

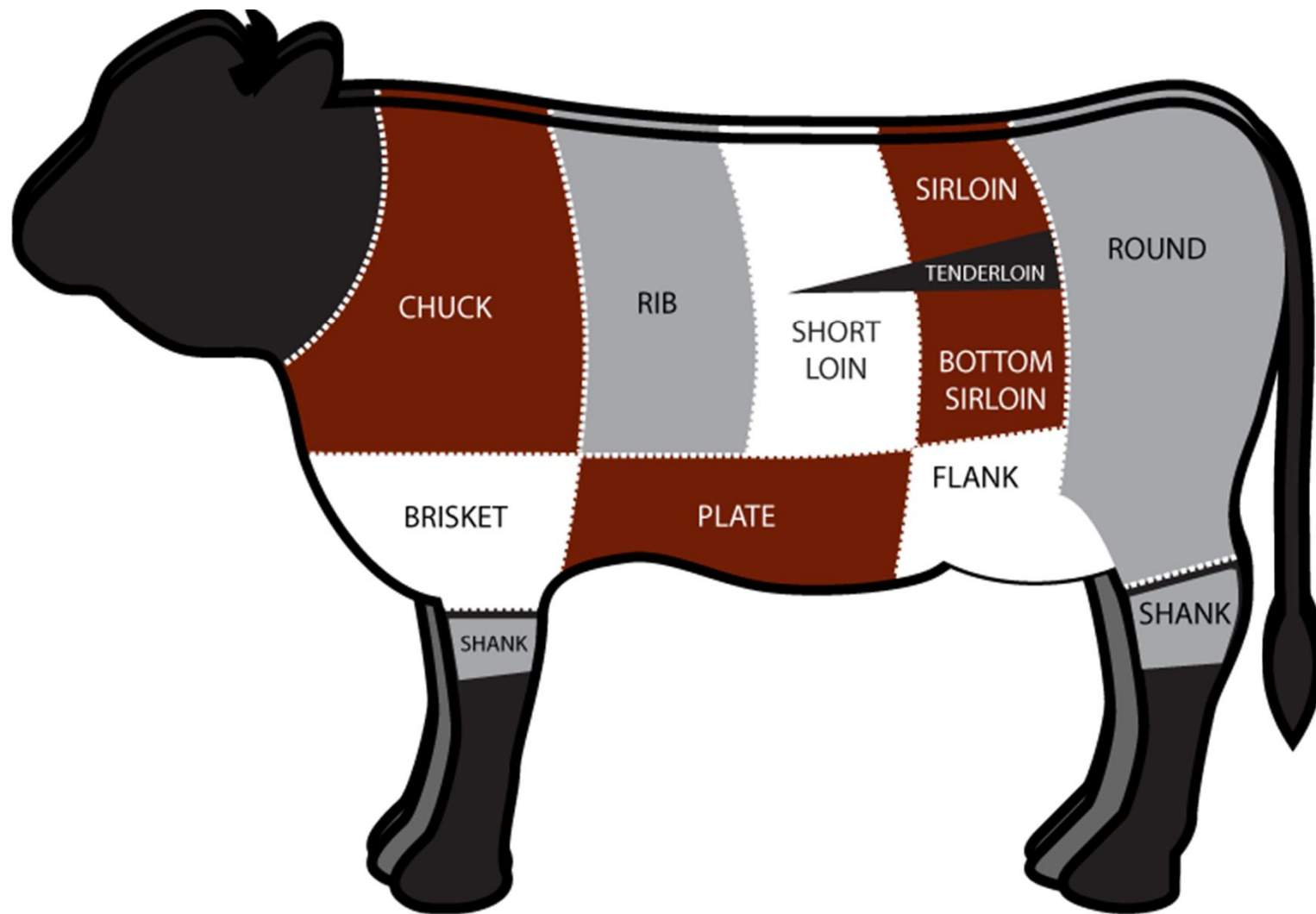


Training for the Administrative  
Staff: Learning Outcomes Part I –  
Programme LO

ARMENQA-Workshop  
Linköping University, Sweden  
June 22-24

"THE SECRET OF  
CHANGE IS TO FOCUS  
ALL OF YOUR ENERGY,  
NOT ON FIGHTING THE  
OLD, BUT ON BUILDING  
THE NEW."

— SOCRATES



This is an organisational chart that shows the different parts of a cow.  
In a real cow the parts are not aware that they are parts.  
They do not have trouble sharing information. They smoothly and naturally work together, as one unit. As a cow. And you have only one question to answer.  
Do you want your organisation to work like a chart? Or a cow?  
(Anderson & Lemke, NY, advertisement for SAP, Canada)

# References

- National Qualifications Framework for Higher Education in Armenia
- European Qualifications Framework for Higher Education
- Bloom's Taxonomy
- ECTS User's Guide (Yerevan version)

# Challenge

- Qualifications have to be characterised by **Learning Outcomes** which are described unambiguously to allow for:
  - Evidence of compability between the various national, sectoral... and European qualifications frameworks
  - Reliable validation of national frameworks

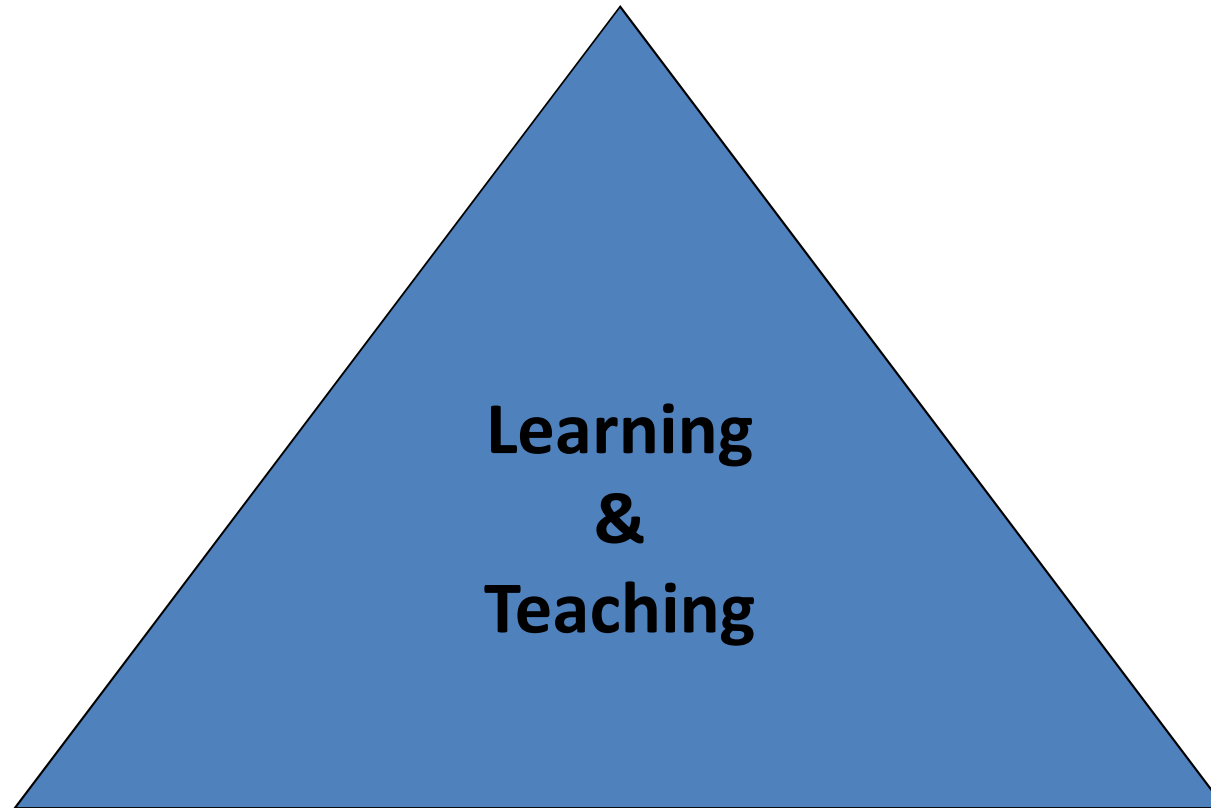
## Learning Outcomes as Profile of Competences = Qualification

- **Qualification** is the formal standard, which is defined as being the „end“ of a learning path.
- It depicts those **Learning Outcomes** which have been achieved and assessed on this pathway (formal learning)
- These learning outcomes can be achieved in non-formal and informal ways as well – independent of organisations



# THE BERMUDA TRIANGLE

Learning Outcomes

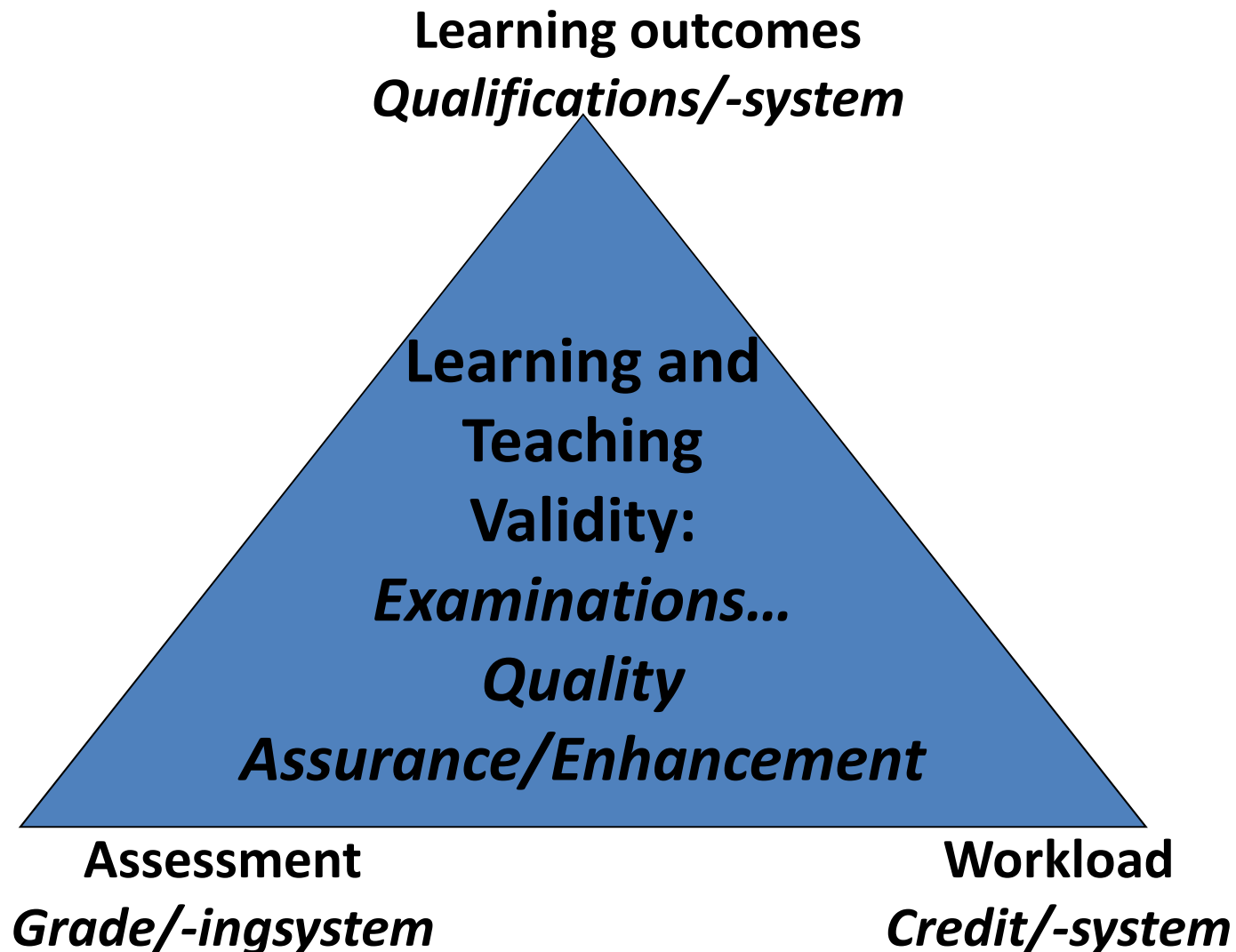


Learning  
&  
Teaching

Assessment

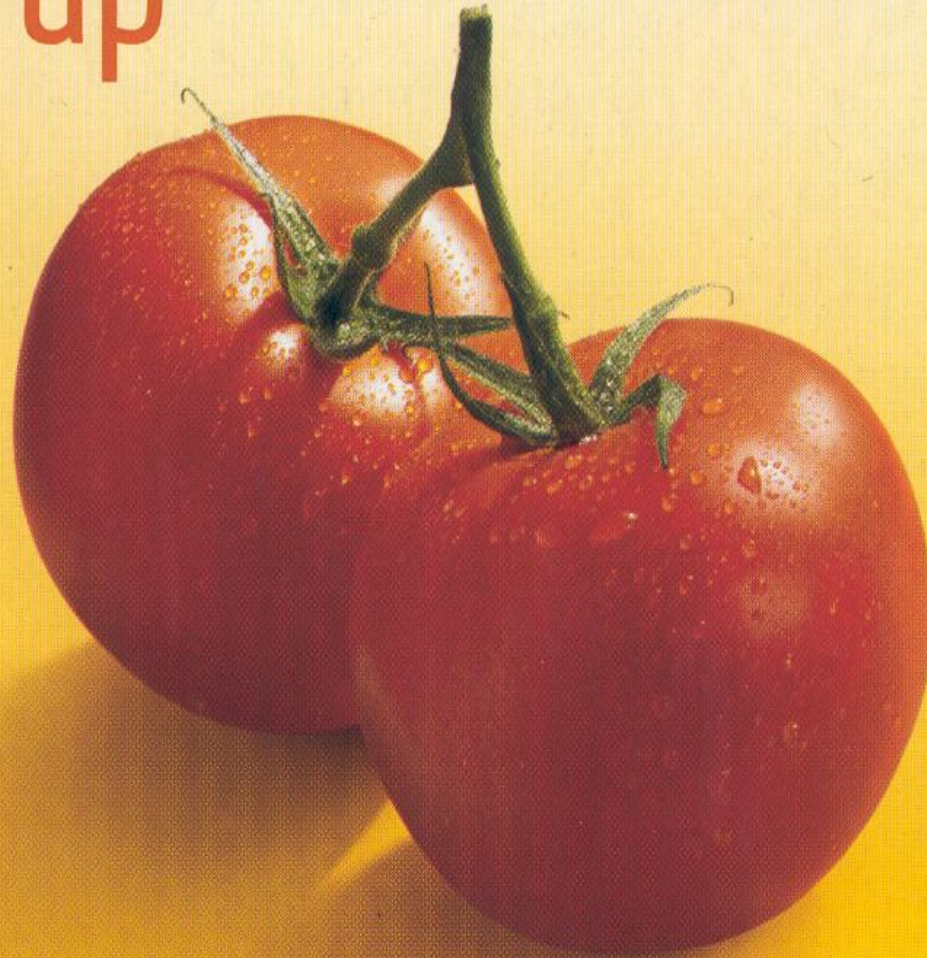
Workload

# THE BERMUDA TRIANGLE dissolved by referencing





catch up



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## Goal: **Qualification Template 1**

(Handbook: essential information for student, staff and quality assurance purposes and other stakeholders)

1. Introduction to the discipline and qualification (brief -1 to 2 paragraphs)
2. Rationale statement (explanation of the uniqueness – 1-2 paragraphs)
3. **Overall qualification learning outcomes (Profile – 4-8)**
  - 3.1 Reference to the RAQF (identification of level and its description)
  - 3.2 Reference to the European Qualifications Framework for Higher Education
4. Structure of the qualification – include information on:
  - 4.1 List of core and subject specific option modules (include module codes)
  - 4.2 Explanation of module relationships (levels, pre-requisites, co-requisites and credit values, diagram)
  - 4.3 Free choice module information (if applicable)
  - 4.4 Progression routes within the qualification (if applicable)
  - 4.5 Information on module scheduling (if appropriate)

# Qualification Template 2

- 5. Teaching and learning methods statement (overall rationale of approach)
- 6. Assessment rationale (overall logic and range of assessments employed)
- 7. Generic assessment criteria (expressed in generic learning outcomes)
- 8. Learning resources (brief description of subject specific resources)
- 9. Employability and transferable skills (if appropriate, link to university policy via matrix)
- 10. Student support (academic and pastoral tutoring arrangements)
- 11. Linkages to external reference points (Qualifications Frameworks)



## Learning outcomes

(From: Analytic Quality Glossary)

### core definition

A learning outcome is the specification of what a student should learn as the result of a period of specified and supported study

### explanatory context

Learning outcomes are concerned with the achievements of the learner rather than the intentions of the teacher (expressed in the aims of a module or course). They can take many forms and can be broad or narrow in nature (Adam, 2004).

Learning outcomes and ‘aims and objectives’ are often used synonymously, although they are not the same. Adam (2004) notes that ‘Aims’ are concerned with teaching and the teacher’s intentions whilst learning outcomes are concerned with learning’ and Moon (2002) suggests that one way to distinguish aims from learning outcomes is that aims indicate the general content, direction and intentions behind the module from the designer/teacher viewpoint.

# ECTS User's Guide 2015

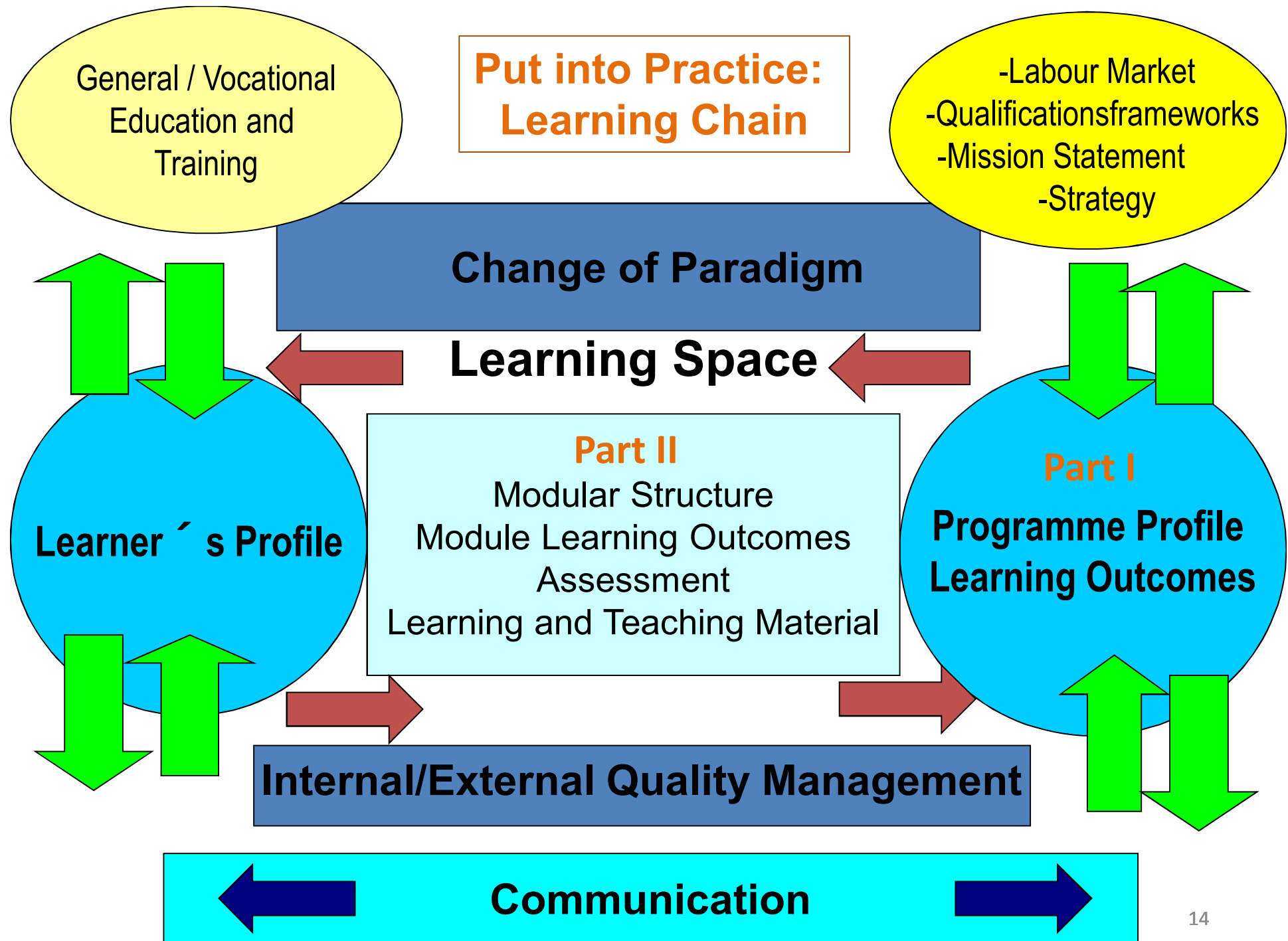
## Learning Outcomes

are statements of what the individual knows, understands and is able to do on completion of a learning process.

The achievement of learning outcomes has to be assessed through procedures based on clear and transparent criteria.

Learning outcomes are attributed to individual educational components and to programmes as a whole.

They are also used in European and national qualifications frameworks to describe the level of the individual qualification.



## **Labour Market Research**

- Job descriptions, Forward looking

## **Qualifications Frameworks**

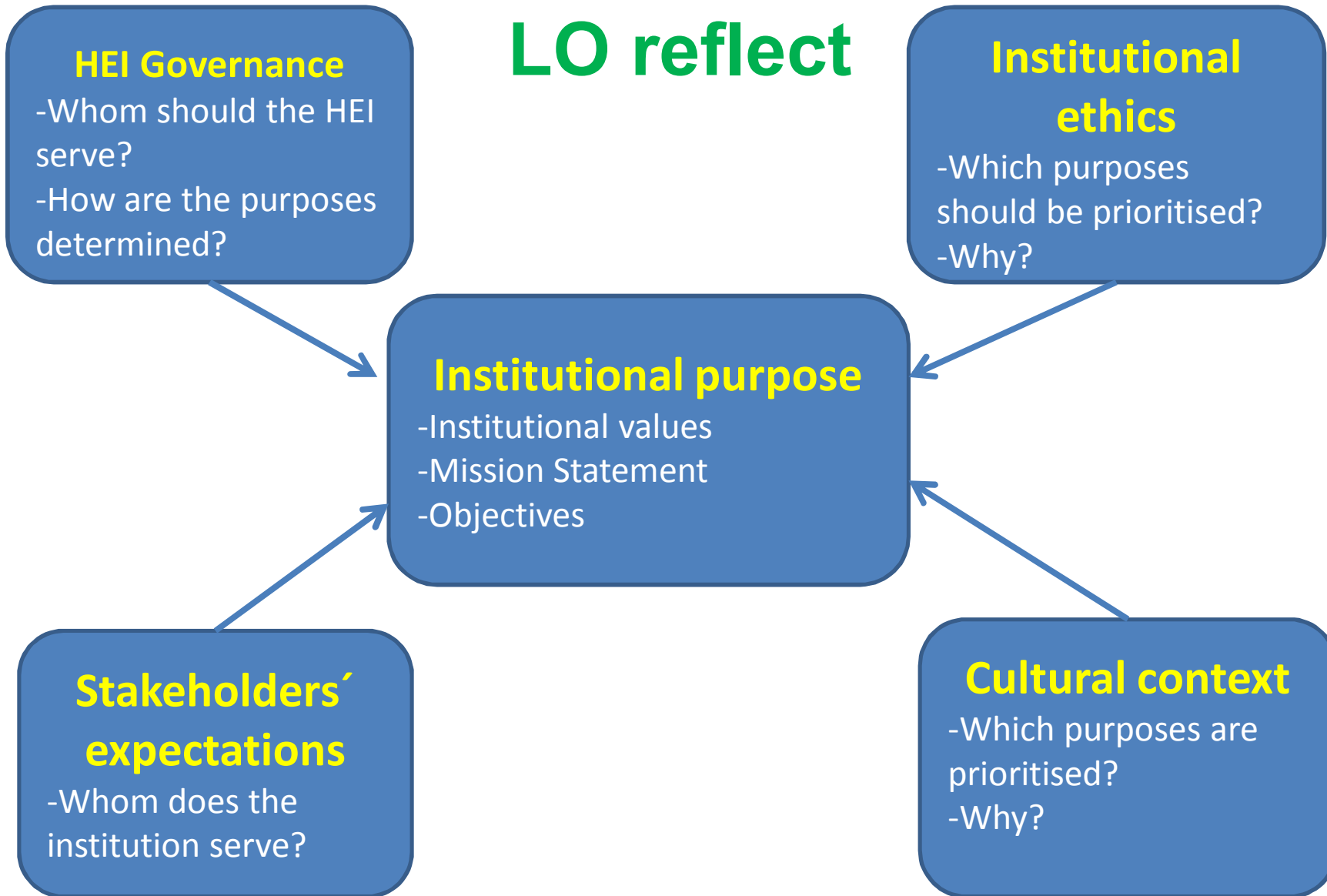
- European, National, Sectoral, Institutional

## **Mission Statement**

- Faculty, Strategy



# LO reflect



# Mission statements



- ***A mission statement*** aims to provide employees and stakeholders with clarity about the overriding purpose of the organisation
- A mission statement should answer the questions:

*‘What business are we in?’*

*‘How do we make a difference?’*

*‘Why do we do this?’*

# Statement of corporate values

- ***A statement of corporate values*** should communicate the underlying and enduring core *'principles'* that guide an organisation's strategy and define the way that the organisation should operate.
- Such core values should remain intact whatever the circumstances and constraints faced by the organisation.

# The Role of Mission Statement

- A **mission statement** is a generalised statement of the overriding purpose of an organisation
  - Should emphasise the common ground amongst stakeholders and not the differences
  - A **vision** that is likely to persist for a significant period of time as a „beacon in the distance“ towards which an organisation can strive.
- **Strategic intent** is the desired future state or aspiration of an organisation (Hamel and Prahalad – used instead of mission and vision)

# Profile

## Level of description

Institution	Philosophy Mission Statement
Faculty	Bundle of Qualifications
Study-programme <b>Part I</b>	Profile expressed in learning outcomes <b>Part I</b>
Educational component (module) <b>Part II</b>	Described by learning outcomes <b>Part II</b>

# What to do?

**You cannot do without discussing ...**

**It is not a top-down approach:**

- Learning is much more than the sum of learning outcomes
  - Intended/planned – achieved
  - Unplanned /non-formal /informal
- It is more than employability
- Own research
- Positioning helps to find „your way“



Me? Discussing? What for?

I know what the students should know and be able to do.

A lot of rubbish being expressed these days. They think they have invented the wheel again. As it appears...



# Part I Programme Profile - Exercise

## Group 1

- What do you expect a teacher at an institution of higher education knows and is able to do?

## Group 2

- What do you expect a senior administrator at an institution of higher education knows and is able to do?

## Group 3

- What do you expect a quality assurance manager at an institution of higher education knows and is able to do?

## Group 4

- What do you expect a medical doctor at a hospital knows and is able to do?

# Group 1- Teacher

# Group 2 – Senior Administrator

# Group 3 – Quality Assurance Manager

# Group 4- Medical Doctor

# Decide about the level

Each group:

- How can you support your decision

# Use the descriptors of the RAQF

- Each group



„Translate“ and specify the descriptors  
for your profile (express in LOs)

# Present your proposals

- Each group

**Example:**

**German  
Qualifications Framework  
for LLL**

**„one for all“**

# Level Descriptors (DQR)

Level 5	Be in possession of competences for the autonomous planning and processing of comprehensive technical tasks assigned <i>within a complex and specialised field of study</i> <b>or</b> <i>field of occupational activity</i> subject to change
Level 6	Be in possession of competences for the processing of comprehensive technical tasks and problems set and be in possession of competences for autonomous management of processes <i>within subareas of scientific subject</i> <b>or</b> <i>within a field of occupational activity</i> . The structure of requirements is characterised by complexity and frequent change
Level 7	Be in possession of competences for the processing of new and complex professional tasks and problems set and be in possession of competences for autonomous management of processes <i>within a scientific subject</i> <b>or</b> <i>within a strategically oriented field of occupational activity</i> . The structure of requirements is characterised by frequent and unpredictable change.
Level 8	Be in possession of competences for the <i>obtaining of research findings in a scientific subject</i> <b>or</b> <i>for the development of innovative solutions and procedures within a field of occupational activity</i> . The structure of requirements is characterised by novel and unclear problem situations.

## Level indicator

### Structure of requirements (of the level indicator)

Professional competence		Personal competence	
Knowledge	Skills	Social competence	Self-competence
Depth & breadth	Instrumental & systemic skills, judgement	Team / leadership skills, involvement & communication	Autonomy / responsibility, reflectiveness & learning competence



# How to get there?

# Real examples

- Alicia Alonzo is an associate professor of teacher education. Her research focuses on tools and knowledge for science teachers' formative assessment practices. She is interested in learning progressions – descriptions of increasingly sophisticated ways of thinking about a topic – and associated assessment tasks as tools for formative assessment. She is currently involved in video-based studies of and efforts to support teachers' pedagogical content knowledge.





# Your translation into ksc

# Senior administrator

## Wikipedia

- Admissions
- Supervision of academic affairs such as hiring, promotion, [tenure](#), and evaluation (with faculty input where appropriate);
- Maintenance of official records (typically supervised by a [registrar](#) in the US - In the UK not all institutions have a Registrar, who would have varying responsibilities for non academic matters depending on the organisation);
- Maintenance and audit of financial flows and records;
- Maintenance and construction of campus buildings (the *physical plant*);
- Maintenance of the campus grounds;
- Safety and security of people and property on the campus (often organized as an office of [public safety](#) or [campus police](#));
- Maintenance and construction
- Supervision and support of campus [computers](#) and [network](#) ([information technology](#)).
- Fundraising from private individuals and foundations ("development" or "advancement")
- Research administration (including grants and contract administration, and institutional compliance with federal and state regulations)
- Public affairs (including relations with the media, the community, and local, state, and federal governments)



# Your translation into ksc



# Quality Assurance Manager

Responsibilities of the job include:

- determining, negotiating and agreeing in-house quality procedures, standards and/or specifications
- assessing customer requirements and ensuring that these are met
- setting customer service standards
- specifying quality requirements of raw materials with suppliers
- investigating and setting standards for quality/health and safety
- ensuring that manufacturing processes comply with standards at both national and international level
- working with operating staff to establish procedures, standards, systems and procedures
- writing management/technical reports and customers' charters
- determining training needs
- acting as a catalyst for change and improvement in performance/quality
- directing objectives to maximise profitability
- recording, analysing and distributing statistical information
- monitoring performance
- supervising technical or laboratory staff.

# Lessons learned



# Your translation into ksc



# Quality Assurance Manager

## Is your proposal similar?

- **Qualifications and training required**
- A degree or HND in any subject is acceptable. However, employers may prefer qualifications in subjects such as business studies/management, materials science/technology, food science/technology, textile technology, polymer science/technology, process engineering, physics, mathematics or production engineering.
- For some positions a postgraduate qualification or a technical background may be beneficial. Relevant work experience is highly desirable and may be gained via final year project work, work shadowing, sponsorship, vacation work or 'year out' placements.
  
- **Key skills for quality assurance managers**
- Confidence
- Excellent technical skills
- Organisational skills
- Planning skills
- Interpersonal skills
- Communication skills
- Problem solving skills
- Teamworking skills
- IT skills
- Communication skills.
- It is also essential to have good numerical skills and an understanding of statistics.

# Medical doctor

Sri Lanka

Graduates should be prepared to approach medical practice:

- With the appropriate intellectual skills enquiry, clinical reasoning, critical thinking and decision making; possessing sufficient knowledge of the basic and clinical sciences, and an understanding of the underlying principles of scientific method;
- With developed clinical, interpersonal and practical skills; understanding and accepting their professional, ethical and legal responsibilities, and their limitations.

# You never stop learning



# Your translation into ksc

# Example: Postgraduate Computer Science Degree (Declan Kennedy)

On completion of this programme the student will be able to:

- Perform problem solving in academic and industrial environments
- Use, manipulate and create large computational systems
- Work effectively as a team member
- Organise and pursue an scientific or industrial research project
- Write theses and reports to a professional standard, equivalent in presentational qualities to that of publishable papers
- Prepare and present seminars to a professional standard
- Perform independent and efficient time management
- Use a full range of IT skills and display a mature computer literacy

Student Subject	Does what? Active verb	Directed to? Object	How? Specification/Modality
...will be able to...	perform	academic industrial environments	solve problem
	Use, manipulate, create	computational systems	large
	Work	team member	effectively
	Organise, pursue	scientific or industrial research project	
	Write	theses, reports	professional standard
	Prepare, present	seminars	professional standard
	perform	Time management	independent, efficient
	Use, display	IT skills , computer literacy	mature

# Example: undergraduate engineering degree

On completion of this programme, the student will be able to:

- Derive and apply solutions from knowledge of sciences, engineering sciences, technology and mathematics
- Identify, formulate, analyse and solve engineering problems
- Design a system, component or process to meet specific needs and to design and conduct experiments to analyse and interpret data
- Work effectively as an individual, in teams and in multi-disciplinary settings together with the capacity to undertake lifelong learning
- Communicate effectively with the engineering community and with society at large

Student Subject	Does what? Active verb	Directed to? Object	How? Specification/Modality
...will be able to...	Derive, apply	Solutions	from knowledge of sciences, engineering s., technology, mathematics
	Identify, formulate, analyse, solve	engineering problems	
	Design	System, component, process	meet specified needs
	Conduct Analyse, interpret	Experiments data	
	Work	Engineering community, wth society at large	Effectively
	Communicate	Engineering community, with society at large	effectively

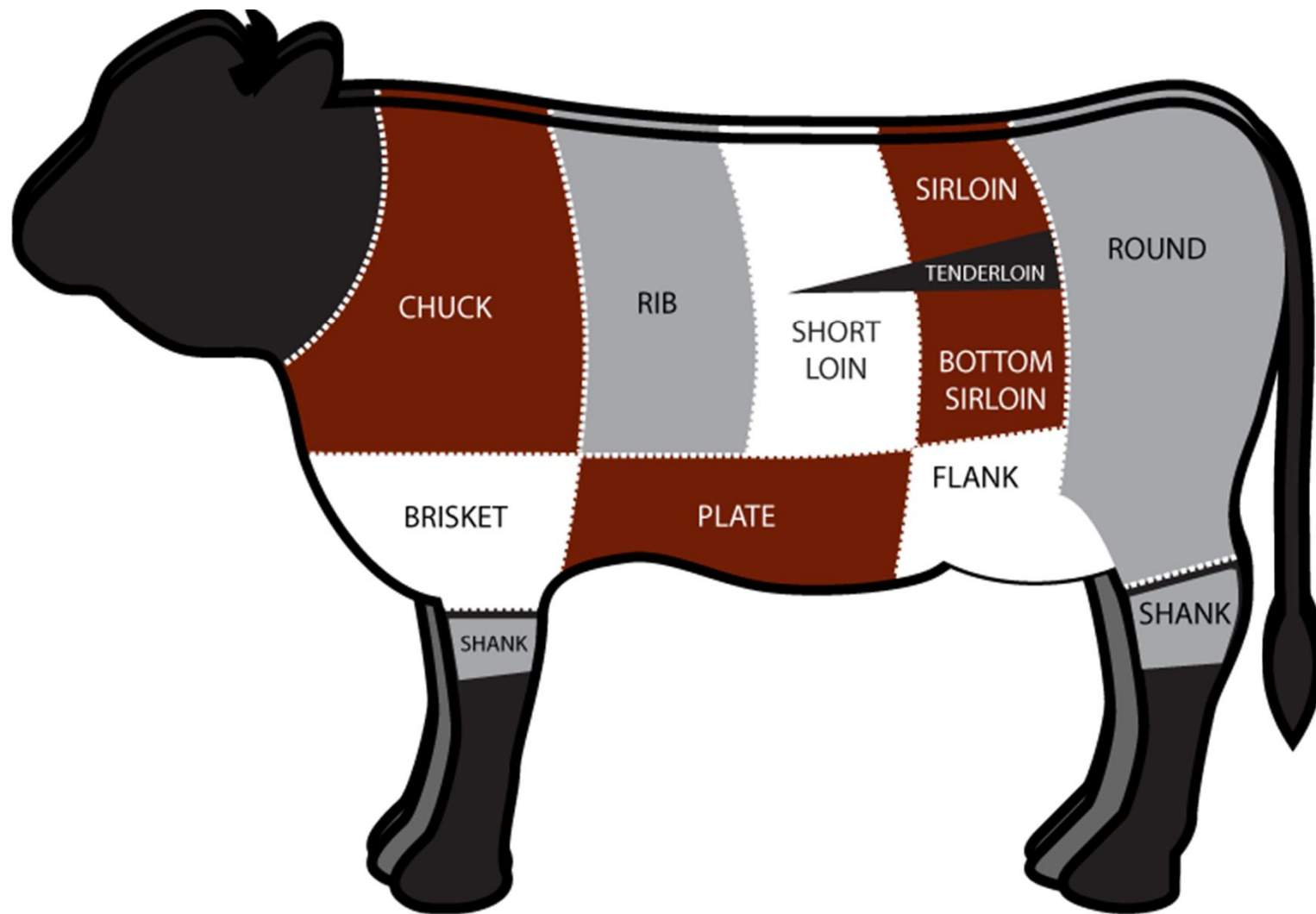


# Lessons learned

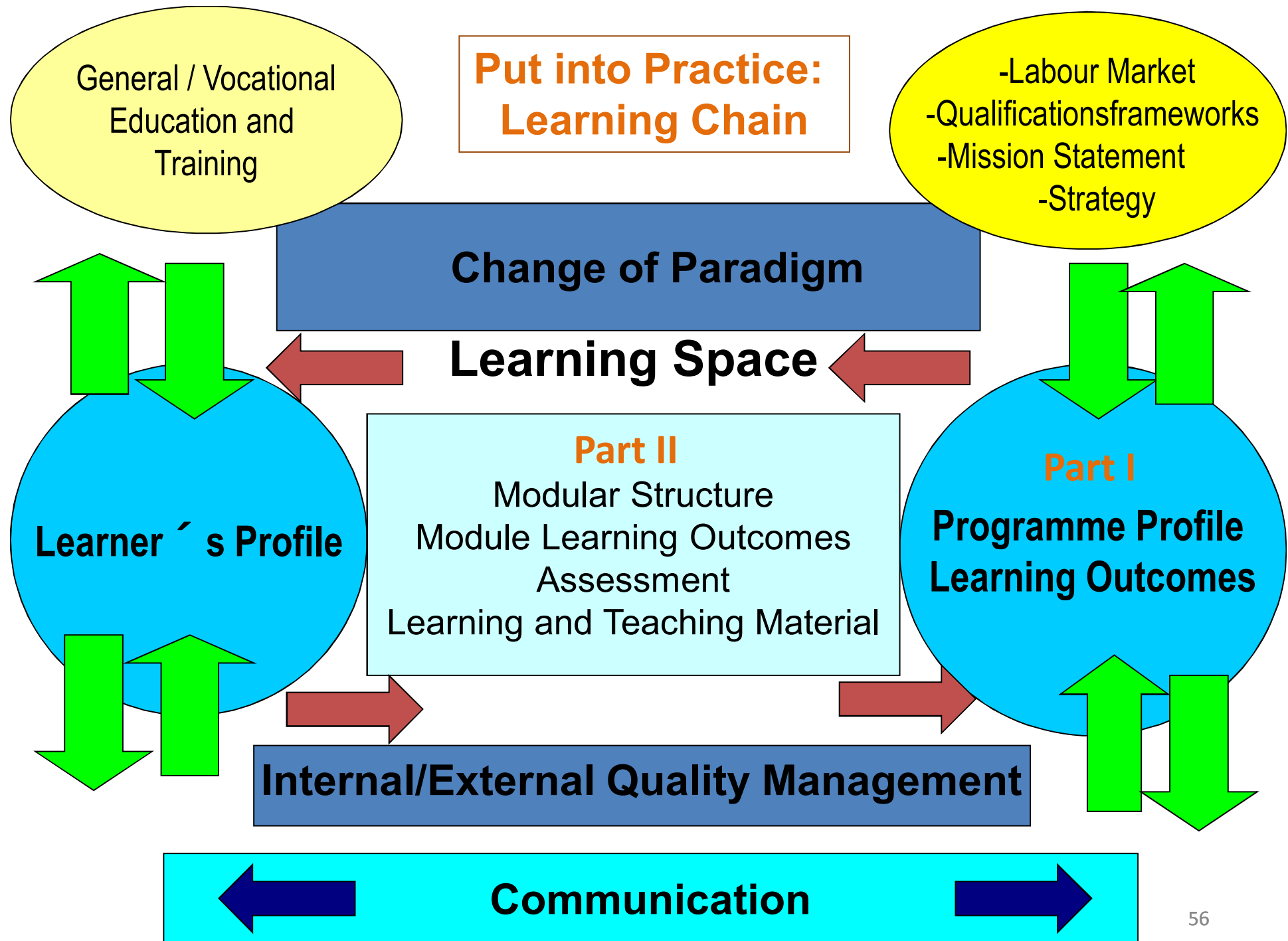


Training for the Administrative Staff:  
Learning Outcomes Part II –  
LO of Educational Components

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Do you want your organisation to work like a chart? Or a cow?  
(Anderson & Lemke, NY, advertisement for SAP, Canada)



# Definition

## **Educational Component**

- ECTS User's Guide: most general term for course, unit, module...

## **Module**

- A course unit in a system in which each course unit carries the same number of credits or a multiple of it



# Definition Module

- ***Definition***

A module comprises a self-contained, formally structured learning process with common theme oriented learning and teaching.

- ***Prerequisite***

Defined coherent learning outcomes,  
predefined volume of study with required workload, expressed in credits, with unambiguous criteria of assessment

***Facilitate***

Profile description of individual study-programmes,

Modularisation,

Differentiated study-programmes on one defined level.

# Module Template I (2 pages max.)

(Provide details of the module for students, staff and qa purposes)

## Short Module Details

1. Full Module Title
2. Module Code
3. Module Level (RA QF)
4. ECTS credits
5. Length
6. Module leader
7. Host Course
8. Module status (obligatory/option)
9. Pre-requisites (if appropriate)
10. Co-requisites (if appropriate)
11. Access restrictions
12. Assessment
13. Date validated

# Module Template 2 (2 pages max.)

(Provide details of the module for students, staff and qa purposes)

14. Module aims (3-6 aims the professor hopes to achieve)

**15. Learning outcomes (4-8 LO – perspective of student: „On successful completion of this...“)**

16. Indicative syllabus content (brief description of the module content)

**17. Learning delivery (teaching/learning methods + study mode)**

18. Assessment rationale (explanation of the assessment methods)

**19. Assessment criteria (generic assessment criteria)**

20. Assessment weighting (weighting of each assessment component)

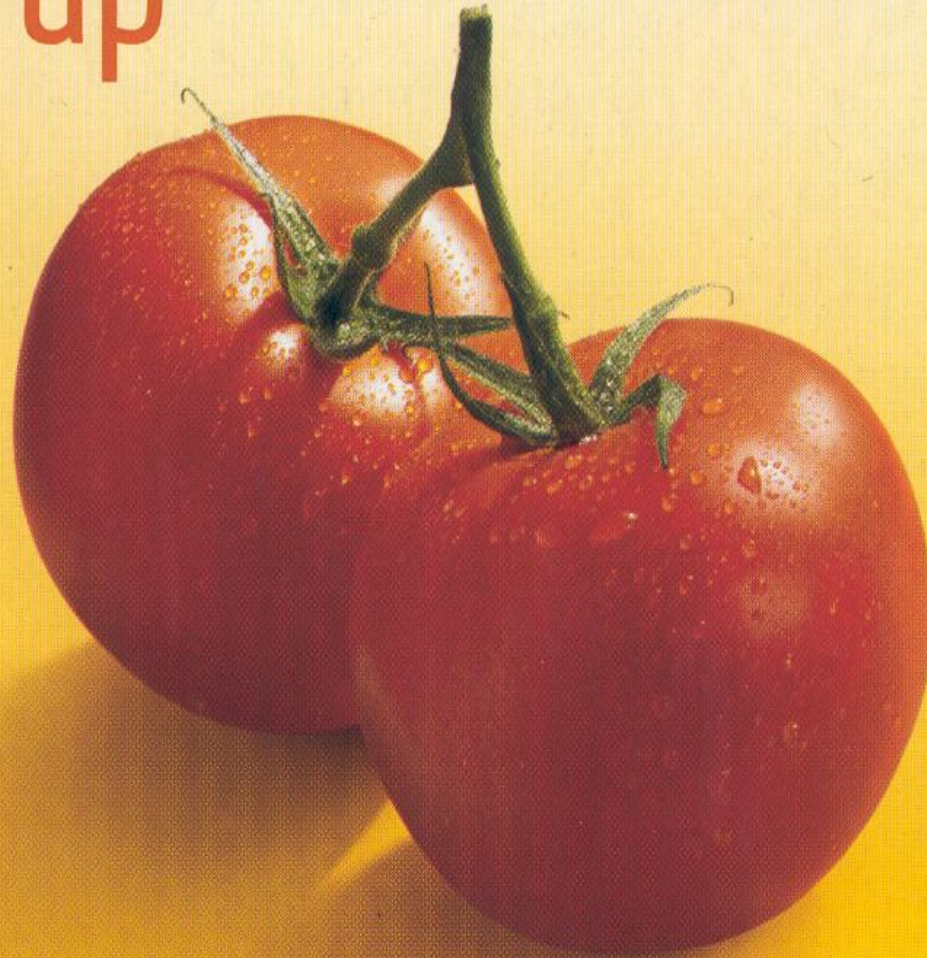
21. Essential reading (list of key texts, web reference, journals...)

22. Intranet web reference (if applicable)

23. Validation date (if applicable)



catch up



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»zeitenwechsel«

Change of time

Seitenwechsel

Swap sides

Change of Perspective

You have not forgotten,  
Have YOU?

**Starting Point**

**Student-centred**





# How to write Learning Outcomes

From the definition of LO it becomes obvious, the focus is

- on the learner
- His/her ability to do something

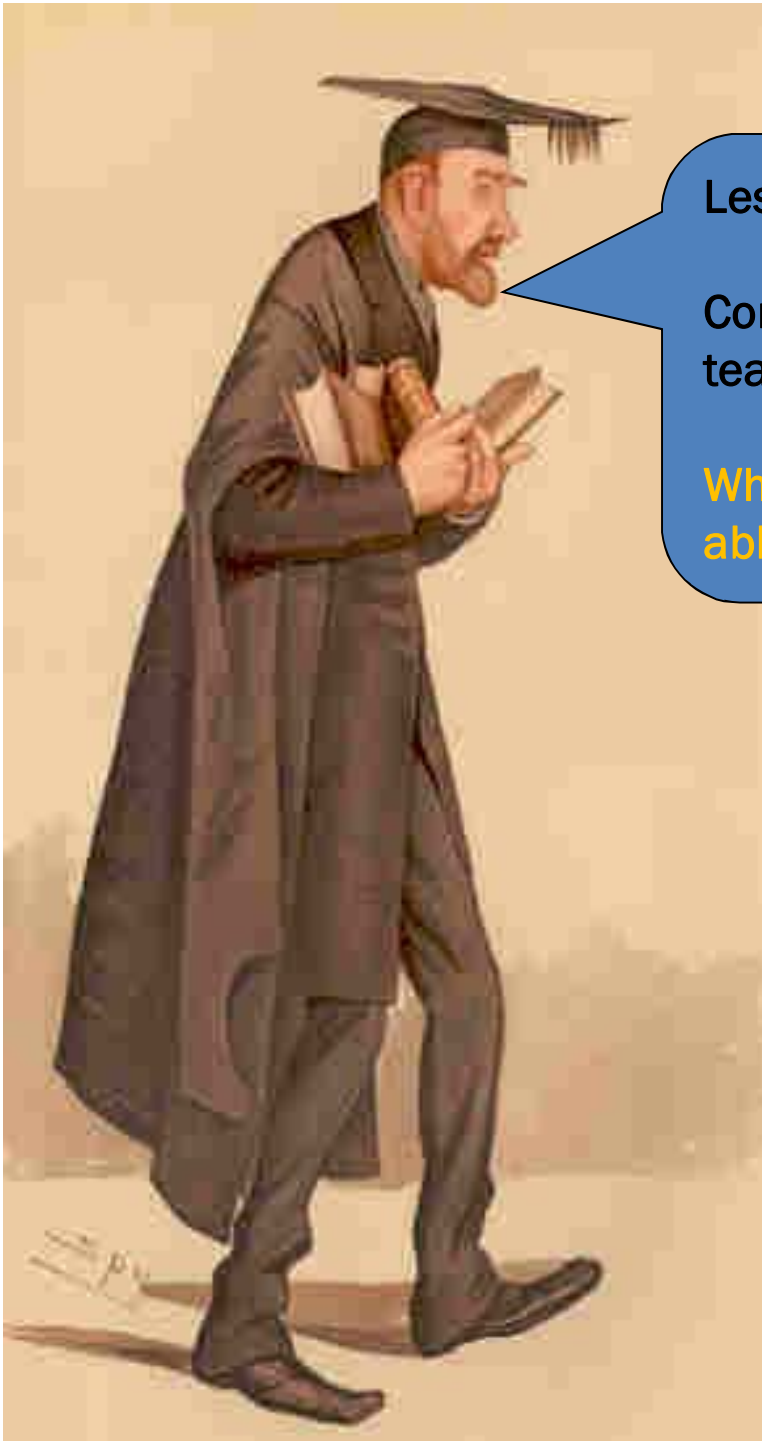
While aims and objectives of **teaching** are e.g. to know, understand, be familiar with

**Learning** focuses on the ability of the learner to define, list, recall, analyse...

## Well formulated learning outcomes comprise at least three essential elements (see Moon 2004):

Who?  
Subject

1. Use an active verb that learners are expected to know and be able to do (e.g. „describe“, „implement“, „analyze“, „assess“, „plan“...)  
Directed to?  
Active Verb
2. Specify to what the learner is expected to apply the skill, e.g. „Can explain the components“; can present the „components by hand“)  
What? Object
3. Specify modality of learning (e.g. „to give a presentation“ most often used in educational research design by applying „interactive methods“, etc...)  
How? Modality



### Lessons Learned

Come on – don't disappoint me – I worked so hard on teaching you this part of the subject....

What did you want the students should know and be able to do? Give me some examples, please!

To be filled-in by you individually or by working together in groups

I hope you remember

Student Subject	Does what? Active verb	Directed to? Object	How? Specification/Modality
...will be able to...	Derive, apply	Solutions	from knowledge of sciences, engineering s., technology, mathematics
	Identify, formulate, analyse, solve	engineering problems	
	Design	System, component, process	meet specified needs
	Conduct Analyse, interpret	Experiments data	
	Work	Engineering community, wth society at large	Effectively
	Communicate	Engineering community, with society at large	effectively

# Example of Mapping

PRLO	EduComp 1	EduComp 2	EduComp 3	EduComp 4
Derive, Apply			x	x
Identify, Formulate Analyse Solve	x	x	x	x
Design Conduct, Analyse Interpret		x		x
Work		x	x	x
Communicate	x		x	x

NB:

PLO = Programme Learning Outcome

EC = Educational Component 1, 2...etc....

LO = Learning Outcome

# Why these and not others?

- Discuss your proposals



# **Examples of Good Practice**

- **What has to happen before these learning outcomes can be achieved?**

# LO Knowledge

- List the criteria to be taken into account when caring for a patient with tuberculosis
- Define what behaviours constitute unprofessional practice in the solicitor-client relationship
- Describe the processes used in engineering when preparing a design brief for a client

# LO Comprehension

- Identify participants and goals in the development of electronic commerce
- Explain the social, economic and political effects of World War I on the post-war world
- Recognise the forces discouraging the growth of the educational system in Ireland in the 19th century

# LO Application

- Construct a timeline of significant events in the history of Australia in the 19th century
- Select and employ sophisticated techniques for analysing the effectiveness of energy usage in complex industrial processes
- Modify guidelines in a case study of a small manufacturing firm to enable tighter control of production.

# LO Analysis

- Compare and contrast the different electronic business models
- Debate the economic and environmental effects of energy conversion processes.
- Compare the classroom practice of a newly qualified teacher with that of a teacher of 20 years teaching experience
- Calculate gradient from maps in m, km, % and ratio

# LO Synthesis

- Recognise and formulate problems that are amenable to energy management solutions
- Propose solutions to complex energy management problems both verbally and in writing
- Organise a patient education programme
- Summarise the causes and effects of the 1917 Russian revolutions

# LO Evaluation

- Assess the importance of key participants in bringing about change in Irish history
- Evaluate marketing strategies for different electronic business models
- Predict the effect of change of temperature on the position of equilibrium
- Evaluate the key areas contributing to the craft knowledge of experienced teachers

# Example Business Studies

## Module: Electronic Commerce

### 8 Learning Outcomes – Bloom's Taxonomy

#### LO Knowledge

- Identify the main characteristics of electronic commerce
- Be aware of opportunities and threats



# LO Comprehension

- Identify participants and goals in the development of electronic commerce

# LO Application

- Develop a potential business plan for identified target groups of electronic commerce

# LO Analysis

- Compare and differentiate various business forms of electronic commerce

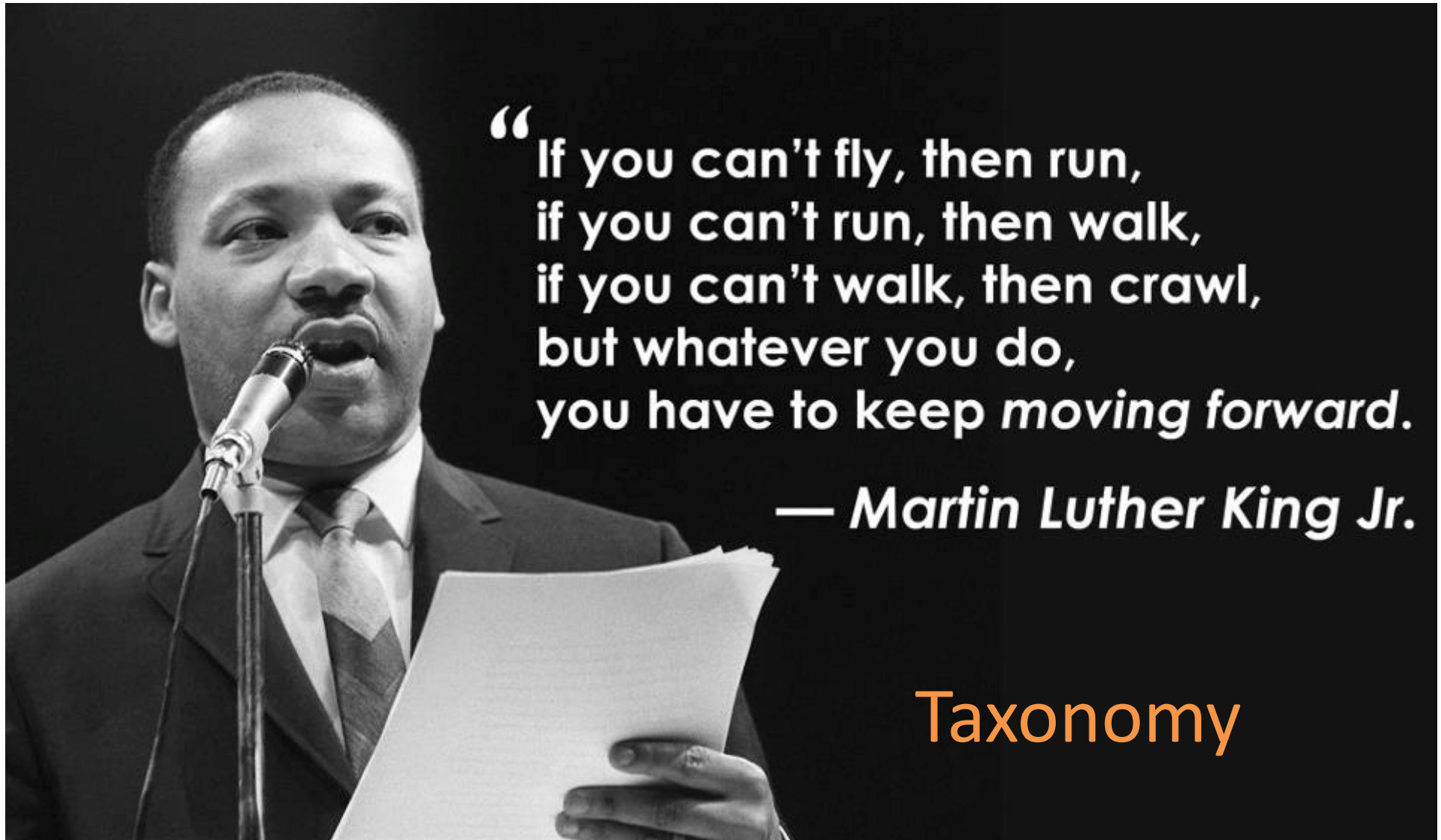
# LO Synthesis

- Summarise the reasons and effects of a specified model of electronic commerce
- Organise a LLL-programme for customers

# LO Evaluation

- Evaluate marketing strategies of various models of electronic commerce

# Differentiation between levels



“ If you can't fly, then run,  
if you can't run, then walk,  
if you can't walk, then crawl,  
but whatever you do,  
you have to keep *moving forward*.”

— *Martin Luther King Jr.*

**Taxonomy**

# Joint Quality Initiative – Dublin Descriptors

## *Knowledge and understanding*

- **1 (Bachelor)** [is] supported by advanced text books [with] some aspects informed by knowledge at the forefront of their field of study ...
- 2 (Master)** provides a basis or opportunity for originality in developing or applying ideas often in a research context ...
- 3 (Doctorate)** [includes] a systematic understanding of their field of study and mastery of the methods of research associated with that field

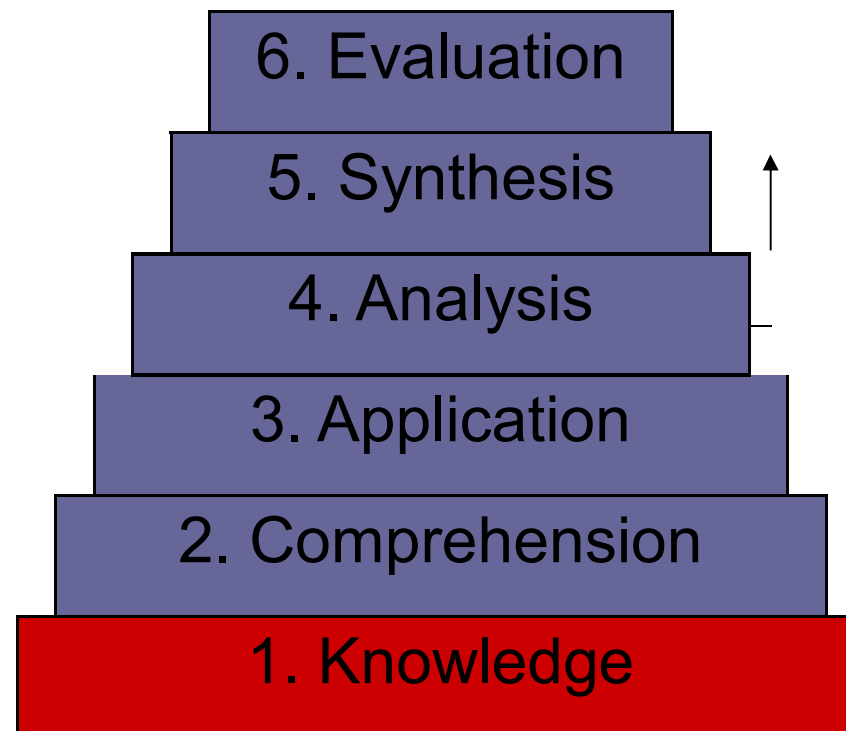


## EQF : Readability – horizontal / vertical

	<b>Knowledge &amp; Underst.</b>	<b>Skills</b>	<b>Competence</b>
<b>L 6</b>	<p>advanced knowledge of a field of work or study involving a critical understanding of theories and principles</p>	<p>advanced skills, demonstrating mastery and innovation, in a complex and specialised field of work or study</p>	<p>manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work and study Contexts - lead groups in work and study</p>
<b>L 7</b>	<p>highly specialised knowledge, some of which is at the forefront of knowledge in a field of work Or study, as the basis for original thinking critical awareness of knowledge issues in a field and at the interface Between different fields</p>	<p>specialist research and problem-solving skills, including analysis and synthesis, to develop new knowledge and procedures and to integrate knowledge from different fields</p>	<p>demonstrate leadership and innovation in work and study contexts that are complex, unpredictable and require new strategic approaches take responsibility for continuing personal professional development, for contributing to professional knowledge and practice and for reviewing the strategic performance of teams</p>

Bloom's Taxonomy  
No categorisation  
Presents processes of thinking hierarchically.  
Each level of the hierarchy is determined by the ability of the learner to operate on this level or the ones below.

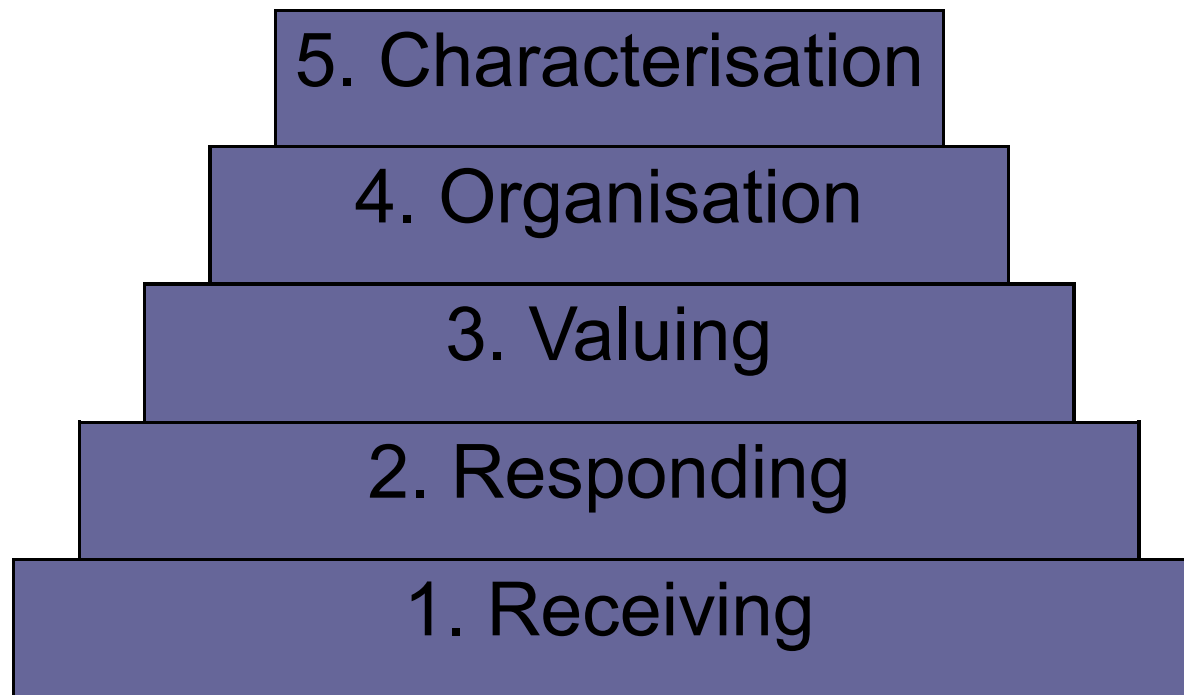
## Cognitive Domains



## Examples of verbs to assess knowledge

Arrange, collect, define, describe, duplicate, enumerate, examine, find, identify, label, list, memorise, name, order, outline, present, quote, recall, recognise, recollect, record, recount, relate, repeat

# Affective Domaine



**Receiving:** Willingness to receive information, e.g. the individual accepts the need for a commitment to service, listens to others with respect, shows sensitivity to social problems, etc.

**Responding:** The individual is actively participating in his or her own learning, e.g. shows interest in the subject, is willing to give a presentation, participates in class discussions, enjoys helping others, etc.

**Valuing:** This ranges from simple acceptance of a value to one of commitment, e.g. the individual demonstrates belief in democratic processes, appreciates the role of science in our everyday lives, shows concern for the welfare of others, shows sensitivity towards individual and cultural differences, etc.

## **Organisation:**

Process that individuals go through as they bring together different values, resolve conflicts among them and start to internalise the values,

e.g. recognises the need for balance between freedom and responsibility in a democracy, accepts responsibility for his or her own behaviour, accepts professional ethical standards, adapts behaviour to a value system, etc.

Evaluation

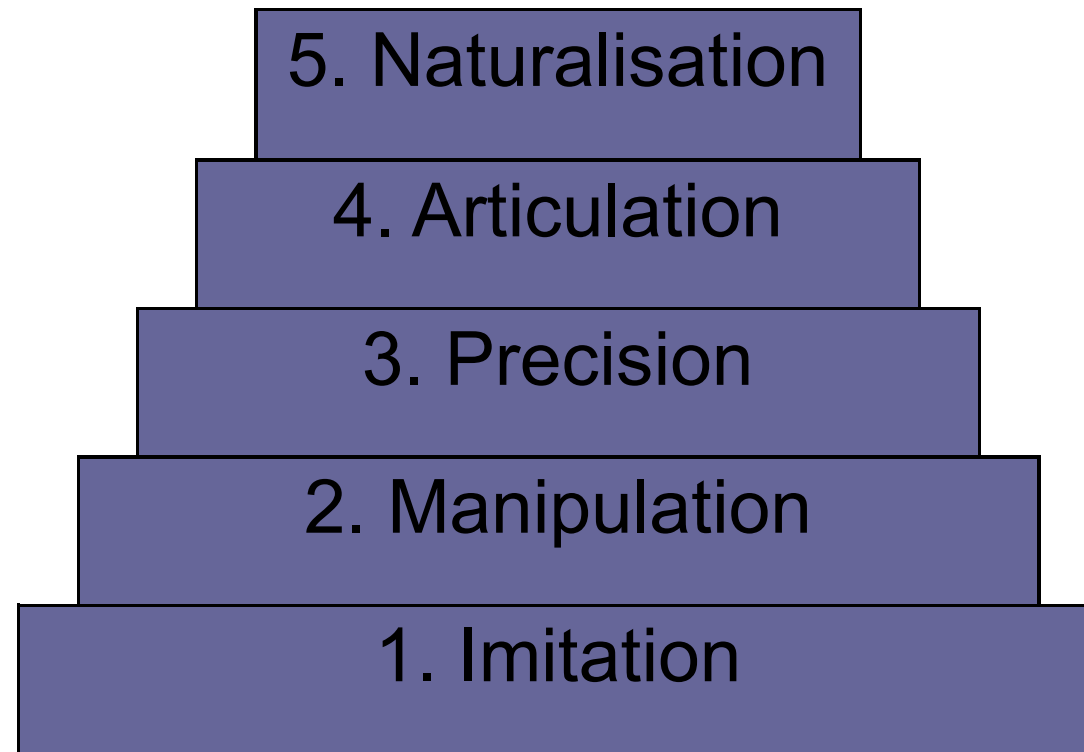
## **Characterisation:**

At this level the individual has a value system in terms of his/her beliefs, ideas and attitudes that control their behaviour in a consistent and predictable manner, e.g. displays self reliance in working independently, displays a professional commitment to ethical practice, shows good personal, social and emotional adjustment, maintains good health habits, etc.

## Some active verbs commonly used when writing learning outcomes for this domain

Act, adhere, appreciate, ask, accept, answer, assist, attempt, challenge, combine, complete, conform, co-operate, defend, demonstrate (a belief in), differentiates, discuss, display, dispute, embrace, follow, hold, initiate, integrate, justify, listen, order, organise, participate, practice, join, share, judge, praise, question, relate, report,

# Psychomotor Domaine (Dave 1970)





## **Imitation:**

Observing the behaviour of another person and copying this behaviour. This is the first stage in learning a complex skill.

## **Manipulation:**

Ability to perform certain actions by following instructions and practising skills.

## **Precision:**

At this level, the student has the ability to carry out a task with few errors and become more precise without the presence of the original source. The skill has been attained and proficiency is indicated by smooth and accurate performance.

## **Articulation:**

Ability to co-ordinate a series of actions by combining two or more skills. Patterns can be modified to fit special requirements or solve a problem.

## **Naturalisation:**

Displays a high level of performance naturally (“without thinking”). Skills are combined, sequenced and performed consistently with ease.

# Simpson (1972) – 7 levels

## **Perception:**

The ability to use observed cues to guide physical activity.

## **Set (mindset):**

The readiness to take a particular course of action.

This can involve mental, physical and emotional disposition.

## **Guided response:**

The trial-and-error attempts at acquiring a physical skill.

With practice, this leads to better performance.

## **Mechanism:**

The intermediate stage in learning a physical skill.

Learned responses become more habitual and movements can be performed with some confidence and level of proficiency.

## Simpson (1972) – 7 levels (cont.)

### **Complex Overt Responses:**

Physical activities involving complex movement patterns are possible. Responses are automatic and proficiency is indicated by accurate and highly coordinated performance with a minimum of wasted effort.

### **Adaptation:**

At this level, skills are well developed and the individual can modify movements to deal with problem situations or to fit special requirements.

### **Origination:**

The skills are so highly developed that creativity for special situations is possible.

## Some active verbs commonly used when writing learning outcomes for this domain

Adapt, adjust, administer, alter, arrange, assemble, balance, bend, build, calibrate, choreograph, combine, construct, copy, design, deliver, detect, demonstrate, differentiate (by touch), dismantle, display, dissect, drive, estimate, examine, execute, fix, grasp, grind, handle, heat, manipulate, identify, measure, mend, mime, mimic, mix, operate, organise, perform (skilfully), present, record, refine, sketch, react, use.

# Other taxonomies in this domain

Harrow (1972) and Dawson (1998)  
Ferris and Aziz (2005) - specifically for engineering students.

In general:

all of the various taxonomies in this domain describe a progression from simple observation to mastery of physical skills.

# Good Practice

- The **key word is DO** and the **key need** in drafting learning outcomes is to use **active verbs**. (Jenkins and Unwin, 2001; Fry et al., 2000)
- **Try to avoid ambiguous verbs** such as “understand”, “know”, “be aware” and “appreciate”.(Bingham J., 1999)
- **Concrete verbs** such as “define”, “apply” or “analyse” are more helpful for assessment than verbs such as “be exposed to”, “understand”, “know” “be familiar with”.(Osters and Tiu, 2003)
- **Vague verbs such as “know” or “understand” are not easily measurable.** Substitute, “identify”, “define”, “describe” or “demonstrate”.(British Columbia Institute of Technology, 1996)

# Good Practice cont.

- **Care** should be taken in using words such as **‘understand’** and **‘know’** if you cannot be sure that students will understand what it means to know or understand in a given text. (McLean and Looker, 2006 )
- **Verbs relating to knowledge outcomes – “know”, “understand”, “appreciate” – tend to be rather vague, or to focus on the process students have gone through rather than the final outcome of that process,** so use action verbs – “solve”, evaluate, analyse – to indicate how students can demonstrate acquisition of that knowledge. (UCE Educational and Staff Development Unit)

# Good Practice cont.

- Certain verbs are unclear and subject to different interpretations in terms of what action they are specifying. Such verbs call for covert behaviour which cannot be observed or measured.

**These types of verbs should be avoided:** know, become aware of, appreciate, learn, understand, become familiar with.

(American Association of Law Libraries)



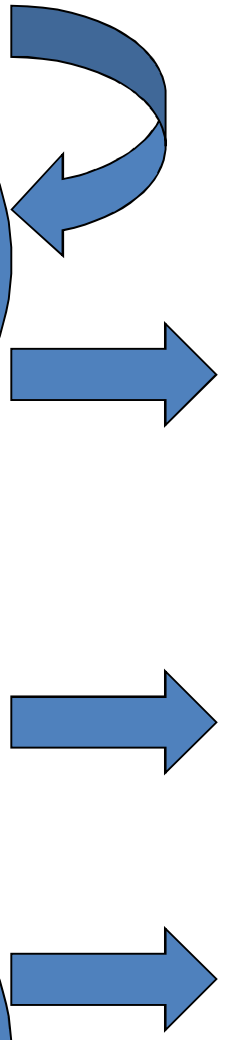
**Sectoral / Disciplinary Orientation / Benchmark  
Business Studies and Management  
Universities of Applied Sciences**

Wissen und Verstehen von Absolventen bauen auf der Ebene der Hochschulzugangsberechtigung auf und gehen über diese wesentlich hinaus. Absolventen haben ein breites und integriertes Wissen und Verstehen der wissenschaftlichen Grundlagen ihres Lerngebietes nachgewiesen:

**Level 6 BA**  
*Organisationen und ihre Elemente definieren, unterscheiden und die Zusammenhänge erkennen.*

*das Umfeld der Organisationen und seiner Elemente erkennen, unterscheiden und die Zusammenhänge erkennen.*

*Konzepte und Instrumente des Managements erklären und bewerten*



Dazu gehören:

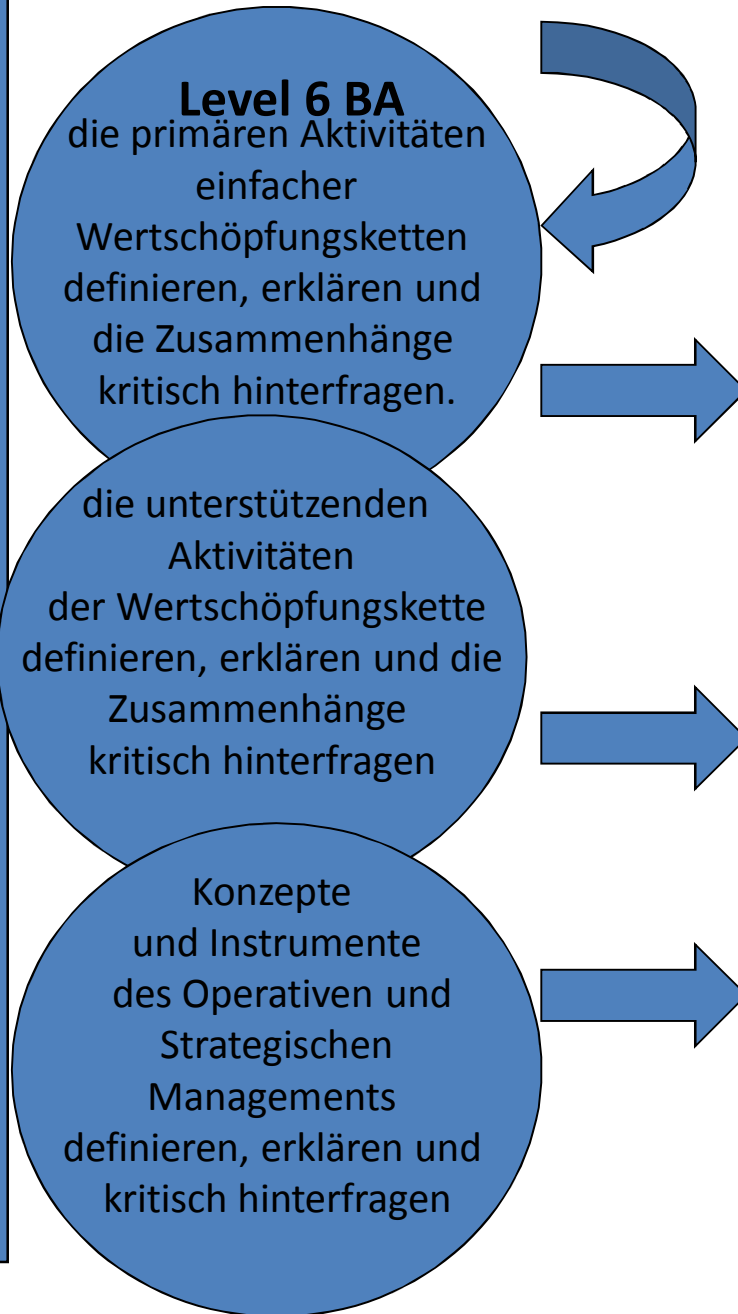
Zwecke, Ziele, Strukturen, Funktionen und Prozesse unter Beachtung der jeweiligen Organisationskultur, des individuellen sowie des institutionellen Verhaltens und ihrer Auswirkungen nach innen und außen.

Wirtschaft, Umwelt, Werte und Normen, Recht, Politik, Gesellschaft, Technologie, einschließlich ihrer jeweiligen Auswirkungen für das Management auf lokaler, nationaler und internationaler Ebene.

Prozesse und Verfahren effektiver und effizienter Führung von Organisationen. Dies beinhaltet Wissen über Theorien, Modelle und die Entscheidungsfindung im strategischen und operativen Kontext

Sie verfügen über ein kritisches Verständnis der wichtigsten Theorien, Prinzipien und Methoden der Wirtschaft und sind in der Lage, ihr Wissen vertikal, horizontal und lateral zu vertiefen . Ihr Wissen und Verstehen entspricht dem Stand der Fachliteratur, sollte aber zugleich einige vertiefte Wissensbestände auf dem aktuellen Stand der Forschung in ihrem Lerngebiet einschließen.

## Wissensvertiefung Die Fähigkeit zu / ist fähig, .



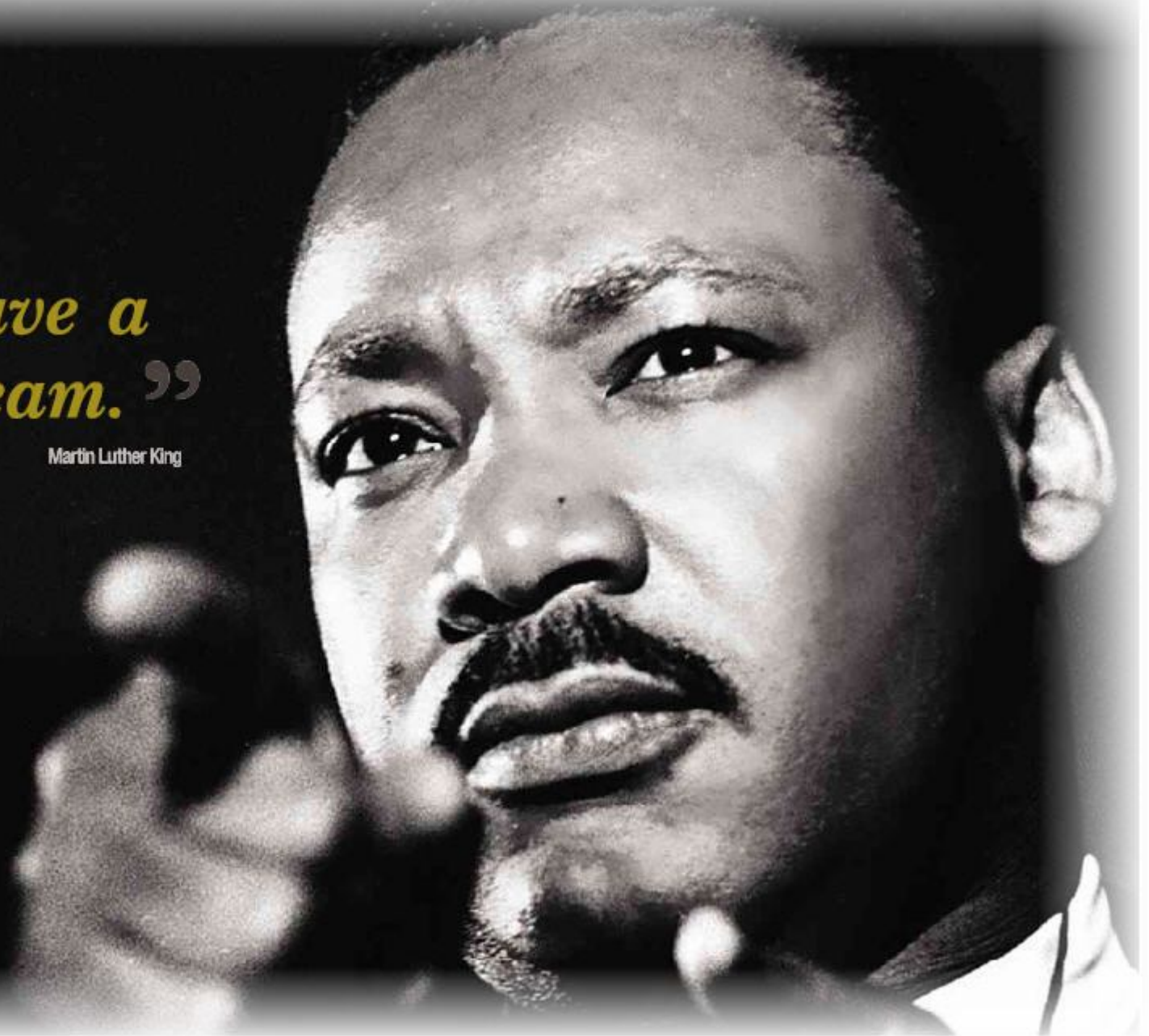
Dazu gehört die Orientierung an **Märkten:** Entwicklung und Funktionsweisen (Ressourcen, Güter und Dienstleistungen) und **Kunden:** Bedürfnisse (Erwartung und Erfüllung), Pflege der Beziehungen

*Finanzierung / Controlling:*  
Steuerung der Finanzströme, Informationsversorgung durch internes und externes Rechnungswesen  
*Humanressourcenmanagement*  
*Informations- und Kommunikationsmanagement*  
(Inhalte, Systeme und Technologien)  
*Organisationsentwicklung / Change Management*

Dazu gehören in allen unternehmerischen Perspektiven:  
Prozessmanagement,  
Projektmanagement,  
Qualitätsmanagement,  
Personalentwicklung

*“ I have a  
dream. ”*

Martin Luther King



# Qualifications Framework Institutional / Organisational

Osnabrueck

University of Applied Sciences

Learning Outcomes and Levels  
Bachelor Degree 3 years

			Level 1 Descriptor	Level 2 Descriptor	Level 3 Descriptor
			<b>The ability to demonstrate and / or work with</b>		
<b>Knowledge and Understanding</b>	<b>Knowledge widening</b>	<b>General</b>	a broad knowledge of the subject/ discipline in general	a broad knowledge of the scope, defining features, and main areas of a subject/ discipline	a broad and integrated knowledge and understanding of the scope, main areas and boundaries of a subject/ discipline
			knowledge that is embedded in the main theories, concepts and principles	understanding of a limited range of core theories, principles and concepts	a critical understanding of a selection of the principal theories, principles, concepts and terminology
			an awareness of the evolving/ changing nature of knowledge and understanding	limited knowledge and understanding of some major current issues and specialisms	
				an outline knowledge and understanding of research and equivalent scholarly/ academic processes	
		<b>Module related</b>			
	<b>Knowledge deepening</b>	<b>General</b>	an understanding of the difference between explanations based in evidence and/ or research and other forms of explanation, and of the importance of the difference	detailed knowledge in some areas	knowledge that is detailed in some areas and/ or knowledge of one or more specialisations that are informed by forefront developments
		<b>Module related</b>			

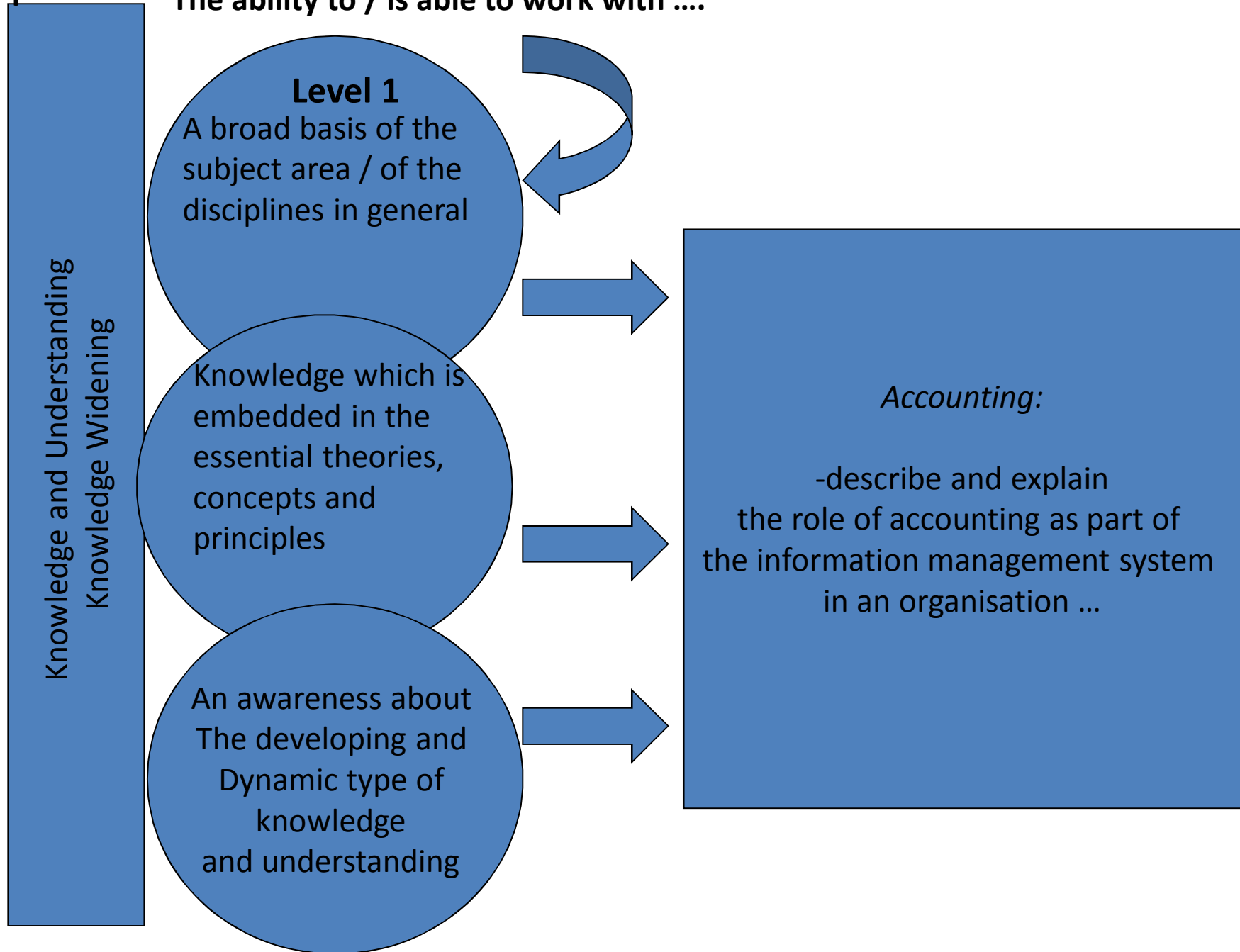
	<b>Terminology</b>	<p><i>To acquire knowledge:</i> define, describe, identify, label, name, outline, reproduce, recall, select, state, present, extract, organise, recount, write, recognise, measure, underline, repeat, relate, match</p> <p><i>To understand knowledge</i> interpret, translate, estimate, justify, comprehend, convert, clarify, defend, distinguish, explain, extend, generalise, exemplify, give examples of, infer, paraphrase, predict, rewrite, summarise, discuss, perform, report, present, restate, illustrate, indicate, find, select, represent, name, formulate, judge, contrast, translate, classify, express, compare</p>		
	<b>Example</b>	<p><i>Accounting:</i> The student can describe and explain the role of Accounting within the Information Management System of a business organisation</p>	<p><i>Accounting:</i> The student can critically discuss and evaluate the various Accounting systems ...</p>	<p><i>Accounting:</i> The student can identify and critically evaluate the strategic options of the Information Management Systems of a business organisation</p>
<b>Knowledge revealing/ opening and developing</b>	<b>General</b>	<p><b><i>Instrumental - ICT and numeracy skills</i></b> use a wide range of routine skills and some advanced skills associated with the subject/ discipline - for example</p>		
		use a wide range of use standard applications to process and obtain a variety of information and data	use a range of standard applications to process and obtain data	Use a range of routine skills and some advanced and specialised skills in support of established practices in a subject/ discipline, for example - use a range of IT applications to support and enhance work - interpret, use and evaluate numerical and graphical data to achieve goals/ targets
		use a range of numerical and graphical skills in combination		
		use numerical and graphical data to measure progress and achieve goals/ targets	use and evaluate numerical and graphical data to measure progress and achieve goals/ targets	

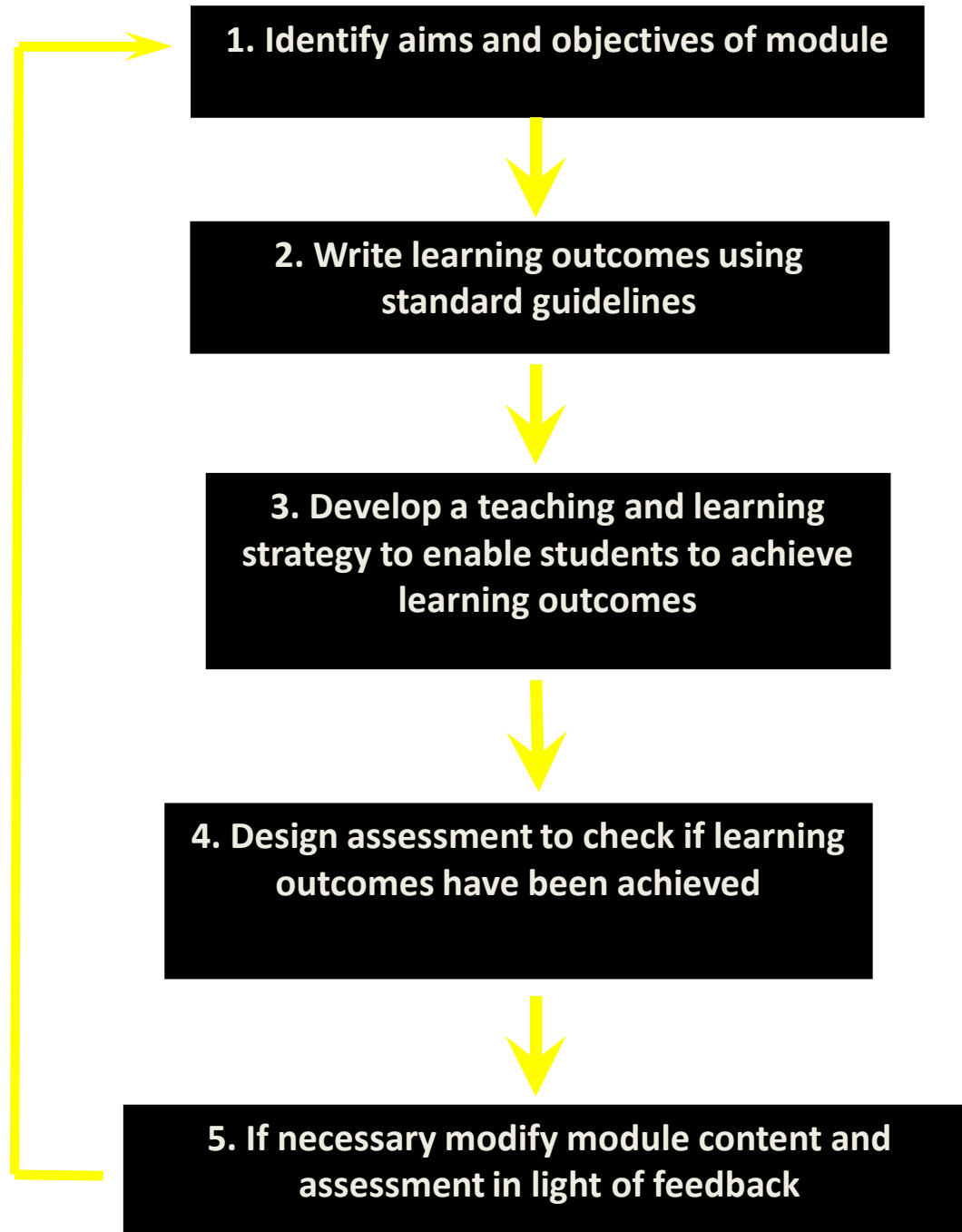
<b>Subject-related</b>			
<b>Terminology</b>	use, apply, present, formulate, darstellen, examples: present, work out, calculate, statistically present, statistically underpin, and collect data, evaluate, assess, rank, present graphically, compile, match, put in order, merge, summarise, diagnose, categorise, propose, work out hypotheses, verify, falsify ...		
<b>Example</b>	<i>Data processing:</i> The student is aware of some of the general characteristics of data basis.	<i>Data processing::</i> The student can assess the various alternatives to implement an information system	<i>Data processing::</i> The student understands the various activities which are necessary to implement technological change.
	<b>Interpersonal / communicative - Generic cognitive skills and competences</b> The student has the ability to		
	present and evaluate arguments, information and ideas which are routine to the subject discipline	undertake critical analysis, evaluation and/ or synthesis of ideas, concepts, information and issues which are within the common understandings of the subject/ discipline	undertake critical analysis, evaluation and/ or synthesis of ideas, concepts, information and issues
	use a range of approaches to addressing defined and/ or routine problems and issues within familiar contexts	use a range of approaches to formulate evidence-based solutions/ responses to defined and/ or routine problems/ issues	identify and analyse routine professional problems and issues
		critically evaluate evidence-based solutions/ responses to defined and/ or routine problems/ issues	draw on a range of sources in making judgements
	use a wide range of routine skills and some advanced skills associated with the subject/ discipline - for example - convey complex ideas in well-structured and coherent form - use a range of forms of communication effectively in both familiar and new contexts	use a range of routine skills and some advanced and specialised skills associated with a subject/ discipline- for example - convey complex information to a range of audiences and for a range of purposes	use a range of routine skills and some advanced and specialised skills in support of established practices in a subject/ discipline, for example - make formal and informal presentations on standard/ mainstream topics in the subject/ discipline to a range of audiences



Example

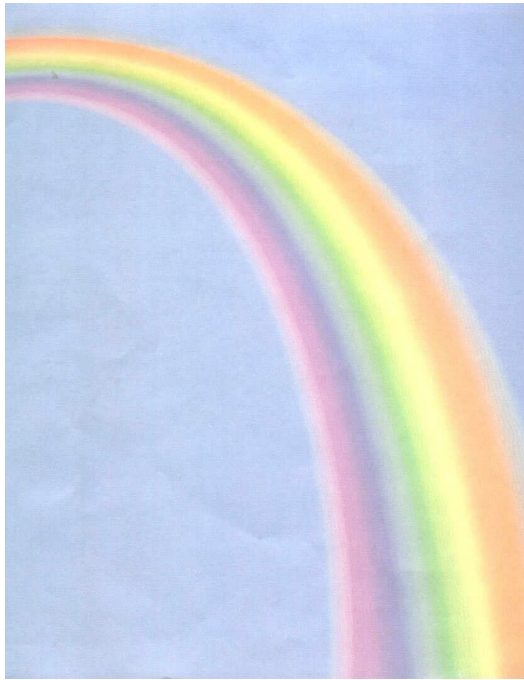
The ability to / is able to work with ....





# Your Check

- Do the various learning outcomes of all modules refer to the profile of the programme?
- Are all learning outcomes of the programme reflected in the various learning outcomes of the modules?



That's all Folks.  
Hope you learned  
something about  
learning outcomes!





Learning Outcomes

# Tuning Approach

- When designing a programme:

# STEP 1

*Key questions:*

1. ***Which syllabi are the essential characteristics of this degree programme?***

***Without which module would no one consider this as the identified degree programme?***

***Conclusion: Core modules***

## STEP 1 (CONT.)

2. *Which areas could be identified – vertically, horizontally or laterally – for further useful studies (profiling)?*

(*vertical*: specialisation in a narrow sense = deepening  
backward/forward integration;

*horizontal*: interdisciplinary = enlargement;

*lateral*: unrelated diversification)

**Conclusion: Specialisation modules / major /  
minor / electives / options**



## STEP 1 (CONT.)

**3. *What else is needed to understand issues, identify and to express them in various ways?***

***To which extent can a quantitative approach help to explain these issues?***

**Conclusion: Support modules**

**4. *How can I learn and organise myself?***

***How can I present / express best what I want to say***

**Conclusion: Organisation and Communication modules**

## STEP 1 (CONT.)

5. *How does theory relate to practice?*

*How can I relate theory to practice?*

*What are the methods?*

**Conclusion: Transfer modules**

## RESULT OF STEP 1

- Structuring of degree programmes into

### **Core modules**

Objective of Learning Outcomes:

- Knowledge Acquisition and Widening

### **Specialisation modules (level dependent)**

Objective of Learning Outcomes:

- Knowledge Acquisition and Deepening

## RESULT OF STEP 1 (CONT.)

**Support modules**

**Organisation and communication  
modules**

**Transfer modules**

**Objective of Learning Outcomes:**

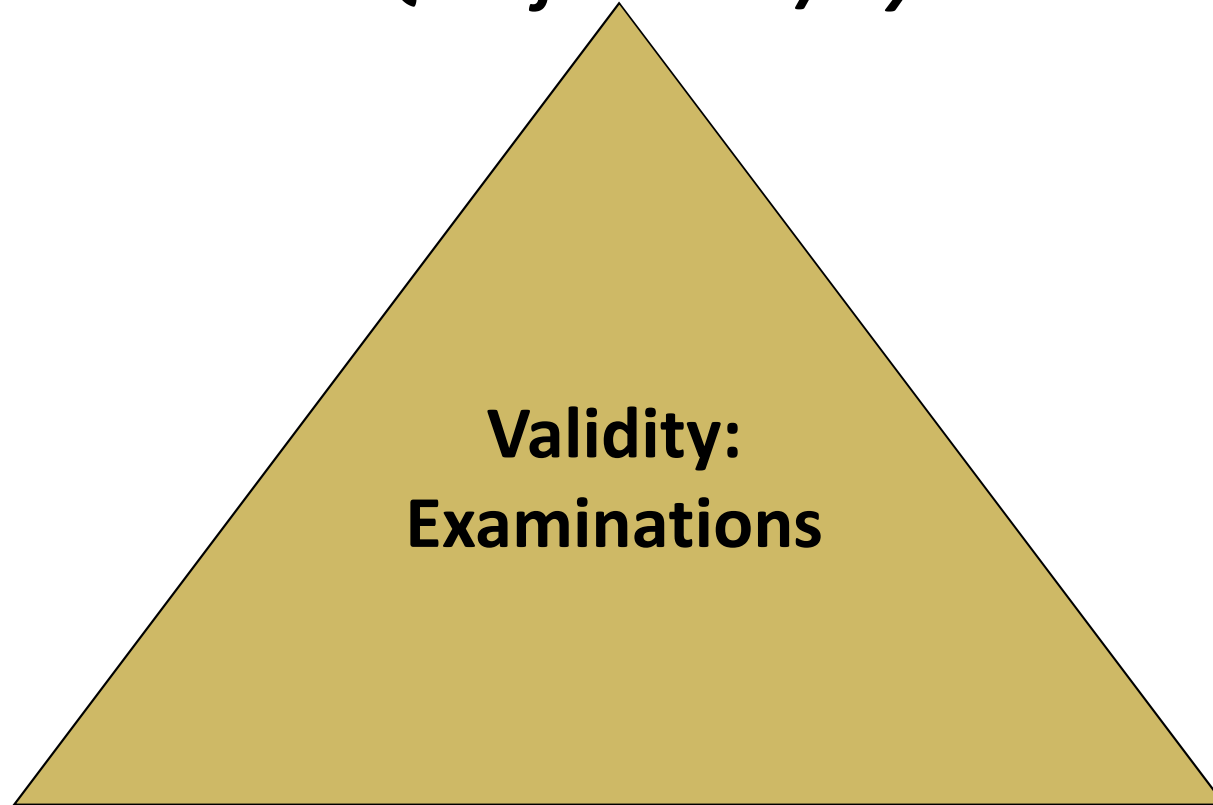
**Methodology: Skills / Competences to  
learn and transfer**

**Knowledge acquisition (independent  
learning), developing and creating**

**Step 1: THE BERMUDA TRIANGLE**  
**demystified through referencing**

Learning Outcomes

*Qualifications/-system*



**Validity:  
Examinations**

**Assessment**  
*Grad(e)-ingsystem*

**Workload**  
*Credit/-system*

# Essential Question of Examinations

Can the exam **validate** the achievement of the learning outcomes?

At the level of

- Student
- cohort
- moving cohort
- external

# Objectives of competence-oriented examinations

## SMART

- ▣ Specific
- ▣ Measurable
- ▣ Adequate
- ▣ Relevant
  
- ▣ Timely

## MEANS

- ▣ Unambiguous
- ▣ Feasible
- ▣ Acceptable
- ▣ Realistic, competence oriented
- ▣ In which / at which time

## Potential Conflicts

# Assessment Criteria

## Potential Conflicts (Examples)

### SMART CRITERIA

- ▣ Relevance versus Measurable
- ▣ Measurable versus Suitability /Fairness
- ▣ Relevance / Realistic versus demanding /adequate versus timeline

### LEARNING OUTCOMES

- ▣ Ability to work in teams
  - Group work?
- ▣ Ability to speak
  - Written examination?
- ▣ Proposals to act
  - Level bachelor thesis
  - 6-Weeks



# Potential Conflicts

## QUALIFICATIONS

- ▣ Qualifikationsframework
  - Levels
  - Parallel (professional / academic)

## BUNDLE OF LEARNING OUTCOMES

- ▣ Sum of learning outcomes matches a level
- ▣ All documented learning outcomes have to be validated
- ▣ Examinations have to correspond to a respective level
- ▣ Variety of examinations



**Learning outcomes of a defined level  
have to be validated**

# Assessment Requires

## ▣ Forms / Types

- Written
- Oral
- On-line
- Theoretical
- Practical
- QA
- Report
- Essay...

## ▣ SMART Criteria eg Weighting

- Context (5%)
- Research Question (10%)
- Methodology (15%)
- Analysis (20%)
- Conclusion (20%)
- Recommendations (20%)
- Literature (5%)
- Presentation, Language, Quotation (5%)

***Beware:*** No weighting according to the number of credits

## Example

Criteria	<40	<50	<60	<70	<80	80+	Comments
Clarity and relevance of terms of reference/aims and objectives and these have been fully met							
Demonstration of knowledge, understanding and critical evaluation of relevant literature							
Justification and use of appropriate methods and data collection							
Evidence of systematic data collection and clear presentation and findings							
Critical analysis and interpretation of findings linking both secondary and primary research							
Appropriateness of conclusions and, where required, realistic and appropriate recommendations							
Evidence that personal learning has been reviewed – skills reflection							
Satisfactory presentation of material, consistent and appropriate referencing and clear and accurate use of English							
Overall Grade							127

# Business in Context (2004/2005)

## Assignment

Criteria	Weighting	70%+	60-69%	50-59%	40-49%	Fail
	%					
<b>Generic: Communication</b>	5	Communicates to reader succinctly with very good clarity and coherence. There is good physical presentation.	Small element of distinctive coherence and structure and presentation missing.	Clear presentation of basic arguments and structure. Poor elements can be compensated by other good work.	Some element of coherent argument and structure.	Difficult to read and follow arguments. Very untidy physical presentation.
<b>Knowledge &amp; Understanding</b>	20	Comprehensive, clear demonstration of required concepts and practical knowledge and understanding. Wide reading used	Mainly clear and comprehensive: small element missing or elementary.	Basic knowledge and understanding of material across board or incomplete compensated by good elements.	Elementary knowledge and understanding displayed. Incomplete.	Demonstrates no or very limited knowledge or understanding or required material.
<b>Analysis</b>	30	Demonstrates clear incisive ability to assess range of information analytically.	Demonstrates overall effective analysis of material, with some element missing allowed.	Basic analysis of material and comparisons.	Mainly descriptive: little analysis.	Descriptive only - no analysis.
<b>Synthesis/ Creativity/ Application</b>	10	Distinctive display of creativity and ability to synthesise material	Significant element of synthesis and creativity.	Small element of sunthesising arguments and showing creativity displayed.	Limited/elementary creativity and synthesis.	No creativity or synthesis of material displayed.
<b>Evaluation</b>	30	Demonstrates clear, incisive ability to evaluate information in all forms.	Some (significant) element of incisive, clear evaluation, above basic level.	Basic evaluation of information and appropriateness of concepts and models.	Only elementary evaluation of material presented.	Extremely limited evaluation of material - both practical and concepts.
<b>Assignment Parameters</b>	5	Follows parameters/guidelines exactly as asked.	Small element of guidelines missing or inadequate.	Satisfactory, basic adherence to all guidelines or compensation by some distinctive element.	Small element of parameters/guidelines followed.	Parameters not followed.
<b>Total</b>	100					

# Requirements

**„Blind Double Marking“**

**Consistence**

**Feed-back**

**Explanation**

**Transparency**

# Step 2: Grades and Grading Transfer

- ▣ National Grading System
- ▣ System of relative grades/marks – Percentage based
- ▣ Passing grades of modules and study-programmes
  - Additional information
  - No conversion tables
  - Reference: Moving cohorte

# Example of ranking of relative grades

Grade-category	Number	Number accumulated	%-rang	Grade-category	Number	Number accumulated	%-rang	Grade-category	Number	Number accumulated	%-rang
Sehr gut				gut				befriedigend			
1,0	0	0	0.00%	1,6	6	32	5.45%	2,6	53	374	63.71%
1,1	0	0	0.00%	1,7	9	41	6.98%	2,7	45	419	71.38%
1,2	1	1	0.17%	1,8	30	71	12.10%	2,8	48	467	79.56%
1,3	8	9	1.53%	1,9	18	89	15.16%	2,9	38	505	86.03%
1,4	8	17	2.90%	2,0	21	110	18.74%	3,0	43	548	93.36%
1,5	9	26	4.43%	2,1	37	147	25.04%	3,1	24	572	97.44%
				2,2	29	176	29.98%	3,2	8	580	98.81%
				2,3	48	224	38.16%	3,3	3	583	99.32%
				2,4	52	276	47.02%	3,4	2	585	99.66%
				2,5	45	321	54.68%	3,5	2	587	100.00%

# Requirements

- ▣ Representative number of students
- ▣ Sufficient number of examinations
- ▣ Min. 100 graduates
- ▣ This means for example: BA-programme of 3 years with six module exams per semester = 3600 exams.
- ▣ In addition to the quantitative aspects the qualitative comparability of the reference group has to be safeguarded (for example in case of change of examinations orders).



**That is not too  
difficult – or?**

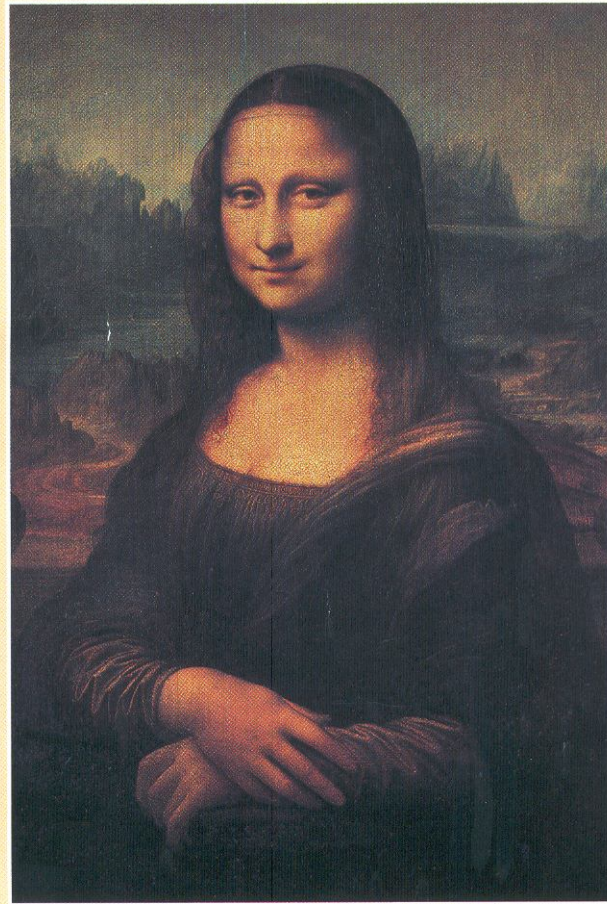


# In a German restaurant

You ask for the bill –

You receive it inside a card with the following  
„cover girl“

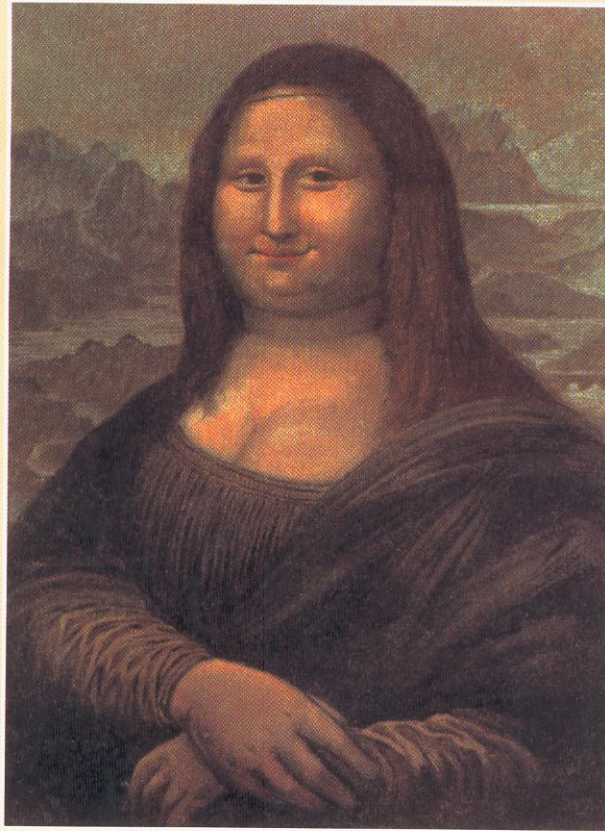
*Thanks  
for having dinner*



**You open the card...**

You find the bill, pick it up and see...





*and the dessert  
with us!*

**Learning outcomes of the workshop?**

