you under pedagogical alignment.

NOTE:

- LOBE_LITE is for quick but not thorough evaluation. Hence, the robustness of the instrument cannot be vouched for. For thorough evaluation, use LOBE_PREMIUM (38 questions) that has been tested for validity & reliability.
- To maintain inter-rater reliability with LOBE_LITE, we recommend that multiple evaluators from your team should go through the instrument together before they start evaluation. They should decide together what should be the condition set to mark ‘Inadequate’ for a particular question. Similarly, for the other points in the scale – ‘Target’, ‘Almost’, ‘Missing’.

How to use LOBE_LITE?

1. Select a learning object you want to evaluate. A learning object may correspond to a topic within a chapter.
2. Before starting evaluation, go through different components of the learning object once.
3. While evaluation, first read the hints given against each question in this document in the columns –
    - ‘Which components to consider’ specifies which components of the learning object to consider during evaluation of that question.
    - ‘What is ‘Target’ for this question’ helps you know what the ‘Target’ condition is for scoring that question.
    - ‘What does this term mean’ gives more explanation about the educational technology terms used in the question.

- ‘Note before scoring’ column contains additional guidance on how to evaluate that particular question.

4. Now, go back to the LOBE_LITE checklist and record your score for each question. Simply tick against the 4-point scale – Missing, Inadequate, Almost and Target.
5. The additional ‘Remarks’ column in LOBE_LITE checklist is for you to give specific recommendations to improve quality of the learning object for that particular question.

Content Quality Questions	What does ‘this term’ mean?	Which components to consider?	What is ‘Target’ for this question?
C1. Is the content accurate and grade appropriate?	‘Grade appropriate content’ means - the content is appropriate for that grade. For example, introducing the 5 states of matter is grade appropriate for Grade 9 but not for Grade 5.	Consider the content across all components of the learning object like dynamic visualization, learning activities, examples, graphs if any etc. and score on the overall content accuracy.	The content contains correct facts, explanations, examples or graphical representations. The content presentation is unlikely to cause any misconception for the learner.
C2. Are the assessment questions in the learning object and their solutions correct, clear, unambiguous and grade appropriate?	‘Grade appropriate assessment’ means the difficulty level of the question should be commensurate to the skill level of the students of that grade.		The assessment questions as well as their solution contain correct facts and accurate scientific explanations. The wording of the questions and solutions should be clear and complete for the learner. The question should not be open to more than one interpretation. An example of an ambiguous question is: Write a short note on WWII.

Pedagogical Alignment Questions	What does 'this' term mean?	Which components to consider?	What is 'Target' for this question?	Note before scoring
P1. Does the content and the assessment questions contain appropriate context?		Consider the content in the following components of the learning object - dynamic visualization, learning activities, examples.	Context in content: The context should motivate the learner to care about the topic. For example, a motivational introductory scenario or a real life example or application of the topic. Context in assessment question: The context is appropriate when it is relevant and sufficient for the specific question. For e.g., if a word problem in Mathematics is set in context of a baseball game, then the context is not meaningful for Indian students.	• Score on the overall quality of context provided. If you find contextualization completely missing in either one of content or assessment question, please mark as Inadequate. • Context is not required in all assessment questions. However, there should be sufficient questions containing a relevant and meaningful context.
P2. Are the assessment questions in the learning object aligned to the stated learning objectives?	Aligned to learning objectives mean - If assessment questions are at a lower cognitive level than the learning objectives, then there is no source of evidence to test if the learning objectives have been achieved. On the other hand, if the assessment questions are higher than the learning objectives, then it will not be fair to learners		All assessment questions should be aligned to the corresponding level of the stated learning objectives.	
P3. Has both higher order thinking skills (HOTS) and lower order thinking skills (LOTS) been sufficiently addressed in the learning object?	Higher order thinking skill (HOTS) covers apply level and above of Revised Bloom's Taxonomy.	Consider the content in the following components of the learning object - examples, learning activities, assessment questions.	Ideally, dynamic visualization should include those HOTS examples or learning activities that are important for the topic.	Whether an example, activity or assessment is at HOTS level, that depends on how the material has been presented to the learners. For example, there is an activity or assessment requires application of a formula for solution. But the formula has already been displayed in the learning object. Then all that the learners are required to do is remember that formula and plug in the given values to solve the given

				problem. In such cases, the cognitive level of the learning activity or assessment is no longer Apply, but comes down to Understand level.
P4. Does the learning object promote learner-centric learning?		Consider the content in the following components of learning object - dynamic visualization & learning activities	The dynamic visualization and learning activities should allow learners to construct understanding of the topic on their own by connecting the content to what they already know, organizing and making sense of the content, testing and revising their understanding, applying the content and so on. This can be promoted by providing sufficient relevant activities where learners are required to do the above. Such activities are essential in getting learners engaged with the content and for effective learning.	Give overall score on learner-centricity of the learning object.
P5. Does the learning object provide support to learners to do group activity?	The structure of the learning/assessment activity should be such that there is high probability that all learners in the class will participate in small-group (2-3 members) activity. The group activity should ensure learners engage in logical argumentation with their group members. For example, calculating & showing group scores for an assessment activity.		Consider the following components of the learning object - learning activities, assessment questions**.**	This question to be evaluated only if you want to evaluate the support the learning object provides for collaborative activity.

Technology Integration (T) Questions	Which components to consider?	What is 'Target' for this question?	Note before scoring
T1. Does the learning object include interactivity features that are meaningful for learning the corresponding content?	Consider the following components of a learning object - dynamic visualization, learning activities, or assessments.	The choice of interactivity features in the learning object should be determined by the learning purpose they serve (Refer the examples below). Also, superfluous interactivities should be avoided. Examples of interactivity mapped to purpose: • for navigation – use back/next, play/pause buttons • for choosing from a set of values – - if no. of values < 5 , use radio buttons; - if no. of values >5, use drop-down • for control/modify variables – use slider bars for matching and selection – use drag & drop	Examples of interactivity features : Slider bars, input boxes, drag & drop, drop-down, activity question popping in between content presentation
T2. Does the user have appropriate control of navigation and pace within the learning object?		The learning object should provide the user the flexibility to - *i)* go from one part of the learning object to another as desired, *ii)* go back & forth, *iii)* interact with the learning object at their desired rate (for example slow down / speed up an animation) contain obvious exit options.	
T3. Is the interface easy to use for a new user?		The interface of the learning object should be: *i)* intuitive to a new user, *ii)* information should be easy to find, *iii)* organization and hierarchy of content should be clear and consistent, *iv)* screens and buttons should be consistently placed, labels and legends should be placed near the graphics.	