



Assessment of trainees/Learning Outcomes at the end of a course

Professor of Experimental Surgical Research
National & Kapodistrian University of Athens, Greece



Assessment of trainees/Learning Outcomes



- A formal, standardized, and objective evaluation of trainees'
 - knowledge
 - skills
 - and attitudeagainst the Learning Outcomes at the end of a training activity
- Will help harmonize the Education and Training (E&T) of trainees working with animals for scientific purposes
- May contribute to the mutual recognition of E&T
- May also facilitate free movement of scientists



Assessment of trainees/Learning Outcomes



- 2021 – ETPLAS Working Group 1 developed **guidance on Assessment Criteria** for the **Learning Outcomes** of the **Core** and **Function A – specific Modules** (for persons carrying out procedures on animals)
- 2024 – ETPLAS Working Group 1 developed **guidance on Assessment Criteria** for the **Learning Outcomes** of **Function B – specific Modules** (for persons designing procedures and projects)
- To assess knowledge and understanding following basic E&T of the respective Learning Outcomes for these Functions





Assessment of trainees/Learning Outcomes







Check for updates



Working Party Report

Assessable learning outcomes for the EU Education and Training Framework core and Function A specific modules: Report of an ETPLAS WORKING Group

Laboratory Animals
2021, Vol. 55(3) 215–232
© The Author(s) 2020

Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/0023677220968589
journals.sagepub.com/home/lan


Ismene A Dontas¹ , Kenneth Applebee² ,
Martje Fentener van Vlissingen³, Viola Galligioni⁴ ,
Katerina Marinou⁵, Kathy Ryder⁶, Johannes Schenkel⁷ ,
Jan-Bas Prins^{8,9} , Anne-Dominique Degryse¹⁰ and
David I Lewis¹¹ 

<https://doi.org/10.1177/0023677220968589>



Working Party Report

Guidance on the assessment of learning outcomes for those designing procedures and projects – Report of an ETPLAS Working Group

Laboratory Animals
2024, Vol. 58(6) 626–639
© The Author(s) 2024

Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/00236772241244527
journals.sagepub.com/home/lan


Ismene A Dontas¹ , Derek J Fry^{2,*}, David I Lewis^{3,*} ,
Kenneth Applebee⁴ , Martje Fentener van Vlissingen⁵,
Katerina Marinou⁶ and Johannes Schenkel⁷ 

<https://doi.org/10.1177/00236772241244527>



Assessment criteria

- Statements which specify (and itemize) the standards that must be met and what evidence will be taken to show achievement of the respective Learning Outcomes knowledge
- Should evaluate **K**nowledge, **S**kills, and **A**ttitudes “KSA” or Behaviours, including critical thinking
- Be in accordance with good educational practice and to agreed quality standards
- May facilitate free movement of scientists
- Available, accessible, understandable, transferrable
- Assist in developing assessment methods – exams – for trainees



Assessment criteria for Function A persons

- Function A: persons carrying out procedures on animals
- Each assessment criterion assesses an individual element of a composite Learning Outcome
- Wording should permit the evaluation of the knowledge acquired by objectively assessable examination methods
- By using these methods, subjective marking is avoided
- Discrimination against those being examined in their non-native language or students with learning challenges is avoided



Assessment criteria example from Module 2

Learning Outcome 2.1

Describe the differing views, within society, relating to the scientific uses of animals and recognize the need to respect these.

Assessment criteria pertaining to LO 2.1:

The candidate should have retained the information that they have been taught and be able to:

1. Relate opinions as voiced collectively or individually by
 - animal protection societies
 - patient support societies
 - establishments and researchers
 - industry, including pharma, biotech and food
 - people with personal, cultural or religious beliefs;
2. Recognize the fundamental right of freedom of speech;
3. Recall different perspectives which enable an individual to determine their own opinion on the use of animals for scientific purposes;
4. Explain how different perspectives drive forward advancements in animal welfare, legislation and science.

<https://doi.org/10.1177/0023677220968589>



Assessment criteria example from Module 7

Learning Outcome 7.4

Describe techniques/procedures including, for example, injection, sampling and dosing techniques (routes/volumes/frequency), dietary modification, gavage, tissue biopsy, behavioural tests, use of metabolic cages.

Assessment criteria pertaining to LO 7.4:

The candidate should be able to:

1. Describe the commonly used approaches and procedures of administration of test substances, drugs or modified diets;
2. Describe the common routes of withdrawal of bodily fluids and tissues samples;
3. Identify and apply relevant sources of information, including on injection volumes, frequencies, vehicles, withdrawal of bodily fluids or tissue samples;
4. Explain the advantages and disadvantages of the use of behavioural tests and metabolic cages, and the potential impact on the animal;
5. Identify options for refinement of the techniques applied.



Assessment criteria for Function B persons

- Function B: persons designing procedures and projects
- Assessment Criteria for 2 different levels of attainment
- An “ideal” (I) response and one that would be “acceptable” (A) as a pass level for a Learning Outcome
- Diversity of experience of the “Learners” (e.g. novices to LAS, Function A persons wanting to add to their knowledge, life-long learning, ...)
- Learners’ needs
- Educators may select most suitable level for their local requirements



Assessment criteria example from Module 7

Learning Outcome 7.4.

Describe techniques/procedures including, for example, injection, sampling and dosing techniques (routes/volumes/frequency), dietary modification, gavage, tissue biopsy, behavioural tests, use of metabolic cages.

Assessment criteria pertaining to LO 7.4:

I – Related, with a variety of illustrative examples, minimally invasive procedures without anaesthesia appropriate to the species and stage of development.
A – Related, with a few illustrative examples, minimally invasive procedures without anaesthesia appropriate to the species and stage of development.

<https://doi.org/10.1177/0023677220968589>



Selection of Assessment formats

- Aim: to assess knowledge acquired following a Course/Module
- Assessment of knowledge and understanding (and critical thinking) is desirable
- Assessment formats should ideally be capable of being marked electronically (objectively)
- Traditional Multiple Choice Questions (MCQs, single or multiple True or False response) at best can assess knowledge. Poorly written, they become assessment by process of elimination.
- Extended Matching Questions (EMQ)
- ...



The use of Assessment Criteria

- These Assessment Criteria can be used by training providers and accrediting or approving bodies, to assess
 - individual elements of a composite Learning Outcome
 - individual Learning Outcomes
 - individual Modules
 - any Function / role / task
- and determine whether a trainee has acquired and attained the knowledge, understanding, skills and attitude required to achieve an acceptable performance standard



The use of Assessment Criteria

- The use of these Assessment Criteria, by training providers and accrediting or approving bodies:
- Will aid in producing knowledge-based assessment tools including understanding and critical thinking
- Will help harmonize the E&T of persons working with animals for scientific purposes
- Will contribute to the mutual recognition of E&T
- May also facilitate free movement of scientists



Thank you for your attention

Questions?