



EASA

European Aviation Safety Agency

Balancing the Technical, Pedagogic and Linguistic in the Development of Learning Objectives (LOs) and Syllabus Content

Area 100 KSA Workshop
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Syllabus and LO development

- The LOs are **brief statements** which describe what students will be **expected to learn** by the end of the course of training.
- They are the **basis** upon which the course, and the effective teaching of that course, is constructed.
- **Effective LOs** must be...
 - **current, relevant, and up to date** reflecting **applicable rules, emergent technology, and state-of-the-art practices**
 - **suitable** to allow for a **robust examination** of the syllabus for the applicable licence categories
 - targeted with an appropriate '**depth of knowledge**' and be both **unambiguous** and **easily understandable**

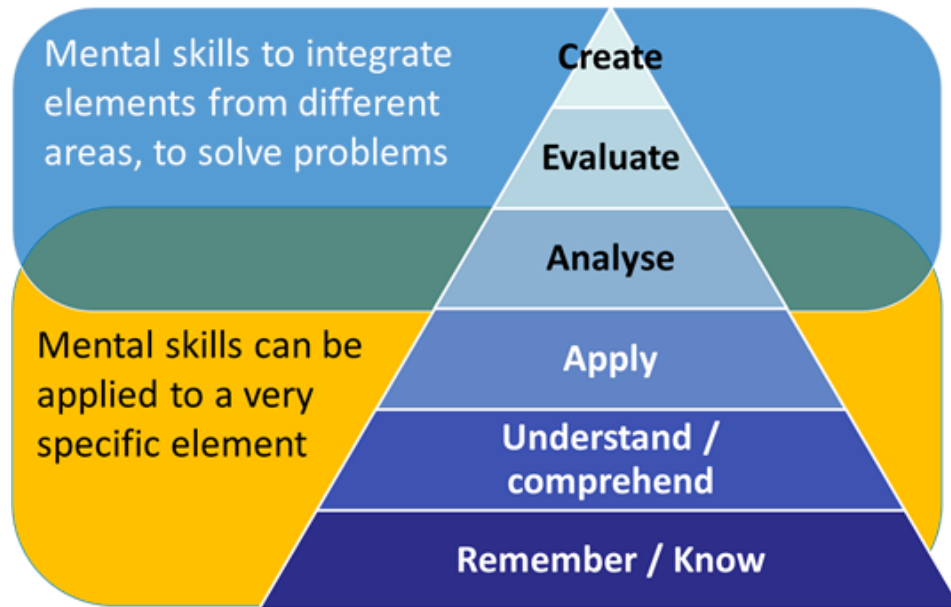


The Purpose of the LOs

- LOs are a way to establish and articulate **academic expectations** for students so they know precisely what is expected of them.
- When LOs are clearly communicated to students, students will be **more likely** to **achieve** the presented goals.
- Conversely, when LOs are **unclear**, students may not know what is expected of them, which may then lead to **confusion**, **frustration**, or other factors that could **impede** the learning process.
- A **pedagogical method** for LO development was created...



Bloom's Taxonomy and the LOs



➤ The **depth** or **level** of **comprehension** to be achieved during the training, and the corresponding level of attainment to be examined or assessed, is based on Bloom's taxonomy.

➤ In each case, the level of knowledge or skill is signified by the LO **verb**.

➤ B. Bloom (1956) and Anderson & Krathwohl (2001)



The Taxonomy of the LOs

- The sequential **increasing levels** of required cognitive learning are identified by the LO verb.
- The lowest level **‘remember’** is signified by verbs such as:
- **‘state’, ‘list’, ‘define’ and ‘recall’**

“**State** that the structure of the regulatory material related to EASA involves:

- hard law (regulations, implementing rules);
- soft law (certification specifications, acceptable means of compliance, guidance material).”



The Taxonomy of the LOs

- The next higher level of '**understand**' is signified by verbs such as:

'describe' and 'explain'

"**Describe** measured performance and **explain** how it is determined."

"**Explain** the operator's and commander's responsibility concerning portable electronic devices (PEDs)."

- The third level of '**apply**' is signified by the verbs:

'calculate', 'interpret', 'relate' and 'solve'

"**Calculate** the actual track with appropriate data of heading and drift."

"Decode and **interpret** significant weather charts (low, medium and high level)."



The Taxonomy of the LOs

- The next higher level of **'analyse'**, would be signified by the verbs:

'plan', 'discuss', 'evaluate' and 'create'

- are less common due to the style and time limitations applicable in the theoretical knowledge examinations.

“Explain how the accelerate-stop distance is determined and **discuss** the deceleration procedure.”

“**Evaluate** the effect of wind and altitude on air distance.”

“**Discuss** the established expression ‘safety first’ in a commercial entity.”

“**Discuss** the advantages and disadvantages of fixed-pitch and constant-speed propellers.”



The Taxonomy of the LOs

- The LOs used in Area 100 KSA differ in that they require a **combination** of knowledge and skills.
- The verbs:

‘demonstrate’ and ‘show’

- have been used to **supplement** the cognitive LO verbs for the Area 100 KSA LOs.

“**Demonstrate** the ability to identify threats, errors and undesirable aircraft states.”

“**Show** the ability to plan, prioritise and schedule tasks effectively.”



The Taxonomy of the LOs

- **‘Demonstrate’** means **the selection and use** of the appropriate knowledge, skills and attitudes to achieve an effective outcome.
- It signifies a **high taxonomy level** and would normally be assessed using **multiple indicators** from more than one core competency.
- **‘Show’** means more simply **the attainment** of knowledge, skills or attitude.
- It signifies a **lower taxonomy level** than ‘demonstrate’ and would normally be assessed by a **single indicator**.



LO Phraseology and the ECQB

➤ Linguistic considerations:

- Candidates are to be tested for their subject knowledge, **not their English level.**
- It is important to remember that some candidates for the theoretical knowledge exam have **a primary language other than English.**
- **ICAO Level 4 'operational level'** considered to equate to Common European Framework of Reference for Languages (CEFRL) band **B1 'Independent User - Threshold or Intermediate'.**
- Terms and phrases in the LOs which exceed this level may be used in ECQB questions.
- The Syllabus, LOs and ECQB questions may be **translated** which is another important reason to ensure that there is adequate clarity maintained throughout.



Syllabus and LO compliance

- Adherence to the LOs should become part of the ATO's **compliance monitoring scheme** as required by ORA.GEN.200.
- Lesson **plans** should ensure **complete** syllabus and LO **coverage**.
- LOs identified as **Basic Knowledge** (BK) must still be comprehensively covered on the course.
- Application of Area 100 KSA principle **throughout** training course....

“Tell me and I forget, teach me and I remember, involve me and I learn”



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Thank you for your attention

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