

The University of Edinburgh Medical Teaching Organisation

Dr Michael Ross, Vilnius Thursday 29th April 2010



2. Writing Learning Outcomes

- Terminology & key concepts
- Examples of learning outcomes
- Advantages and limitations

Tuning programme design process

- Needs analysis, support & resources
- Degree Profile
- **Programme Learning Outcomes (LO)**
- Structure programme into Course Units, defining LO and ECTS for each
- Teaching and learning methods
- Assessment
- Evaluation system & quality enhancement



Content - terminology



- Learning outcome
- Learning objective
- Behavioural objective
- Aim
- Goal
- Intention
- Constructive alignment

- Content
- Competence
- Competency
- Capability
- Performance
- Process
- Practice



Learning outcomes are “Broad statements describing what students should possess on graduation from a course” (Harden 2002)



Tuning definition (General brochure)

Learning Outcomes are “statements – made by the academic staff – of what a learner is expected to know, understand and / or be able to demonstrate after completion of a process of learning”



Key features of Learning Outcomes

- Decided in advance for a course
- Describe what graduate will be able to do
- Complex, deep and broad (≤ 12 top level)
- Can define increasing levels of detail
- Based on requirements of graduates
- Used to specify T&L processes and levels
- Assessed (to some degree)



Learning Outcome vs Competence

- LO belong to an educational programme, C (actual outcomes) belong to the individual
- Sometimes they are equivalent – graduates' C will be equal or greater than the LO at the point of graduation



Tuning (Medicine) 2nd Cycle Example

Graduates in medicine will be able to:

Carry out a consultation with a patient

- take a history
- carry out physical examination
- make clinical judgements and decisions
- provide explanation and advice
- provide reassurance and support
- assess the patient's mental state



Core LO are required but not sufficient. Also consider **level** of attainment and **process** for teaching, learning & assessment.



Example of Postgraduate Outcomes

1.0 Good clinical care

1.1 History, examination, diagnosis, record keeping, safe prescribing and reflective practice

Outcome: demonstrates the knowledge, attitudes, behaviours, skills and competences to be able to take a history and examine patients, prescribe safely and keep an accurate and relevant medical record.

PMETB (2007) The Foundation Programme Curriculum.
Online: www.foundationprogramme.nhs.uk



Advantages of Outcomes

- Comprehensiveness
- Transparency
- Stakeholder consultation
- Comparison / mapping
- Flexibility
- Framework for T.L.A.
- Regulation and QA
- 'Fitness for purpose'
- 'Graduateness'
- Self-directed learning
- Different levels
- Progression
- Branching design
- Integration
- Mobility
- Interdisciplinary



Potential disadvantages of LO

- Manipulation by ignorant media / politicians / others
- Potential for distortion towards easily-measurable
- May not know all capacities required for 'expert' performance
- Risk pitching at 'lowest common denominator' vs excellence
- Risk becoming too detailed & restrictive (cf objectives)
- May be insufficient detail / ambiguity, not 'operationalisable'
- Impersonal, without sense of ownership by learner or teacher
- Constitute a form of social policy - i.e. the 'authoritative allocation of values' (Easton 1953)
- Concerns about process of LO development



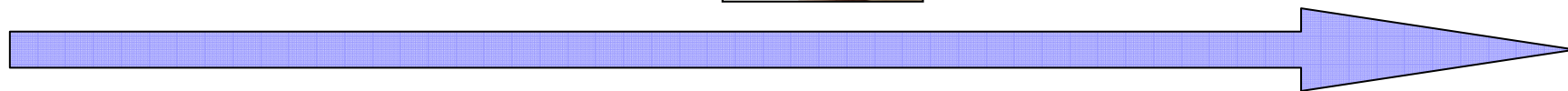
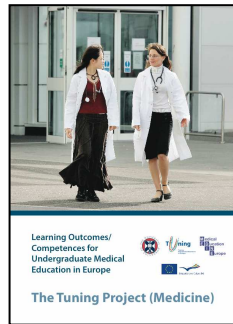
Constructive alignment

- Synthesis of two theories
 - **Constructivism** – learners arrive at meaning by constructing their own knowledge through individual & social activity
 - **Alignment** – designing instruction so that assessment is aligned with intended outcomes

Biggs J (1996) Enhancing teaching through constructive alignment. Higher Education 32:347-364



Constructive alignment



**Define
LO**

**Student-centred
Teaching & Learning**

**Appropriate
assessment**

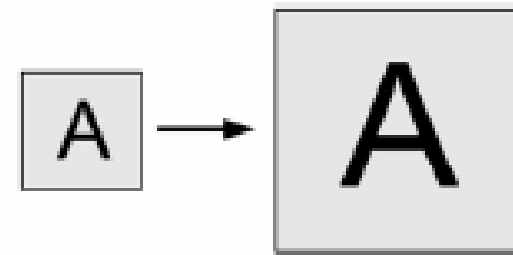


LO and progression

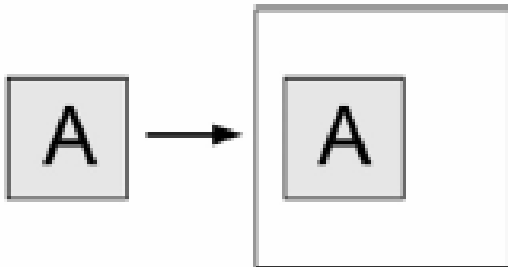
1. Increased breadth



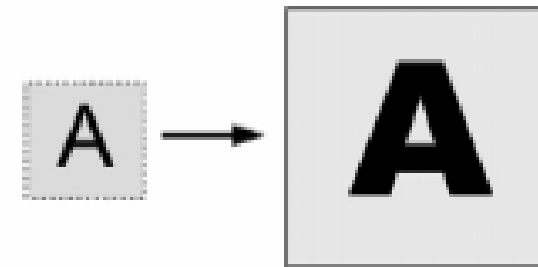
2. Increased difficulty



3. Increased utility and application to practice

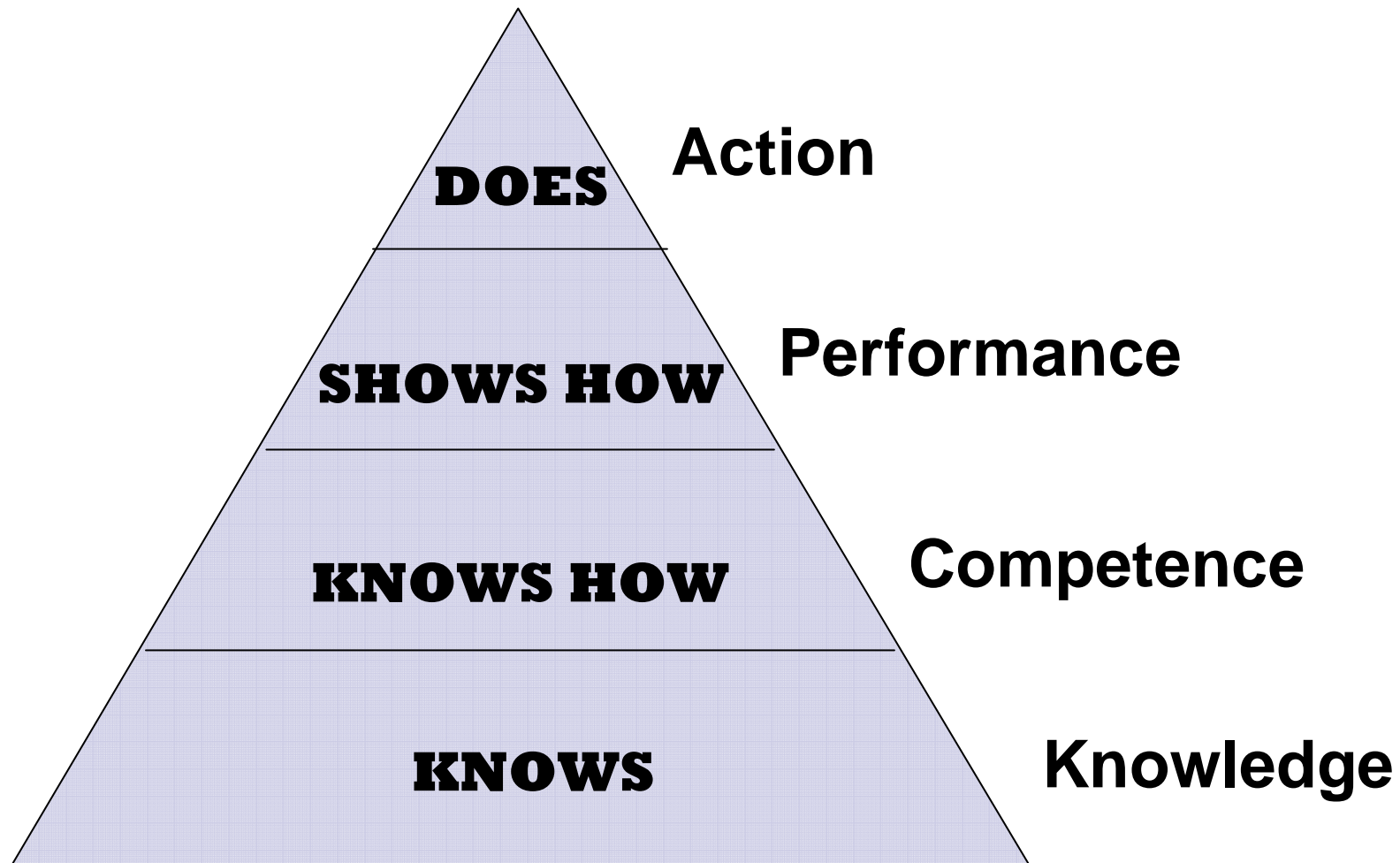


4. Increased proficiency



Harden RM (2007) Learning outcomes as a tool to assess progression. *Medical Teacher* 29:678-682





Miller GE (1990) The assessment of clinical skills / competence / performance. Academic Medicine 65(9) Sept Supplement:S63-S67



