

BLOOM TAXONOMY AND SQF MILOF

LoD2

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CONTETNT

- ▶ Bloom taxonomy for the cognitive domain, Used verbs
- ▶ SQF MILOF - Used verbs

WHAT ARE LEARNING OUTCOMES?

The overall aim of the Bologna Agreement (1999) is to improve the efficiency and effectiveness of higher education in Europe. One of the main features of this process is the need to improve the traditional ways of describing qualifications and qualification structures.

WHAT ARE LEARNING OUTCOMES?

Learning outcomes are defined as statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning

WHAT ARE LEARNING OUTCOMES?

Most learning outcomes describe evidence of learning in areas like knowledge, comprehension, application, analysis, synthesis and evaluation. This area is known as the cognitive domain.

WHAT ARE LEARNING OUTCOMES?

When deciding on the number of learning outcomes to write, the general recommendation in the literature is about six learning outcomes per module. The most common mistake in writing learning outcomes is to use vague terms like *know*, *understand*, *learn*, *be familiar with*, *be exposed to*, *be acquainted with* and *be aware of*.

WHAT ARE LEARNING OUTCOMES?

It is important to link learning outcomes to teaching and learning activities and assessment. This may be done with the aid of a grid to assist in checking that the learning outcomes map on to the teaching and learning activities as well as to the mode of assessment.

WHAT IS THE DIFFERENCE BETWEEN AIMS, OBJECTIVES AND LEARNING OUTCOMES?

The **aim** of a module or programme is a broad general statement of the teaching intention, i.e. it indicates what the teacher intends to cover in a block of learning.

WHAT IS THE DIFFERENCE BETWEEN AIMS, OBJECTIVES AND LEARNING OUTCOMES?

The **objective** of a module or programme is usually a specific statement of teaching intention, i.e. it indicates one of the specific areas that the teacher intends to cover in a block of learning.

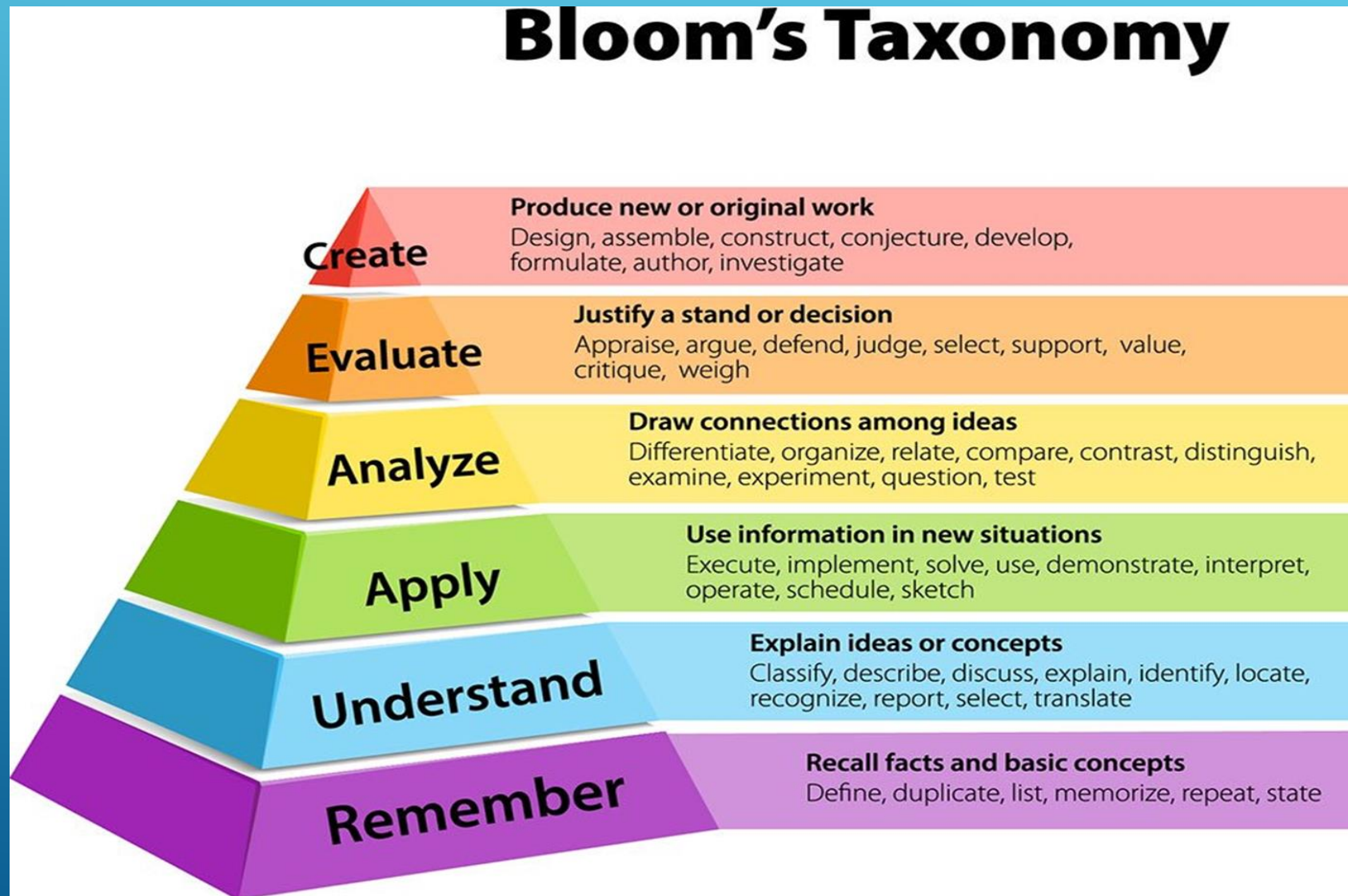
WHAT IS THE DIFFERENCE BETWEEN AIMS, OBJECTIVES AND LEARNING OUTCOMES?

One of the great advantages of learning outcomes is that they are clear statements of what the student is expected to achieve and how he or she is expected to demonstrate that achievement. Thus, learning outcomes are more precise, easier to compose and far clearer than objectives.

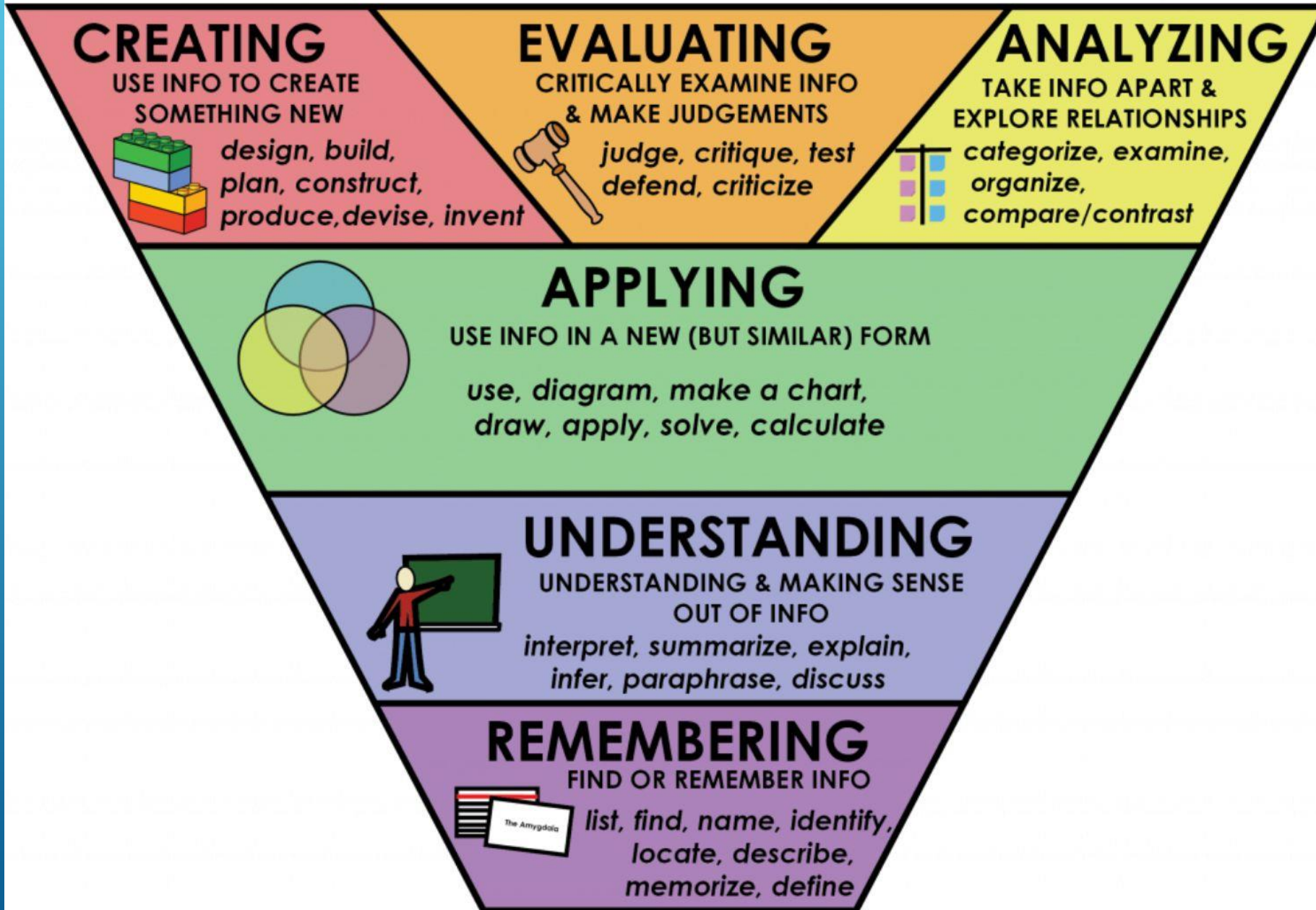
LEARNING OUTCOMES AND COMPETENCES

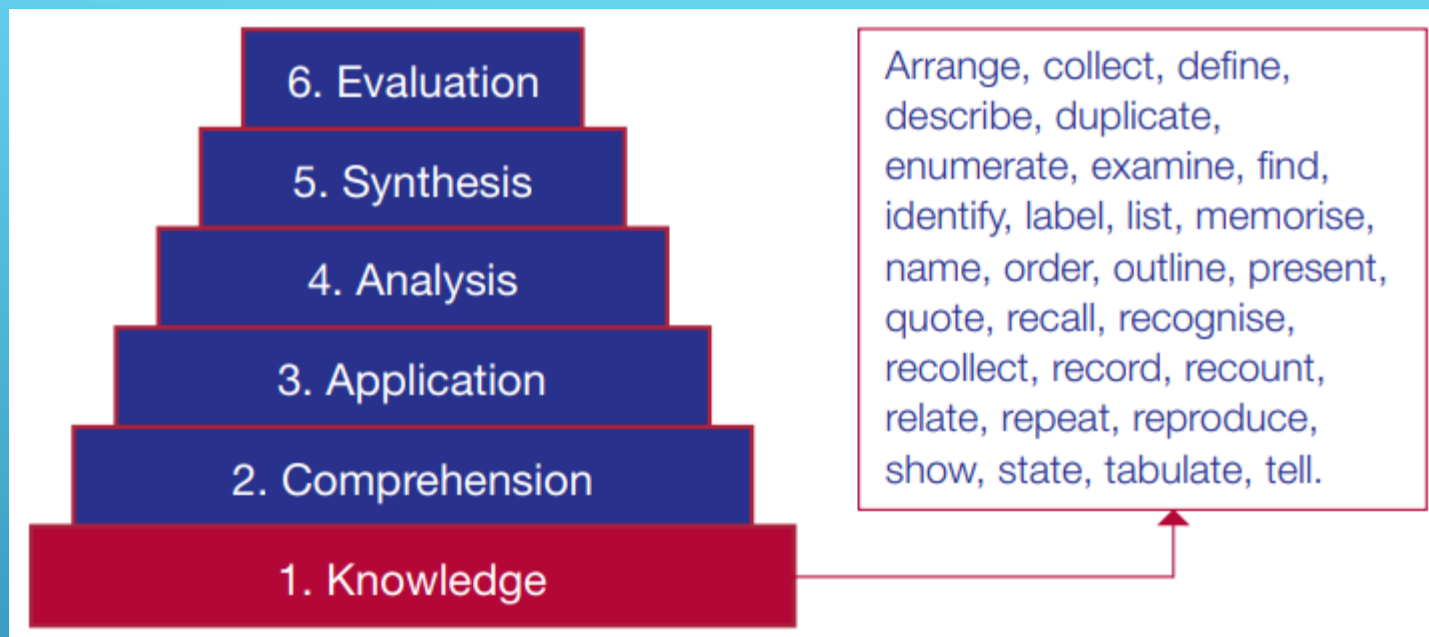
Competences are defined as “a dynamic combination of attributes, abilities and attitudes. Fostering these competences is the object of educational programmes. Competences are formed in various course units and assessed at different stages. They may be divided in subject area related competences (specific to a field of study) and generic competences (common to any degree course).”

HOW DO I WRITE LEARNING OUTCOMES?



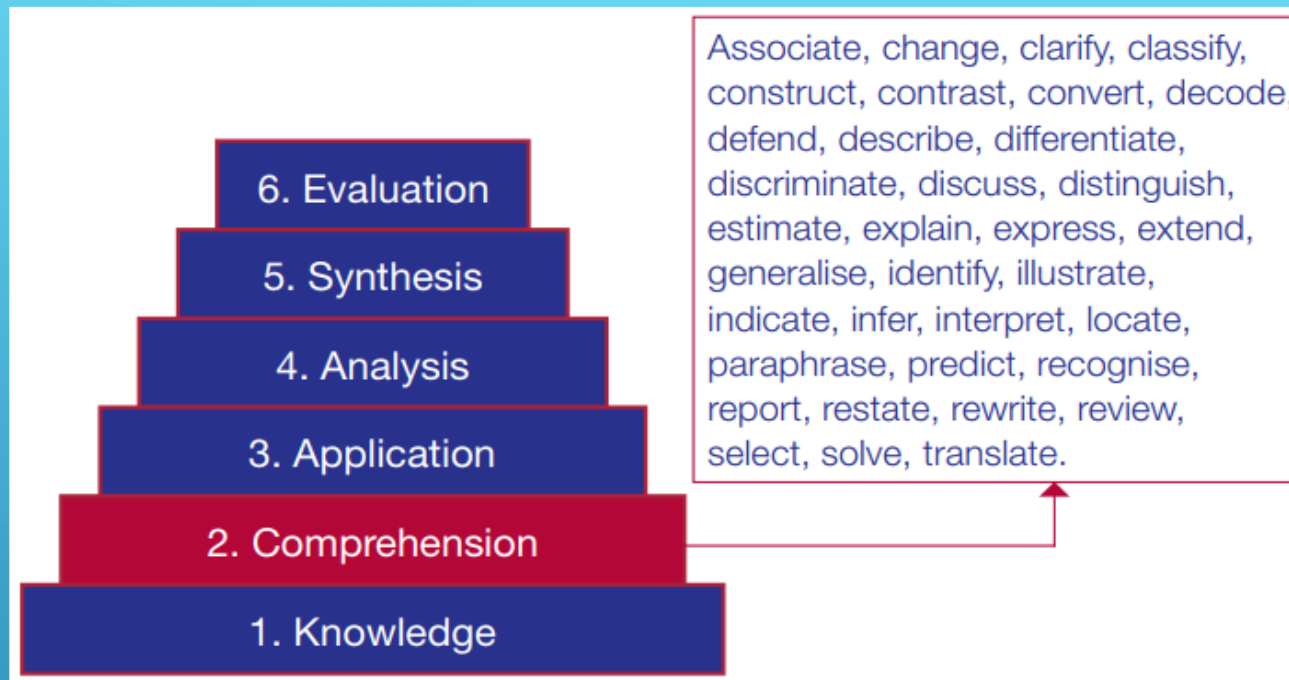
BLOOM'S TAXONOMY





Some **examples** of learning outcomes that demonstrate evidence of **knowledge** are:

- Recall genetics terminology: homozygous, heterozygous, phenotype, genotype, homologous chromosome pair, etc.
- Identify and consider ethical implications of scientific investigations.
- Describe how and why laws change and the consequences of such changes on society.
- List the criteria to be taken into account when caring for a patient with tuberculosis.
- Define what behaviors constitute unprofessional practice in the solicitor - client relationship.
- Describe the processes used in engineering when preparing a design brief for a client.



- ▶ Some **examples** of learning outcomes that demonstrate evidence of **comprehension** are:
- ▶ • Differentiate between civil and criminal law.
- ▶ • Identify participants and goals in the development of electronic commerce.
- ▶ • Predict the genotype of cells that undergo meiosis and mitosis.
- ▶ • Explain the social, economic and political effects of World War I on the post-war world.
- ▶ • Classify reactions as exothermic and endothermic.
- ▶ • Recognise the forces discouraging the growth of the educational system in Ireland in the 19th century

GENERAL GUIDELINES FOR WRITING LEARNING OUTCOMES

When writing learning outcomes, it is helpful to focus on what you expect students to be able to do or demonstrate at the end of the module or programme.

It is important that learning outcomes are expressed in simple and unambiguous terms so that they are clearly understood by students, teachers, colleagues, employers and external examiners.

GUIDELINES WHEN WRITING LEARNING OUTCOMES:

- Begin each learning outcome with an active verb, followed by the object of the verb followed by a phrase that gives the context.
- Use only one verb per learning outcome.
- Avoid vague terms like know, understand, learn, be familiar with, be exposed to, be acquainted with, and be aware of. These terms are associated with teaching objectives rather than learning outcomes.
- Avoid complicated sentences. If necessary use more than one sentence to ensure clarity.
- Ensure that the learning outcomes of the module relate to the overall outcomes of the programme
- The learning outcomes must be observable and measurable.
- Ensure that the learning outcomes are capable of being assessed.

GUIDELINES WHEN WRITING LEARNING OUTCOMES:

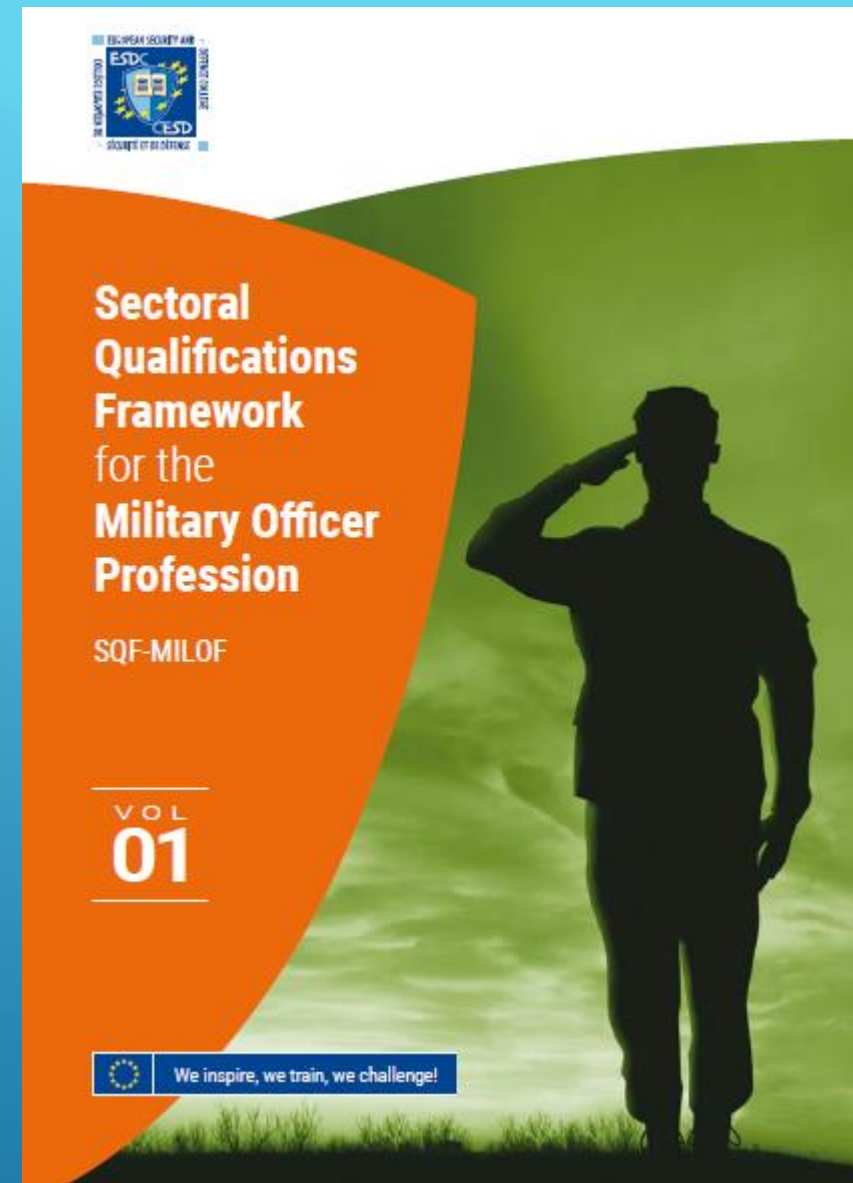
- When writing learning outcomes, bear in mind the timescale within which the outcomes are to be achieved.
- Bear in mind how these outcomes will be assessed, i.e. how will you know if the student has achieved these learning outcomes? If the learning outcomes are very broad, they may be difficult to assess effectively. If the learning outcomes are very narrow, the list of learning outcomes may be too long and detailed.
- Before finalising the learning outcomes, ask your colleagues and possibly former students if the learning outcomes make sense to them
- When writing learning outcomes, try to avoid overloading the list with learning outcomes which are drawn from the bottom of Bloom's Taxonomy

CHECKLIST TO DOUBLE CHECK THE WRITTEN LEARNING OUTCOMES:

- Have I focussed on outcomes not processes, i.e. have I focussed on what the students are able to demonstrate rather than on what I have done in my teaching?
- Have I begun each outcome with an active verb?
- Have I used only one active verb per learning outcome?
- Have I avoided terms like *know*, *understand*, *learn*, *be familiar with*, *be exposed to*, *be acquainted with*, and *be aware of*?
- Are my outcomes observable and measurable?
- Are my outcomes capable of being assessed?
- Have I included learning outcomes across the range of levels of Bloom's Taxonomy?
- Do all the outcomes fit within the aims and content of the module?
- Have I the recommended number of outcomes (maximum of nine per module)?
- Is it realistic to achieve the learning outcomes within the time and resources available?

SQF-MILOF LEARNING OUTCOMES:

Qualification - a formal outcome of an assessment and validation process which is obtained when a competent authority determines that an individual has achieved learning outcomes to given standards.



SQF-MILOF LEARNING OUTCOMES: ASPECT OF COMPETENCE AREAS

Competence Area	Description
Military service member	This area describes the officer's ability to operate as a soldier as part of constituted military structure in accordance with the national and multinational military doctrine and law.
Military technician	This area describes the officer's ability to operate a weapons platform/ system and command and control communications, computers, intelligence, surveillance and reconnaissance (C4ISR) systems, and to sustain military operations.
Leader and decision maker	This area describes the officer's role as a leader and manager of subunits/ units/formations, capable of making decisions and influencing the conditions of their organisation.
Combat-ready role model	This area describes the officer's ability and willingness to carry out missions that involve the highest foreseeable risks, and to ensure professional and ethical standards across all military activities.
Communicator	This area describes the officer's effectiveness as a communicator of organisational messages, conveying professional ideas and messages up and down the chain of command and in communication with the external world; the officer as a negotiator and mediator of conflictual situations.
Learner and teacher/coach	This area covers lifelong learning, the management of personal and professional development requirements, for the officer themselves and for others.
Critical thinker and researcher	This area describes the officer as a critical thinker and researcher, a pro-active interpreter of facts and situations, able to assess the impact of changes in the military domain and as a promoter of the military domain/science and art.
International security/ diplomacy actor	This area covers the officer's diplomatic abilities and their role in promoting the organisation's interests and objectives in the international context.

SQF-MILOF PROPER LEARNING OUTCOMES

Levels	Level 1 EQF 5	Level 2 EQF 6	Level 3 EQF 7	Level 4 EQF 8
Competence area (core): Military service member				
This area describes the officer's ability to operate as a soldier as part of constituted military structure in accordance with the national and multinational military doctrine and law.				
Knowledge	Comprehensive knowledge of tactics and procedures of small teams and subunits belonging to a single branch/arm in accordance with national regulations and doctrine, for high intensity and peace support operations.	Advanced knowledge of tactics and procedures of employing combined arms forces in accordance with national/ multinational doctrine, across the full spectrum of operations.	Highly specialised knowledge of employing military organisations in a joint/ multinational environment in accordance with national/ multinational doctrine, across the full spectrum of operations.	Most advanced knowledge of employing joint/ national and multinational military organisations in a complex, unpredictable and continuously evolving, multifaceted, politically led operating environment.
Skills	Practical skills for developing tactics and proposing alternate options of employing small teams and subunits belonging to a single branch/arm as part of a combined arms subunit/ task-oriented force.	Advanced skills required to employ creatively and flexibly service specific forces and their enablers (combat support) by planning and executing full spectrum of operations in the most varied circumstances.	Highly specialised skills required to apply the principles and norms of employing Operational Art, designing and integrating military forces to achieve desired effects across the service specific capabilities and a range of military operations in a coordinated manner and considering the unpredictability of the operating context.	Most specialised skills of employing military organisations and forces in a joint environment along with civilian organisations.
Responsibility and Autonomy	Take the initiative to execute military tasks under their responsibility and those deriving from the higher echelon's intent, under conditions of freedom and speed of action, and limitations imposed by discipline, law of armed conflict and rules of engagement in high intensity and peace support operations.	Take the initiative and assume responsibility in prioritising the tasks assigned by the higher echelon taking into account the role of other actors in the operating environment, in accordance with civilian guidance and direction, along other instruments of power.	Formulate plans to respond to crisis situations and allocate resources to address complex interventions in high risk environments by defining the right mix of policies, instruments and tools to achieve envisaged objectives.	Innovate the military employment of forces in new strategic frameworks by addressing, through specific work and research, the evolving nature of threats and challenges to the internal and external security of a nation/ alliance/ international organisation.

SQF-MILOF LEARNING OUTCOMES – ORGANISATIONAL ASPECTS:

Organisational Context Level of operations	Description
Single Arm/Branch focus at the tactical level	In this organisational context and at this level of operations, military officers command single arm/branch sub-units (platoons or similar), leading them in operations and exercises, conducting training and performing specific administrative duties.
Single Service focus at the tactical level	In this organisational context and at this level of operations officers lead combined arms military sub-units/units, provide advice to and support higher-level commanders in planning and conducting operations at tactical level, provide support in logistical matters, conduct/supervise training, oversee the welfare of troops and supervise administration and equipment management.
Joint/Multiple Service focus at the operational level	In this organisational context and at this level of operations officers lead military units and formations, provide advice to and support higher-level commanders in planning and conducting joint operations at high tactical and operational levels, provide support in logistical matters, conduct/supervise training, oversee the welfare of troops and supervise administration and equipment management.
Political Civ.-Mil focus at the strategic level	In this organisational context and at this level of operations, officers lead military formations and structures, provide advice to and support higher-level commanders/civilian authorities in planning and conducting joint operations at operational and strategic levels, serve as staff at joint multinational headquarters and function as primary advisers to general officers/civilian equivalent in strategic decision and policy making.

SQF-MILOF CORE LEARNING OUTCOMES

SQF-MILOF Level	Level 1	Level 2	Level 3	Level 4
MILOF-CORE Focus				
Learning Area: Military leadership; command				
Single Arm / Branch (tactical)	Discuss the importance of internalising the principles and spirit of the military discipline necessary to execute military tasks in high-risk situations, as a member of the subunit / team, in unpredictable or changing environments.	Explain the leader's role in building cohesive, disciplined teams / subunits / units > Analyse the context and conditions of assuming higher level command / deputizing command in uncertain / short term situations.	n/a	n/a
Single Service (tactical)	Describe the context and the framework of leadership at tactical level.	Explain the importance of timely decisions in an unpredictable, potentially life-threatening environments > Analyse the qualities required for the full and efficient employment of the commanders under the ethos of Mission Command.	Interpret higher commander's intent and the relevance of conceiving and conveying orders in a mission-oriented organisational culture context > Critically assess the complexity of professional activities or projects within the organisation and across arms / branches.	n/a
Joint / Multiple Services (operational)	Describe the context and the framework of the leadership at strategic and operational level.	Analyse the qualities required for leaders to develop innovative organisations capable of operating in dynamic and complex environments.	Critically analyse the constraints and advantages of Mission Command, to lead and manage resilient and efficient organisations under most stressful situations > Anticipate, communicate, and mitigate risks, surprise and uncertainty impacting on the organisation.	Innovatively adapt relevant strategies to new realities, changing contexts and new challenges that affect decisions with impact beyond military organisation.

LEARNING OUTCOMES DEFINITION - EXAMPLE

NVNA Key Learning outcomes:

For the competence area: **Military Service member**

- Explain the principles of combined arms forces employment at the tactical level in accordance with national/ multinational doctrine, across the full spectrum of operations.
- Apply the risk assessment and decision-making process specific to the full spectrum of operations at the low tactical level
- Participate effectively in tactical plans implementation
- Apply at low tactical level the basic norms of national and International Humanitarian Law and their principles relevant to the responsibilities and positions
- Explain the process of strategy formulation at the international and national level as well as the responsible bodies
- Describe the theory and principles of civil-military relations/ democratic control of armed forces

LEARNING OUTCOMES DEFINITION - EXAMPLE

NVNA Key Learning outcomes:

For the competence Area: **Military Technician**

- List the technical specifications of relevant operating platforms under his/her responsibility and demonstrate their effective exploitation
- Describe the combat service support capabilities of subunits during full spectrum operations. Explain the unit sustainability
- Explain the C4ISR systems –structure, operation, Electronic warfare.
- Explain the resource management for the military units

LEARNING OUTCOMES DEFINITION - EXAMPLE

NVNA Key Learning outcomes:

For the competence Area: **Leader and Decision-Maker**

- Explain the model of team leader role in military organizations in the context of hierarchy and wide spectrum of situations
- Describe the specifics in relationship OF-NCO based on the manuals and ethics
- Describe relevant leadership concepts, theories, principles and good practices. Demonstrate their implications in military environment

LEARNING OUTCOMES DEFINITION - EXAMPLE

NVNA Key Learning outcomes:

For the competence Area: **Combat-Ready Role Model**

- Demonstrate commitment in actions engaging values and ethics of the military organisation in peace time, high intensity and peace support operations
- Explain the role of international humanitarian law, national law and military regulations in orders issuing and following.
- To know the Naval history and reflect the evolution of arms, forces, organizations, conflicts.
- Demonstrate high level of morale and discipline of subordinates, and appropriate physical and psychological fitness
- Demonstrate gender awareness and its application in military environment
- Demonstrate cultural awareness and its application in military environment

LEARNING OUTCOMES DEFINITION - EXAMPLE

NVNA Key Learning outcomes:

For the competence Area: **Communicator**

- Describe the way to convey relevant messages to a broad audience
- Demonstrate ability to provide written and oral orders and reports
- Demonstrate ability to promote opinion and arguments in military environment adjusting to different type of audience
- Demonstrate ability to proper interact with others

LEARNING OUTCOMES DEFINITION - EXAMPLE

NVNA Key Learning outcomes:

For the competence Area: **Critical Thinker and Researcher**

- Explain the implementation of the analysis and data processing methods in planning the operations at various levels
- Explain the evolution of the main factors of the operating environment
- Analyse the effects and challenges of new technologies on military domain

LEARNING OUTCOMES DEFINITION - EXAMPLE

NVNA Key Learning outcomes:

For the competence Area: **Learner and Teacher/Coach**

- Describe the models of mentoring, coaching, training and teaching and their adjustment to the military context
- Describe the organisation and procedures of basic military training, drills and exercises at team level or equivalent

For the competence Area: **International Security/ Diplomacy Actor**

- Describe security, defence and conflict management in the context of diplomacy
- Analyse the security dimensions of different theories in International relations and the role of different instruments for national goals completion

THANK YOU FOR YOUR ATTENTION