TOOLKIT ON ENHANCING ACCOUNTABILITY AND TRANSPARENCY IN CURRICULUM DEVELOPMENT AND STUDENT ASSESSMENT

Working together to improve quality of higher education
http://partnership-governance-eu.coe.int

Strengthening Integrity and Combatting Corruption in Higher Education in Armenia Project

Partnership for Good Governance

Գործընկերություն հանուն լավ կառավարման

EUROPEAN UNION

COUNCIL OF EUROPE
CONSEIL DE L'EUROPE

TOOLKIT ON ENHANCING ACCOUNTABILITY AND TRANSPARENCY IN CURRICULUM DEVELOPMENT AND STUDENT ASSESSMENT

This document is produced by Professor Volker Gehmlich, University of Osnabrück, Germany, in consultation with Ms Gayane Harutyunyan, Director of National Information Centre of Academic Recognition, Armenia

2016

This document has been produced using funds of a Joint Project between the European Union and the Council of Europe. The views expressed herein can in no way be taken to reflect the official opinion of the European Union or the Council of Europe.

Content

Context

Ethical values, beliefs and assumptions are the "unseen" basis for human and/or organisational behaviour and their diversity. Of late, they have become again a focus of public debate, not the least sparked by cases of corruption, disrespection of rules and regulations throughout the world, shaking foundations of trust and reliability, also in higher education. Within the Eastern Partnership Programmatic Co-operation Framework Project of the Council of Europe and the European Commission, initiatives are taken and activities have been launched to strengthen the autonomy and accountability of higher education institutions in Armenia, ensuring integrity and combatting corruption in higher education. In this project the Ministry of Education and Science of the Republic of Armenia, university staff and students from public and private higher education institutions in Armenia and Armenian civil societial organisations have joined forces to

- design guidelines of ethical principles to underpin professional standards and practices in higher education
- include integrity mechanisms and effective tools combatting corruption in frameworks of higher education institutions
- develop a toolkit to enhance transparency and accountability in higher education

This paper is intended to be used as toolkit in which institutions find several means how accountable and transparent curricula could be developed and students assessed to support the Republic of Armenia - with support of the Council of Europe and the European Commission – to implement effectively the Anti-Corruption Action Plan 2015-2018 of the Armenian Government. In this way, the Armenian institutions will benefit from the positive image based on improved quality subsequently leading to an overall recognition in the academic world and beyond.

In line with the name of the project, all activities have to be scrutinised in terms of combatting corruption, thus following a Code of Ethics, in other words being a practical guide, a toolkit, for the Code having been developed in Armenia and used as a guideline for agreed standards of curriculum development and student assessment as two examples of potential areas of corruption in higher education. In the following the characteristics of these two issues, accountability and transparency, will be described and a toolkit designed to help to create a fair and transparent environment for students, in fact, for all learners, as regards learning, teaching and assessment.

To this extent also the requirements of the European Standards and Guidelines are met, within this context in particular Standard 1.8 Public Information: „Institutions should publish information about their activities, including programmes, which is clear, accurate, objective, up-to date and readily accessible". This means that institutions inter alia „…provide information about their activities, including the programmes they offer… ,the intended learning outcomes of these programmes, the qualifications they award, the teaching, learning and assessment procedures they used, the pass rates and the learning opportunities available to their students as well as graduate employment information." (ESG 2015 p15)

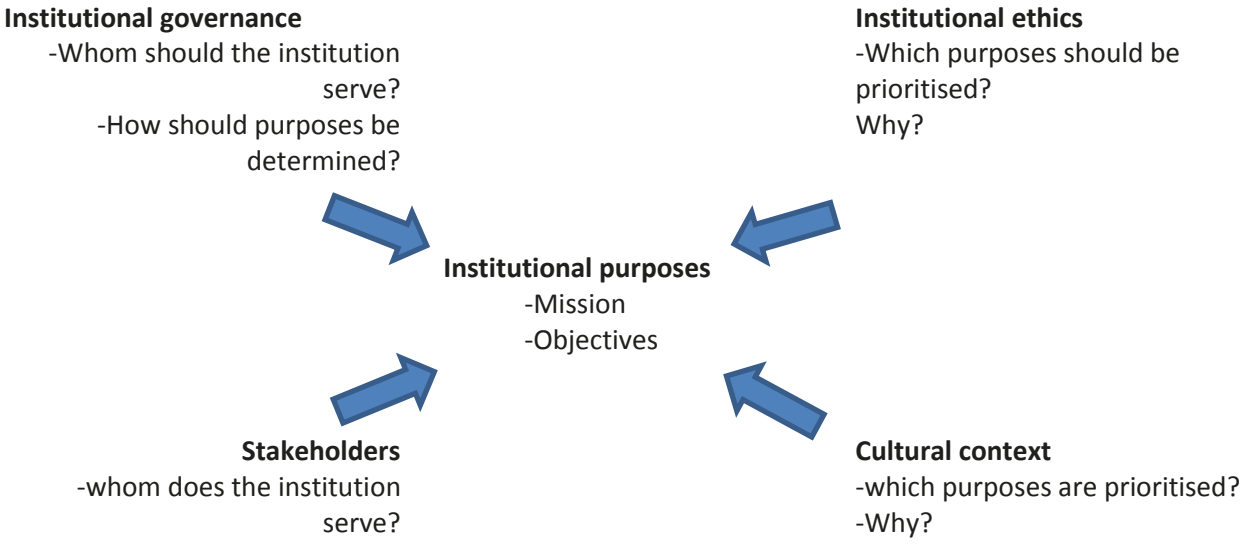
The toolkit consists of three parts, tools to "set the alarm", i.e. institutions to become aware (Part I), tools for doing "things", i.e. preventing the institutions from the formation of any offensive developments (Part II) and transparent recognition (Part III), being a right and not a kindness, having at hand legal and informative documents and competent bodies as tools.

Part I TOOLS FOR GETTING READY – Direction: Be aware and Beware

1. **Organisational Framework**

Accountability and transparency go „hand-in-hand“. Accountability is understood as an obligation of institutions and staff of higher education to report and thus account for their activities; here as regards curriculum development and student assessment. The reports have to clearly and transparently reveal the results achieved, the challenges encountered and the recommendations made for the forthcoming reporting periods of activities. For this purpose „transparent reporting lines“ (governance chain) – who reports to whom when – have to be detailed and accepted so that the reports can be widely discussed, conclusions drawn and developments outlined by the stakeholders, including the society at large so that adequate changes can be initiated in a timely manner. These examples should also demonstrate that management tools as such are adequate means to help to implement an accountable and transparent organisational framework. It should be stressed that the inclusion of students in all matters and at all levels is decisive for the success for the design, development and implementation of programmes and the assessment of students. Finally, this toolkit is by no means „complete“, i.e. comprising all possible means. In fact, it may be suitable for initiating internal debates about the adequacy and also stimulating the development of further tools suited much better for individual purposes.

To get started it might be useful „to set the scene“, i.e. to design an organisational framework within which the discussions are led, activities planned and tools applied. The framework reflects the expectations and purposes linked to an institution of higher education in Armenia in its cultural context respecting its stakeholders.



In this way the institution gets an overview about how members of the institution think, how the institution is governed, what the major ethical guidelines are and what the relationship to stakeholders means so that on this basis the institution may design its curricula, implement what is called „Constructive Alignment".

To make this framework sustainable a system of Quality Assurance /Enhancement and Quality Management should be in place.

Tool 1: Quality Assurance /Enhancement (QA) and Quality Management(QM) in Higher Education

All institutions of higher education in Armenia, having a licence from the Ministry, will have to undergo a process of institutional accreditation by the National Center for Professional Education Quality Assurance Foundation (ANQA). The accreditation of study-programmes is voluntary, left to the institution´s decision. The accreditation is of cyclical nature, which means it is granted for a fixed period of time; a re-accreditation has to be applied for in time.

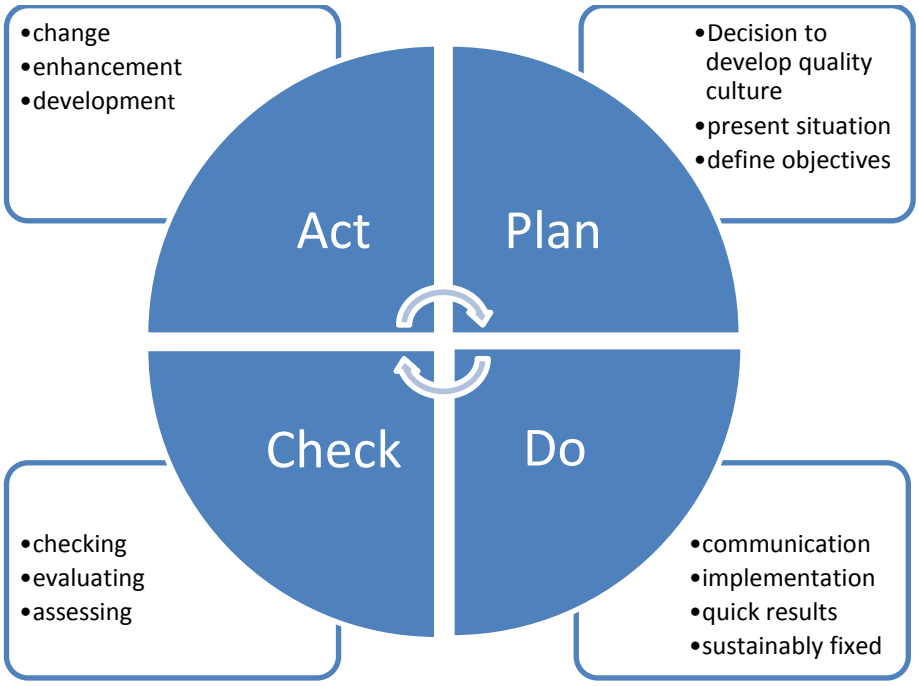
Participating in the European Higher Education Area means for Armenia that accreditation respects – on top of the national legal requirements - the European Standards and Guidelines (ESG). As pointed out above, this toolkit does not only respect the ESG but helps to be in line with their requirements. „They set a common framework for quality assurance systems for learning and teaching at European, national and institutional level;…including the learning environment and relevant links to research and innovation…The ***standards*** set out agreed and accepted practice for quality assurance in higher education in the EHEA…The ***guidelines*** explain why the standards are important and describe how standards might be implemented…"(ESG 2015). The ESG are a tool for the management of QA in higher education, defining generic principles rather than specific requirements, leaving it up to the institutional management to implement a system of internal QA which suits best the institution and which satisfies the requirements of external accreditations. While the ***internal QA*** focuses on the alignment of institutionnal strategy, study-programmes objectives and learning outcomes, the ***external QA*** seeks for evidence that this is done properly. The ***internal QA*** includes ex-ante and ex-post evaluations but is most times concerned with formative evaluation. ***External QA*** in the form of accreditation is either ex-ante or ex-post (re-accreditation). Central issues of internal QA are listed in part 1 of the Standards and Guidelines:

1.1. Policy for QA
1.2. Design and approval of programmes
1.3. Student-centred learning, teaching and assessment
1.4. Student admission, progression, recognition and certification
1.5. Teaching staff
1.6. Learning resources and student support
1.7. Information management
1.8. Public information
1.9. On-going monitoring and periodic review of programmes
1.10. Cyclical external QA

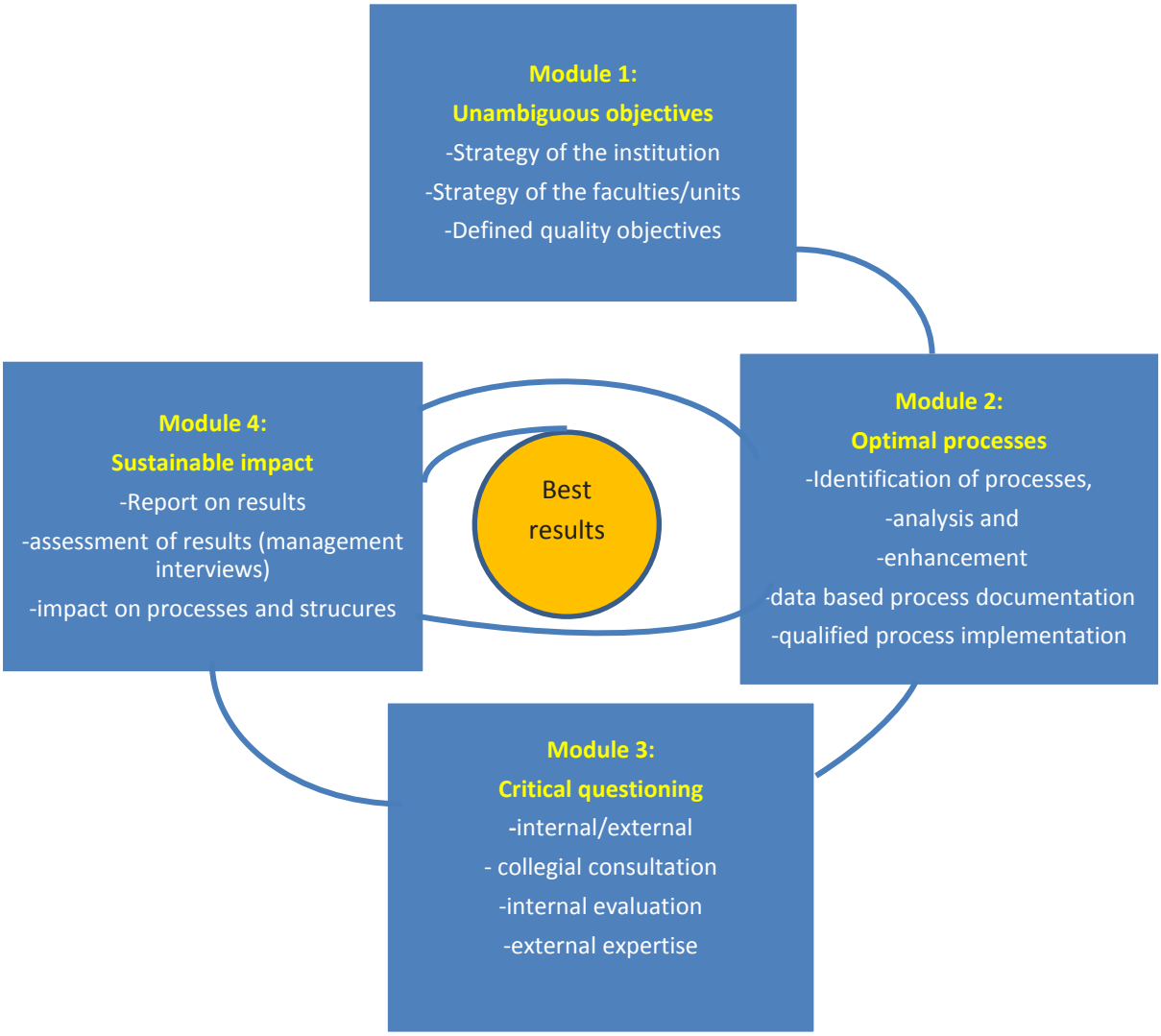
The tools described in this kit are in particular suited for standards and guidelines 1.2 – 1.4 but support as well activities to achieve the other standards.

External QA should build on 1.1–1.10 above and provide public assurance that institutions are taking care of the responsibilities given to them. External QA is peer-review based and highlights inter alia as standard that the expert reports should be fully published and that institutions have a right to lodge an appeal or a complaint (ESG Part II 2.1-2.7) .

Responsible for internal QA should be the Management of the institution (often Presidium or Rectorate). They have to assure that processes, acteurs and structures do not only fit with each other but also that they are fit for purpose. According to several analyses and reports it seems that a broad acceptance and identification of the members of the institution of higher education are more important than management issues and technocratic instruments, referring much more to the culture of the institution: QA should be a part of the organisational culture and is as such never at a standstill with a beginning and an end but is, in fact, a permanent process. To develop such a culture the following steps could be taken on the basis – for example – of the Deming cycle (PDCA):



The German University of Applied Sciences in Muenster defined four „action modules“ accordingly on their way to achieve a quality culture. The modules are interpreted as a spiral and were the result of discussions which were widely and intensively initiated between University management, Quality Management Team QMT), Deans, Quality Management representatives of departments/faculties and of the Central Administration of the institution, forming a work group :

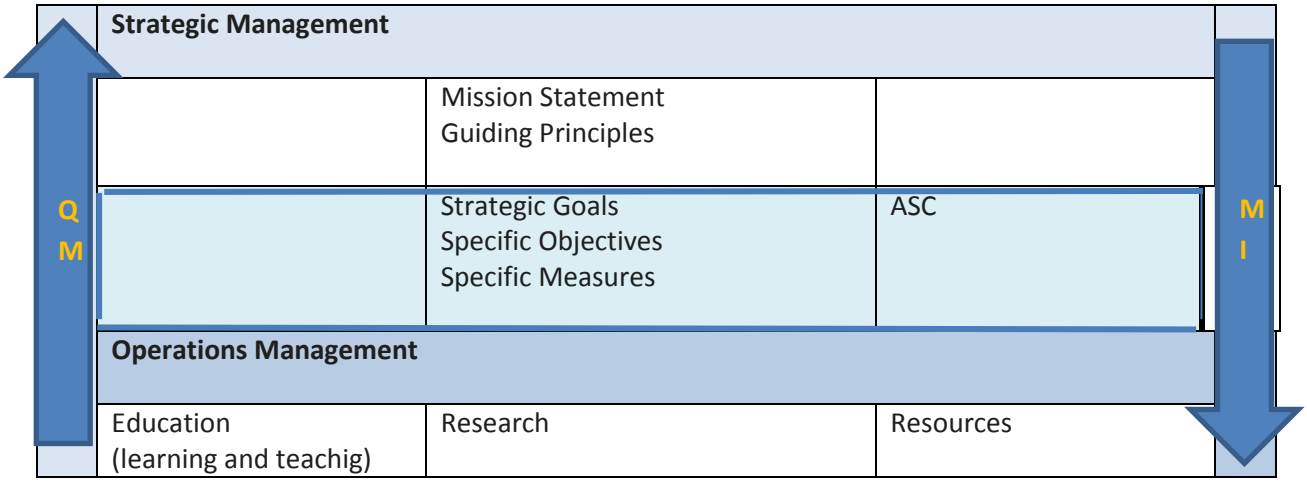


On the basis of the issues raised an Academic Scorecard, a variant of the Balanced Scorecard, a controlling tool for management, was developed at Muenster University of Applied Sciences. Starting point was the mission statement of the university.

The Academic Scorecard is a table which visualises strategic goals, details and transforms them into actions. In addition to a description of the goal, reference numbers are defined to measure and demonstrate the extent of achievement of goals and their development. The Academic Scorecard is complemented by a list of measures to be taken to reach the goals in a defined period of time. To get a complete picture, objectives and measures are formulated from different perspectives, e.g. education (learning and teaching) or research and resources (see below Step 1). In Muenster, the whole process was designed in an iterative way (parts of the result see below Step 2). The Academic Scorecard has to be checked regularly, e.g. every other year, to find out whether the goals and their measures are still up-to-date.

Example: University of Applied Sciences, Muenster (Germany)

Step 1



Legend: QM = Quality Management; MI = Management of the institution (Presidium); ASC = Academic Scorecard

Step 2 (a typical example, optimise completion rate of students, adapted to Muenster´s structure)

Strategic Goals	**Specific Objectives**	**Reference Number**	**Extent (up to 2017)**	**Measures (up to 2017)**
…	…	…	…	-
Example taken from the institution-wide Academic Scorecard, Education (learning and teaching) perspective				
Optimise completion rate	Assure studyability of the programme	Percentage of graduates within the defined time of the programme	90%	Support and check further a systematic development of study-programmes according to the QM-concept; maintain continuously institution-wide communication within and with the Work-group „QMT“ and the Work-group „Examinations“
	…	…	…	…
…	…	…	…	…

Legende: QMT = Quality Management Team

To be considered:

Following the student-centred approach the quality of a study-programme should be measured in relation to the

- specific learning outcomes within transparent curricula and syllabi
- quantitative workload expressed by credits
- type and form of competence-oriented examinations
- learning environment (space, library, computer facilities, etc.)
- learning support (advice, coaching, etc.

within a cycle, between cycles and after graduation (alumni network).

2. Governance Structures and Culture of Organisations

Governance of an institution of higher education is concerned with structures and systems of control by which presidents/rectorates/boards are accountable to all stakeholders. The president/rectorate/board on the one side and the stakeholders on the other side are connected by the governance chain, revealing the roles and relationships of different groups involved in the governance of the institution through their transparent reporting, disclosing their respective accountability. As it is being discussed that universities in Armenia might have the option to become – in legal terms - foundations, their governance chain may be similar to the examples outlined below:.

Tool 2: Institutional Governance Structures and Chain of Reporting

Example University of Colorado Foundation, USA *(www.cufund.org)*

Governance Structure: Boad of Directors, Board of Trustees; all members are volunteers, often alumni of the university, with business, civic and legal experience, and Foundation Officers and Vice Presidents. The Board of Directors adopted a „Public Information Disclosure Policy", listing all materials accessible for the public, allowing the public to understand their mission and activities. They provide „audited financials, summaries of investment activities, annual reports and a roster of board members through its web-site, …have an internal auditor"…

Example Osnabrueck University of Applied Sciences, Lower Saxony, Germany

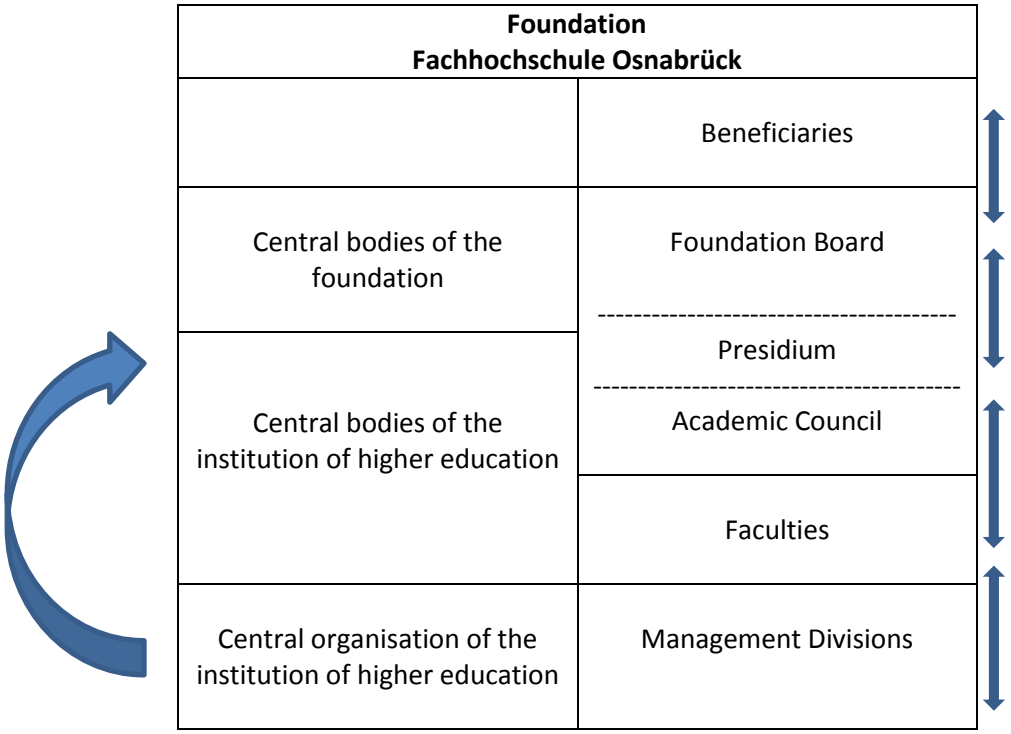
Osnabrueck is a city in Lower Saxony and as universities are part of the laws of the 16 federal states (Länder) in Germany, not the federal state of Germany, Osnabrueck falls within the scope of the Niedersächsische Hochschulgesetz (Law of Higher Education for Lower Saxony).

Foundation Fachhochschule Osnabrück	2002: the federal state of Lower Saxony established a foundation which can perform legal acts. This foundation owns the Hochschule Osnabrueck. The foundation carries and supports the HS Osnabrueck as a corporate organisation within public law since January 2003. Today HS has more than 13,000 students.	
Central bodies of the foundation	**Presidium**	**Stiftungsrat (Foundation Board)**
The HS has developed their own constitution (which had to be approved by the Foundation Board and finally by the federal state) and subsequently further regulations according to their needs.	***Tasks:*** Every president/vice-president has been allocated a portfolio, agreed jointly on the basis of a proposal by the president. The main tasks are reflected in the tasks of the management divisions (see below). Additionally specific topics are added which have to be decided by the presidents jointly.	***Tasks:*** The top body; has taken on the legal supervision from the Ministry. Decides on basic issues of the foundation, e.g. changes of assets, budget and development plan of HS, appointment of president on the basis of proposals from a specific committee and hearings in the institution. By doing this the Foundation Board assures an increase of autonomy of the foundation in relation to the state by enhancing quality of teaching, studies and applied research as part of their own responsibility.

Osnabrueck	***Members:*** 1 president plus 6 Vice-presidents (one of each 4 faculties plus 1 from the institute of Music plus one permanent member for financial and other non-academic affairs) President and vice-presidents are elected Vice presidents from their faculty members; president by the Foundation Board in consultation with the Senat (Academic Council)	***Members***: 5 individual members from outside, selected on the basis of their merits; appointed by the Ministry in agreement with the Senat (Academic Council). 1 representative of the institution; 1 representative of the Ministry Additionally, advisory members without voting right: All members of the Presidium, equal opportunity representative , personal affairs management, representative of Student organisation ASTA
Central bodies of theinstitution (HS)	**Presidium**	**Senat (Academic Council)**
	Tasks: as outlined above Examples of specific tasks could be: Strategic Planning, Internationalisation, Digitalisation	***Tasks:*** Comments on faculty proposals for appointing professors; appointment and induction of president; participation in the induction of avocational vice-presidents; decision on regulations of the institution, in particular its constitution; decision of the development plan; comments on all affairs of basic importance dealt within the various committees („self-administration“), in particular as regards establishing, changing or ending faculties or study-programmes respectively. The Senat has the right to be informed comprehensively by the president. The Senat must have ample time to get prepared for decisions as regards the budget and before an agreement about objectives with the Ministry is made.
	Members: As above	***Members:*** 7 professors 2 academic (not professors, can be teaching staff, research assistants) 2 technical staff / administrators 2 students All members are elected by their peers - most times per faculty Additionally, advisory members without voting right: All members of the Presidium, equal opportunity representative , personal affairs management, representative of Student organisation ASTA

Central organisation of the HS	Management Divisions	
Each division is allocated to the portfolio of one of the members of the presidency	Academic Management Financial Management Research and Transfer Site (building) Communication Open University/Continuing education Personal Management Quality and Process Management Planning of the structure and law Student affairs	

The governance chain of Osnabrueck University of Applied Sciences looks like the following:



It should be noted that this toolkit outlines options of activities; the tools as such are not a guarantee for any improvement. The activities have to be carried out by staff who have to embed the tools into their way of thinking. A successful combatting of corruption can only be achieved if the organisational culture of the institution supports it. Therefore, before tools are applied a proper analysis of the existing culture of the organisation should be made to identify possible gaps or misunderstandings for what has to be changed before embarking on „new territory". Change means learning. In Lewin´s words this means „unfreezing" the present way of thinking, „moving", i.e. learning" new approaches and „freeze" them so that they become state-of-the-art (see also forcefield analysis).

Tool 3: Organisational Culture: _The Cultural Web

The cultural web (Johnson/Scholes et.al.) shows the behavioural, physical and symbolic manifestations of a culture that inform and are informed by the taken-for-granted assumptions, or paradigm, of an organisation . The **paradigm** embodies the beliefs and assumption held in common in an organisation and is made up by stories, symbols, power structures, organisational structure, control system and routines and rituals. To identify what is taken-for-granted in the institution, the culture of the institution, the following descriptions and questions could be discussed :**Stories**

Stories are often related to former rectors, researchers, teachers, administrators and indicate a way of assessing the past. It might be indicative to find answers to

- What core beliefs do the stories reflect?
- What stories are commonly told, e.g. to newcomers?
- How do these answers reflect core assumptions and beliefs?
- What norms do the nonconformists deviate from?

Symbols

Symbols are objects, events, acts or people that convey, maintain or create meaning over and above their functional purpose (logo, car park/ refectory reservations for staff)

- What objects, people or events do people in the organisation particularly identify with?
- What are these related to in the history of the organisation?
- What aspects of strategy are highlighted in publicity?

Power Structures

Power structures characterise the distribution of power to persons, departments, boards or other parts of an institution (governance system):

- Where does power reside?
- Who makes things happen?
- Indicators include: status, claim on resources, symbols of power

Organisational Structure

The organisational Structure mirrors the various levels of the institution and who is working on what for whom and how the communication flows are planned in a formal way (organisational chart). However, the discussants may reveal that there are some or many informal structures as well (elements of organisational culture) .

- How formal/informal are the structures?
- Do structures encourage collaboration or competition?
- What types of power structure do they support?

Control Systems

A control system is not just checking what staff is doing but it is a basis for an effective management of the institution and a support for adequate leadership (zero default, wages, job promotion).

- What is most closely monitored/controlled?
- Is emphasis on reward or punishment?
- Are controls rooted in history or current strategies?
- Are there many/few controls?

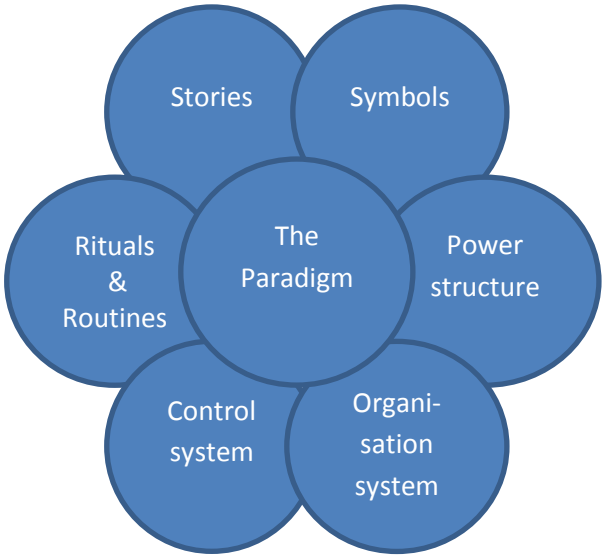
Routines and Rituals

It is mostly a very fruitful exercise when staff discusses these issues. It may be that e.g. rituals are revealed which do not make sense today but were very useful in the past, e.g. the organisation of meetings (who has to participate, what is the format of minutes, breaks, ceremonies).

- Which routines are emphasised?
- Which are embedded in history?
- What behaviour do routines encourage?
- What are the key rituals?
- What assumptions and core beliefs do they reflect?
- What do training programmes emphasise?
- How easy are routines/rituals to change?

The answers to these questions should be analysed and synthesised to identify what the members of the institution really believe in, what they value and assume.

The model of a cultural web of an institution of higher education (Johnson/Scholes et.al.)



Examples of possible findings (shortened version):

Story: President X always smoked a cigar after a meeting of the Academic Board

Symbol: Logo of the institution

Rituals & Routines. Arrangements of breaks

Power Structure: Presidium is formally at the top

Control System: Intransparent reporting

Organisation System: independent faculties

A synthesis of these findings, may reveal as paradigm of the organisational culture, that the institution is not an integrated university; faculties act as independent colleges.

The cultural web could help the institution to understand what staff believe they are doing and thinking. It might also be very useful before a mission statement, a vision and a strategy are being designed.

Tool 4: For and Against Change: Forcefield Analysis

A forcefield analysis can help to identify those forces in an institution of higher education which may work in favour or against an initiative to change existing structures or processes. The answers to the following questions could give a picture of those forces (Johnson/Scholes et. al.):

- What aspects of the current situation would block change, and how can these be overcome?
- What aspects of the current situation might aid change in the desired direction and how might these be reinforced?
- What needs to be introduced or developed to aid changes?

Other instruments to support this analysis are e.g. the Stakeholder Mapping (a matrix of different clusters of stakeholders according to their degree of interest and power in the institution in relation to the potential change) or the Culture Web (as above).

Example of a forcefield analysis

Intended change: to introduce student-centred learning in the institution
Analysis of the elements in favour and against the change to student-centred learning (example):

Pushing →	← **Resisting**
High-quality teaching	Workload / overload
Ethos of hard work	Firefighting
Flexibility	Faculty independence
State-of-the-art	Faculty / Departmental kings
EHEA conformity	Formality of management
Additional	Stories of the „good old days“
Encouragement to new approaches of teaching	Blame culture
Increased diversity of staff	Defence
Clear articulation of a vision for the future	
Participation in the change process	
Skills development	

Carnall includes the forcefield analysis (see stage 2 below) and widens the approach to convince teaching staff of the usefulness of the new way of teaching. He clearly points out that the applicability of this method is a matter of judgement:

Stage 1	Define the strengths and weaknesses of the current situation and the situation you wish to achieve
Stage 2	Identify the forces working for and against your desired changes
Stage 3	Identify the forces that you consider to be the most important and list the actions to reduce the strengths of an opposing force and exploit a favourable force
Stage 4	Agree on the actions most likely to achieve change and the resources needed to implement them

Tool 4: Management Tool: GANTT Chart

A GANTT Chart is a planning device which helps to achieve an intended outcome on time. The first step consists of an analysis of the activities needed, allocating the time foreseen. The design begins at the final stage (when should the activities be finished?) and goes backwards to identify the start (when do the activities have to start to be finished on time?). Then it should be tested whether the forward calculation is identical or whether there are differences which may arise because activities may be done sequently or simultaneously. Mostly the time (days, months) are indicated by bars on which the activities can be marked. It is useful to identify milestones, i.e. achievements which are important steps in reaching the final objectives. A GANTT Chart will allow for a permanent transparency of ongoing and achieved activities. Today many software programmes are available to facilitate the design.

Example of a GANTT-Chart

A simplified model of using a GANTT-Chart for writing a thesis could look like the following (not complete):

Nr.	**Activity**	**Duration in days**	**02.May 2016**	**…….**	**12 June 2016**
			M T W Th F Sa S	M T W Th F Sa S	M T W Th F Sa S
1	Start	1			
2	**Phase 1 – Desk Research**	**24**		……26.05.	
3	Activity 1: Books	10		….19.05.	
4	Activity 2: Articles	15		….17.05.	
5	Activity 3: Studies	10		….26.05.	
6	**Phase 2 – Field Research**	**8**		…10.05.	
7	Activity 4: Selection of Interviewees	1			
8	Activity 6: Design of questionnaire	2			
9	Activity 5: Fixing dates	5		6.05	
10	**Phase 3 - Interviews**	**10**			….26.05.

11	…….	….	….	….	….
20	Activity 12: Submission of hard copy				

At the end of each phase above, a milestone could be introduced e.g., at the end of phase one: materials of desk research selected; phase two: Field research structured; phase 3: collection of all materials finalised…

(Note: The dates are not normally incluced in the bars, they are here for clarity purposes).

It was pointed out that the organisational culture plays a decisive role in change processes, e.g. a „quality culture" was referred to when introducing a workable QM-Sytem. The development towards a Quality Culture and the implementation of a QM-system can also be defined as a project from a management point of view. This could be structured in the following way indicating suitable tools –

Goal: Development of Quality Culture and QM-System	
Guideline	**Measures/Tools**
Mission Statement: e.g. Developing and exploiting national competences for international employability	Identify the Cultural Web of the institution; compare identified paradigm with the planned culture: Gap Analysis
Scope	**Measures/Tools**
Whole institution Cross-functional, Cross-faculty Work-Teams	Forcefield Analysis Stakeholder Analysis* Risk Analysis** Communication System (stakeholder involvement) Trainings
Specific Objectives	**Measures/Tools**
e.g. Increase of Completion rate; achievement of a Constructive Alignment (learning, teaching, examining)…	Design Workpackages
Tasks / Activities	**Measures/Tools**
Specify Tasks of the Workpackages	e.g. Analysis of failure rate; implementation of a Student Support System
Resources	**Measures/Tools**
Calculate requirements	Allocate human, financial and infrastructurtural resources
Timeframe	**Measures/Tools**
Define end and starting date Set milestones	Design e.g. a GANTT-Chart Start at the finishing line and go backwards to the beginning, then from the beginning to the end; possible time differences are buffer times
Reporting	**Measures/Tools**
	Organisational Chart Check communication lines and reporting times

described above – which could be applied:

*Stakeholder Analysis: A matrix to identify important and not so important stakeholders on the basis of impact/power on and interest in achieving the goals. The analysis helps to find out who has to be continuously or less frequently involved/contacted.
**Risk Analysis: An identification of possible risks when trying to reach the goals and offering a list of adequate counter-measures. More attention should be paid to identify measures how to avoid risks.

Although all the tools applied, the most important activity in the change process obviously is „Communication, Communication“

Part II TOOLS FOR DOING IT-
Direction: Constructive Alignment of Learning, Teaching and Assessment

Biggs and Tang (2011) define a constructive alignment as „a principle used for devising teaching and learning activities, and assessment tasks, that directly address the intended learning outcomes…in a way not typically achieved in traditional lectures, tutorial classes and examinations".

The ECTS User´s Guide 2015 highlights that institutions should define their learning and teaching objectives in the light of the various study-programmes and reflect how the programmes and their educational components should be delivered and assessed, relating learning, teaching and assessment with each other. The Guide identifies „general principles" which have to be respected when designing a programme (see 3.5 of the User´s Guide). Consequently, all tools used have to ensure that the following principles are matched, elements which may be supported or blocked by the culture of the institution:

- **Open dialogue and participation**
  - with students and all other stakeholders
  - student-centred approach
- **Tansparency and reliability**
  - Up-to-date course catalogue
  - Quality-assured information on programmes and their components: structure, educational components, learning outcomes, workload, learning/teaching approaches, assessment methods, and progression rules.
- **Consistency**
  - Between the learning outcomes, the learning and teaching activities and assessment procedures (constructive alignment)
- **Flexibility**
  - In terms of individual pathways, learning, teaching and assessment
- **Appropriate assessment of achievements**
  - Awarding credits based on achievement
  - Assessment methods and criteria are in line with the learning outcomes and learning activities

In the following a distinction is made between the tools to be adapted at institutional, programme and educational component level.

1 Curriculum design: Learning and teaching

1.1 Tool at institutional level

In institutions of higher education study-programmes are often designed at faculty/department level by determining the purpose of a new programme according to the ideas of some members who feel the need for a further development of curricula. A more holistic view is often missing; sometimes a reference to the mission statement or a link to the higher education provider´s strategic approach may be given which cannot avoid a rather fragmented picture when it comes to compare the approaches and results of programme development. Internal and external quality assurance processes may avoid extreme deviations of programme design but do not help in developing a common understanding of simple questiions like:

- What are the characteristics of a bachelor/master/doctoral degree of our institution?
- To which extent do they differ from other institutions or not?
- Why?

The answers to these questions will help to find out whether the programme is in line with the overall direction of the institution. The following tool could help to develop a more aligned approach to programme development:

Tool 5: Common understanding of degrees at the institution

On the basis of the National Qualifications Framework of the Republic of Armenia the institution designs its own institutional framework. In case the institution is not integrated, the framework can also be developed at faculty level, taking into account possible sectorial frameworks, still adding the faculty´s particularities. It might be useful to use active verbs from Bloom´s taxonomy as indicators of the level of the qualification, described by Knowledge, Skills, Competence of the European Qualifications Framework (EQF) and the Armenian Qualifications Framework (AQF) respectively.

Qualifications descriptors EQF AQF		**Bachelor**	**Master**	**Doctor**
		The graduate of this institution knows to…	**The graduate…knows to…**	**The graduate…knows to…**
K	KU	demonstrate KU…. Specify the fields and add particularities on the basis of the mission statement, the regional embeddedness, your intended profile; e.g. discipline (pedagogy, in engineering, agriculture), applied, professional (regulated, non regulated), career (teacher, researcher), interdisciplinary (biochemistry, mechatronics), international (teaching in a foreign language), (limited) research oriented at this level This does by no means imply that these elements of this framework are the same in	demonstrate… Specify the fields…at this level – distinct to bachelor level; most likely higher stress on research in particular disciplines or multidisciplinarity	demonstrate… Specify the fields…at this level – distinct to master level; Most likely focus on research in identified areas

		every faculty. A characteristic of the institution may be that each faculty has a or several different approaches. The benefit is the awareness-raising and its internal and external transparency. Activities listed are not restricted to one level; however differences have to be specified		
		The graduate of this insitution is able to	**The graduate… is able to**	**The graduate… is able to**
S	AKU	apply… Specify the form of learning and the environment in your institution to assure this (small classes, more student-centred learning) at this level, Windows for work placements at home and abroad (see as well under CGS – decide which box is more significant for the institution), tutoring/mentoring programmes	apply… Differentiate at this level: study groups of not more than 20 students; case work; presentations; regular feed-back Consider mobility windows	apply, engage… Mixture of purely individual research mixed with formal classes (regular…), research in co-operation with…
S	CICTNS	Explain, apply, collect… Specify the equipment, how it is used for learning and teaching: projects, presentations, etc.; there may be a general policy or only faculty wise	Use, apply, analyse… Specify the different level probably through higher degree of specialisation, may be faculty specific	Plan, use, apply, evaluate, Specification of research orientation, may be faculty specific
S	CGS	apply critical thinking… Specify how this is encouraged. Are there also university-wide initiatives taken? Debating clubs; outside speakers on challenging issues… It may be considered to include mobility windows, here in particular study-abroad periods and/or work placements	Investigate and generate… Specify how this can be achieved and developed further. The Master thesis may be a cornerstone for the institution…	Create/synthesise… Special workshops for doctorates to develop these skills…
C	AR	undertake…, identify… Specify how the student is supported and which facilities exist to support "learn to learn approaches, e.g. tutoring and mentoring programmes, career guidance, Support to write applications, Empowerment of learners…	can deal with complex… Specify how this is achieved, e.g. through independent learning initiatives (learner-centred) Mentoring and further career guidance, Empowerment ….	promote progress of the society; manage complex processes, define strategies, at different level…. Mentoring and further career guidance, Empowerment…

Legend:
EQF = European Qualifications Framework; AQF = Armenian Qualifications Framework; K = Knowledge; S = Skills; C = Competence
KU = Knowledge and Understanding; AKU = Applying Knowledge and Understanding; CICTNS = Communication, ICT, numeracy skills; GCS = Generic Cognitive Skills; AR = Autonomy and Responsibility

1.2 Tools at Programme Level

Tool 6: Design a Glossary

(Note: Presently several initiatives have been started in Armenia within which glossaries are being developed. Also, the reform of the Armenian law will define key terms used in higher education. Therefore this tool here, is a reminder that there should be an accepted glossary for higher education. At one stage in the near future all designed glossaries should be melted into one) .

As the degrees outlined above highlight the distinctive features of an institution´s degrees, so does the profile of a programme identify the key essentials of a degree in a certain discipline and subject. Whereas a study-programme in general is a purposeful and structured set of learning experience that leads to a qualification, having a fixed starting and ending point; the profile of a programme may be discipline-based, professional, career-focused, trans-, inter- or multi-disciplinary. It could be research or applied oriented or very broad or specialised in nature. The profile distinguishes the programme from others, it details what in business terms is called „unique selling point" and may be related to the employability of graduates.

ts (Council of Higher Education SA)

The present draft of the Armenian Higher Education law defines a programme in the following way:

Study programme means the integrity of study courses that determine the content of relevant level of education and the area of specialisation encompassing the expected learning outcomes, as well as information on learning, teaching and assessment methods, minimum duration and volume of studies, admission requirements, the list and volume of subjects, subject descriptions and the content of each module
These elements are mostly mirrored in the 2015 ECTS User´s Guide according to which a programme refers to

- Field(s) of study
- Degree (Qualification) Level (Cycle) of the programme
- Orientation (research or applied oriented, e.g.)
- Key learning outcomes (10-12)
- Learning environment
- Constructive alignment of learning, teaching and assessment.

Students and stakeholders will be informed about the generic and subject specific learning outcomes and which opportunities successful graduates may find in terms of employability.

In detail these elements mean:

Field(s) of study

When being accredited as an institution the scope of programmes will be defined. If the need arises either to widen or shorten the scope changes have to be submitted to the accreditation authority which has to find out whether the authority can accept or not accept this proposal within its remit or whether the wish has to be passed on to the Ministry or a competent body in the country.

The field(s) of study have to be in line with the list of possible fields issued by the Ministry.

Degree Level of the programme

A degree is a formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards. The degree is a type of l qualificationmainly awarded in higher education, indicating a level reached. In the Qualification Framework of the EHEA degrees are foreseen at the end of each cycle. Cycle is the term used in this framework indicating the level of achievement.

The present draft of the Armenian Law of Higher education defines these terms as follows:

> **Qualification** means a degree, graduation document (certificate) conferred in a prescribed manner by the higher education institution that certifies the completion of any higher education level (cycle);
>
> **Academic degree** means a qualification awarded to a person who has completed the higher education institution study programme at corresponding level (cycle) and has passed final attestation, and is certified with a corresponding graduation document.

The Ministry intends to draw a list of all qualifications and academic degrees possible to be awarded from which the institution of higher education selects the most appropriate one for the study-programme to be developed.

Orientation

In particular from Master level onwards the programme has to be characterised as more research or more applied oriented which will have to be reflected in the learning outcomes of the programme. Other ways of differentiation may also be useful – either in combination on their own, e.g. Specialisation versus Generalisation or Disciplin-oriented or Inter-/Multidiscipline oriented. Normally, MBA-programmes are more of a generalistic type than e.g. a Master in Marketing Management. However, reality does not always follow this logic. When it comes to a multidisciplinary orientation this may be translated into disciplines which may complement each other, e.g. biology and chemistry or have nothing to do with each other – at least not at first sight -, like engineering and education. However, for such combinations the labour market will have a particular interest because of some professionns, like teaching, or because of future developments, e.g. biochemistry, mechatronics, to name some which are already known. This highlights the necessity for institutions of higher education to look ahead, translate their research into future needs and design respective programmes.

Learning outcomes

Learning outcomes are statements of what a learner knows, understands and is able to do on completion of a learning process, which may be defined by knowledge, skills and competence (EQF). Learning outcomes are concerned with the achievements of the learner rather than the intentions of the teacher which are expressed in the aims of a component. They can take many forms and can be broad or narrow in nature.

Learning outcomes and aims and objectives are often used synonymously, but they are not the same. Aims are concerned with teaching and the teacher´s intentions (Adam 2004) 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´s viewpoint.

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. The ECTS User´s Guide stresses that there is no general rule as regards the number of learning outcomes; however, 10-12 are seen as appropriate at programme level.

Key learning outcomes

These are those which form the backbone of a study-programme. It is unlikely that there is only one type of learning outcomes key to a programme. Most times a mixture of knowledge, skills and competence (ksc) makes up the main characteristics. A temptation to identify knowledge as key for a programme may lead into the wrong direction. Knowledge, in fact, is the vehicle which allows the student to acquire skills and competence at a higher level. This becomes, for example, evident in taxonomies of learning outcomes, e.g. Bloom, Anderson/Krathwohl.

Learning environment

According to **UNESCO** a learning environment can be structured or unstructured and may be complementary. Whereas formal and non-formal learning mainly take place in a structured environment (institutions, classrooms…), informal learning occurs in both. UNESCO outlines a toolkit which has the objective to address the following questions: „Have we assured every learner an environment that is both physically and psychosocially enabling to their learning and thus conducive to improving the quality of education and learning effectiveness?“ (Quality Framework, www.unesco.org, April 6 2016). Literature typically refers to the classrooms first when referring to learning environment but also includes cultural elements in the scope of the definition. In particular the latter is part of the teacher´s concern, creating a learning environment which is favourable for the intended learning activities to achieve the planned learning outcomes.

Components of an effective learning environment

Developing a total learning environment for students in a particular course or programme is probably the most creative part of teaching. While there is a tendency to focus on either physical institutional learning environments (such as classrooms, lecture theatres and labs), or on the technologies used to create online personal learning environments (PLEs), learning environments are broader than just these physical components. They will also include the

- characteristics of the learners;
- goals for teaching and learning;
- activities that will best support learning;
- assessment strategies that will best measure and drive learning.

Tool 7: Agreement On Programme Profiles

In line with the definition above, the character of a study-programme should be described clearly. Sources for a programme profile are:

- Labour Market Research
    - Job descriptions, forward looking
- Qualifications Frameworks
    - European, National, Sectoral, Institutional
- Mission Statement
    - Faculty, Strategy

On the basis of the national framework and – possibly a sectorial framework - , the mission statement of the institution, ongoing research work, interviewing experts in the field, including representatives of labour markets, students and knowledgeable stakeholders, a round-table discussion, mixed with group-work could be analysed and initiated with the intention to

- brainstorm about opportunities for graduates of the programme in mind today and in future
- identying the differences to today in particular in terms of knowledge, skills and competence
- use the descriptors of the Qualifications Framework to substantiate these ideas
- identify about 10-12 key outcomes which are regarded as essential for each of the possible degree cycles by these experts
- check horizontally the differences between the degree levels descriptor by descriptor.
- check vertically whether the ksc make-up a coherent profile of the programme.

The learning outcomes should reflect

Higher Education Institutional Goverenance
- Whom should the institution serve?
- How are the purposes determined?

Institutional Ethics
- Which purposes should be prioritised?
- Why?

Stakeholders´ Expectations
- Whom does the institution serve?

Cultural Context
- Which purposes are prioritised?
- Why?

and are thus embedded in the

Institutional purpose
- Institutional values
- Mission statement
- Objectives.

A statement of institutional values should communicate the basic and sustainable core beliefs that guide an institutional strategy and define the way the instituton should operate. These values are the framework for the mission statement which provides all stakeholders with clarity about the overriding purpose of the instituion by answering the following questions:

- Which areas of education, training and research do we cover?
- How do we make a difference in comparison to other institutions in the same areas (unique selling point, USP)?
- Why do we do this?

It should emphasise the common ground amongst stakeholders and not the differences and highlight a vision that is likely to persist for a significant period of time as a horizon towards which an institution will strive.

It is possible to use the same table as above (Tool 5) and include the proposed learning outcomes. However, It is recommended to collect all this information and publish it as a handbook or manual (within ECTS the term course catalogue is used). The handbook contains all essential information for student, staff and quality assurance purposes, other stakeholders and the wider public about the programme, its qualification and level. It helps to make programmes transparent and comparable, in particular when similar structures are being used:

Goal of the study-programme: Qualification X

1. Introduction to the discipline and qualification (brief; 1-2 pragraphs)
2. Rationale statement (explanation of the uniqueness; 1-2 paragraphs)
3. Overall qualification learning outcomes (profile, 10-12 learning outcomes)
    3.1 Reference to the Armenian Qualification Framework (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 components (include component codes)
    4.2 Explanation of component relationships (levels, pre-requisites, co-requisites and credit values, diagram)
    4.3 Free choice component information (if applicable)
    4.4 Progression routes within the qualification (if applicable)
    4.5 Information on component scheduling (if appropriate)
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 higher institution policy via matrix)
10. Student support (academic and pastoral tutoring arrangements)
11. Linkages to external reference points (Qualifications Frameworks)

Tool 8: Writing Learning Outcomes

The essentials

From the definition of learning outcomes 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 (Moon 2004):

- Use of an active verb to express what learners are expected to know and be able to do (e.g. graduates can „describe", „implement", „draw conclusions", „assess", „plan"…)
- Specification of what this outcome refers to (object, skill, e.g. Can explain the „function of hardware-components"; can present the „design of a living-room by hand")
- Specification of the modality to proof the achievement of learning (e.g. „to give an overview over the materials most often used in electro-engineering"; „to develop a research design by applying up-to-date scientific methods", etc…

This means that learning outcomes are the answers to the following questions:

Who?
Directed to do?
What?
How?

The answer to the first question is normally the beginning of the description of the learning outcomes:

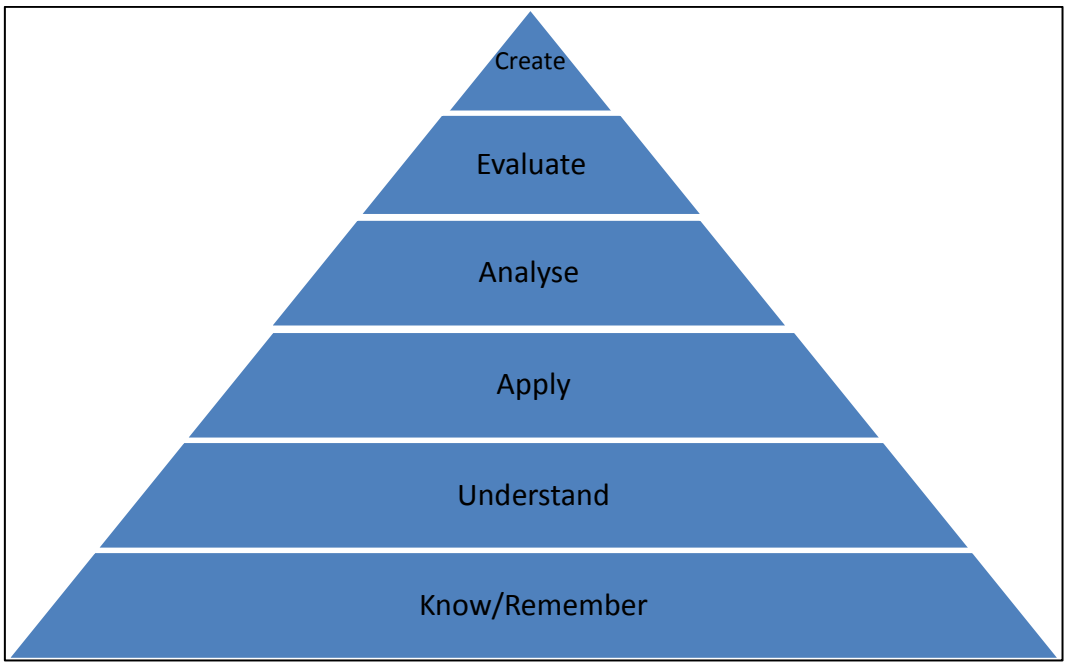
The learner (student) is the subject who is directed (supported, encouraged, motivated) to do something, expressed by an active verb. What he or she is encouraged to do is geared towards something, the object of learning. This may be done in a particular way, a modality.

In the above list of essentials to be respected when writing learning outcomes this means:

The student (who? The subject), can explain (directed to? The active verb) the function of hardware-components (what – The object) by using a computer (how? Modality) .

Bloom and his scholars designed a taxonomy which lists active verbs to indicate a defined level of learning. It might be helpful to select adequate active verbs from this list to describe the intended learning outcomes. Although there are some overlaps this list helps to define the knowledge, skills and competence within the framework of the Armenian Qualifications Framework:

Taxonomies of Learning based on Bloom (1956), Anderson and Krathwohl (2001)



This taxonomy above only reflects what Bloom calls the cognitive domaine. This demonstrates the pogression of learning, the development of mental skills based on knowledge. Knowledge therefore is the „vehicle“ which is necessary to achieve more sophisticated, higher forms of thinking in education. When designing programmes the learning outcomes will normally start with a description of knowing and remembering to progress to applying, analysing, evaluating and creating concepts, processes, procedures, principles at a defined level: The cognitive learning is independent of any level of qualifications frameworks. It can be assumed, however, that the share of applying, analysing, evaluating and creating depends on the type of programme (applied or research oriented), or progression of learning within a programme. It is more likely that at the beginning of a programme the focus is on knowing/remembering where towards the end the skills to analyse, evaluate and create might dominate. Bloom also outlined two more domaines, the affective and psychomotor domaines. In some qualifications framework these elements are taken up as „attitudes“, i.e. affective domaine, the taxonomy expressing the growth in feelings or emotional areas, which is at least partly reflected in the Armenian qualifications framework within the descriptor „autonomy and responsibility“ , and/or manual or physical skills, the psychomotor domaine, possibly within „applying K+U“, communication… and generic skills.

In the following table the active verbs from Bloom´s taxonomy are related to the descriptors of both, the European as well as the Armenian Qualifications Framework. Deviations are, of course, possible:

AQF-Descriptors	**Knowledge and understanding**	**Applying K+U**	**Communication, ICT, numeracy skills**	**Generic cognitive skills**	**Autonomy and responsibility**
EQF-Descriptors	**Knowledge**	**Skills**	**Skills**	**Skills**	**Competence**
Active verbs Bloom, Anderson, Krathwohl					

Knowledge / remembering	Know, identify, relate, list, define, recall, repeat, record, name, recognise, acquire				
Comprehension/ understanding	Restate, locate, report, recognise, explain, express, identify, discuss, describe, review, infer, illustrate, interprete, draw, represent, differentiate, conclude				
Application/ applying		Apply, relate, develop, translate, use, operate, organise, employ, restructure, interpret, demonstrate, illustrate, practice, calculate, show, exhibit, dramatise			
Analysis / Analysing			Analyse, compare, probe, inquire, examine, contrast, categorise, differentiate, contrast, detect, survey, classify, deduce, experiment, scrutinise, discover, inspect, dissect, discriminate, separate		
Synthesis / Evaluating				Compose, produce, design, assemble, create, plan, invent, formulate,	

				collect, set up, generalise, document, combine, relate, propose, develop, arrange, construct, organise, originate, derive, write propose	
Evaluation / Creating				Judge, assess, compare, evluate, conclude, measure, deduce, argue, decide, choose, rate, select, estimate, validate, consider, appraise, value, criticise, infer	(Learn independently, take on responsibility, manage, supervise groups, work with/manage complex, unpredictable issues in an uncertain environment, innovative, autonomous) It may be better here to select the modalities rather than the active verb

Tool 9: Describe Level/Cycle of programmes

Having identified the elements of learning and being able to use Bloom´s taxonomy to design learning outcomes it is necessaryto define the level (cycle) of the programme to be designed. On the basis of the descriptors of the Armenian Qualifications Framework it is essential to distinguish the levels very clearly from each other.

Looking at te Armenian Qualifications Framework this could be demonstrated by the following examples.

Qualification Description		
Bachelor	**Master**	**Doctor**
The Bachelor Degree qualifies individuals who have a **broad and coherent knowledge and skills** in a **range of fields** to undertake professional work and/or further study	The Master Degree qualifies individuals who have an **advanced and specialised knowledge and skills** in the **given field** for professional practice, research and/or further study	The Doctor Degree qualifies individuals who have **critical and systematic understanding and specialised research skills** in **one or more complex fields** of scholarship, investigation or professional practice to **advance and/or create new knowledge**

It can be argued – at least in the English version - whether the Armenian Qualifications Framework is sufficiently unambigous. The Dublin Descriptors (Higher Education Qualifications Framework), here the example of the descriptor of „knowledg and understanding“ (in the AQF: KU) differentiate in the following way :

Qualification Description KU		
Bachelor…	**Master…**	**Doctor…**
is supported by **advanced text** books [with] some aspects informed by **knowledge at the forefront of their field of study** ...	provides a basis **or opportunity for originality** in developing or applying ideas **often in a research context** ...	includes a **systematic understanding of their field** of study and **mastery of the methods of research** associated with that field

The EQF seems to be more precise. You can identify the progression when comparing the levels of qualifications vertically and horizontally:

Qualification Description KU		
Bachelor…	**Master…**	**Doctor…**
Knowledge	**Knowledge**	Knowledge
advanced knowledge of a field of work or study involving a **critical understanding** of theories and principles	**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**	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields
Skills	Skills	Skills
advanced skills, demonstrating **mastery and innovation**, in a **complex and specialised field** of work or study	**specialist research and problem-solving skills**, including analysis and synthesis, to develop **new knowledge and procedures** and to **integrate knowledge from different fields**	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice

The programme designer should use the complete frameworks as templates when defining the qualification descriptors of a programme. The following tool gives an indication how this could look like.

Tool 10: Linking Programme Levels/Cycles And Learning Outcomes

(adapted from the 2015 ECTS User´s Guide, Appendices)

Qualifications descriptors EQF AQF		**Programme: Bachelor in Modern History Degree (Level): BA The graduate of this programme knows and is able to…**	**Programme: Master in Modern History Degree (Level): MA The graduate of this programme knows and is able to…**	**Programme: Doctor in Modern History Degree (Level): Dr The graduate of this programme knows and is able to…**
		The graduate knows	**The graduate knows**	**The graduate knows**
K	KU	The general lines of human history One broad period of history in detail	-theories and methods in human history -Relationships of broad periods of history	-gaps in theories in Modern History -limitations of present research work
		The graduate can	**The graduate can**	**The graduate can**
S	AKU	- select relevant scientific sources to address a historiographical problem - employ basic techniques of historical research - Use the main tools of other social and humanistic sciences as well as history	-research into historiographical problems -evaluate the results of the research findings -identify consequences for other humanistic sciences	-apply research tools to close the gaps -analyse research tools of other sciences for their usefulness in this research
S	CICTNS	- Communicate in Italian and at least one other language of the EU -communicate research results to different target audiences -elaborate on historiographical texts and data	-explain the conclusions drawn -support the findings by ICT applications	-evaluate the results in the light of other disciplines -communicate with researchers and students about the recommendations for further developments in the field
S	CGS	-demonstrate critically the relationship between the present and the past	-evaluate the present gaps -design creative ways for further developments	-evaluate critically both internally and externally the progress made -design a work-plan for a time-horizon with defined resources
C	AR	-demonstrate taking on responsibility in learning groups of students Learn independently to develop further	-manage the complexity of further developments -demonstrate leadership Identify one´s own limitations	-manage research teams -develop the own insight how to make progress in learning

Legend:
EQF= European Qualifications Framework; AQF = Armenian Qualifications Framework
K = Knowledge; S = Skills; C = Competence
KU = Knowledge and Understanding; AKU = Applying Knowledge and Understanding; CICTNS = Communication, ICT, numeracy skills; GCS = Generic Cognitive Skills; AR = Autonomy and Responsibility

Tool 11: Checking Programme Learning Outcomes Of Different Degrees

adopted from the Armenca project:

Undergraduate engineering degree (BSc)

Qualifications descriptors		**Programme: Undergraduate engineering degree (BSc)**
EQF	AQF	**On completion of the programme the graduate can…**
K	KU	Identify, formulate, analyse and solve engineering problems
S	AKU	Derive and apply solutions from knowledge of sciences, engineering sciences, technology and mathematics
S	CICTNS	Design a system, component or process to meet specific needs and to design and conduct experiments to analyse and interpret data
S	CGS	Communicate effectively with the engineering community and with society at large
C	AR	Work effectively as an individual, in teams and in multidisciplinary settings together with the capacity to underake lifelong-learning

Referring to „How to write learning outcomes“ (see above), the various elements of the learning outcomes of the undergraduate degree can be identified:

Student Subject	**Does what? Active Verb**	**Directed to? Object**	**How? Specification/Modality**
…will be able to…	derive, apply	solutions	from knowledge of sciences, engineering sciences, technology, mathematics
	identify, formulate, analyse, solve	engineering problems	
	Design conduct analyse, interpret	system, component, process experiments data	meet specific needs
	work	engineering community, with society at large	effectively
	communicate	engineering community, with society at large	effectively

Example adapted from Declan Kennedy (2007): Writing and Using Learning Outcomes, A Practical Guide; **Postgraduate** Computer Degree (MSC)

Qualifications descriptors		**Programme: Postgraduate Computer Science (MSc)**
EQF	AQF	**On completion of the programme the graduate can…**
K	KU	Perform problem solving in academic and industrial environments
S	AKU	Use, manipulate and create large computational systems Organise and pursue an scientific or industrial research project
S	CICTNS	Write theses and reports to a professional standard, equivalent in presentational qualities to that of publishable papers Use a full range of IT skills and display a mature computer literacy
S	CGS	Prepare and present seminars to a professional standard
C	AR	Work effectively as a team member Perform independent and efficient time management

Again the elements can be identified, here at postgraduate level.

Student **Subject**	**Does what?** **Active Verb**	**Directed to?** **Object**	**How?** **Specification/Modality**
…will be able to…	perform	academic industrial environments	solve problems
	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

These two examples demonstrate very clearly the steps to be taken and the elements of writing learning outcomes the learner is expected to achieve:

- The level/cycle of the programme has to be defined
- The object of the educational component has to be described
- The activity of the learner is chosen
- The modality of the learning is clarified

It can be proven that several – if not all – descriptors of the Armenian Qualifications Framework are respected and that the expected activities meet the adequate level on the basis of Bloom´s Taxonomy.

1.3 Tools at Educational Components Level

Tool 12: Structuring of Components

As the institutions of higher education have been existing for many years, they all have experience in programme design. It may be useful to start with what has been known, before „changing the world". Good experience has been made by asking „experts in the field" about what syllabi a programme in a certain discipline should contain. Although this process does not strictly follow the outcome orientation, it may be very useful to „break the ice" and develop on this basis general structural elements for any higher education institution in any faculty before continuing to change the paradigm, i.e. approach the development from the outcome perspective. As programme development is an iterative process the following steps could be taken:

Arrange „round tables, expert interviews, brain storming sessions" with experts in the field to discuss the following key issues, for example in form of questions:

Expectations of academia, labour market, students, society

1. Which syllabi are the essential characteristics of this degree programme?
   Without which educational component would no one consider this as the identified degree programme
   For example: Would an economics degree programme be considered seriously if there were no components in which mathematics was taught? In the Tuning Project it was found out that across Europe syllabi resemble each other often up to 50%
   The answers to the two questions may lead to syllabi which could be considered as **core educational component**

2. Which areas could be identified – vertically, horizontally or laterally – for further useful studies (profiling)?
   Vertical: specialisation in a narrow sense (deepening or backward/forward integration)
   Horizontal: inter-/multidisciplinarity (enlargement)
   Lateral: unrelated diversification (areas of different disciplines e.g. engineering and management).
   By answering this question components could be identified which could be qualified as **specialisation educational component** or major/minors or electives/options.

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?
   These components may be called **support educational component**

4. How can the student learn and organise him/herself?
   How can a student present/express best what he/she wants to say?
   These components may be qualified as **organisation and communication educational component**

5. How does theory relate to practice?
   How can the student relate theory to practice?

What are the methods?
These syllabi may be considered as **transfer educational component**.

In this way the degree programme to be designed could be structured according to:

- **Core educational components**
  Groups of „subjects“ which make up the backbone of a programme in a respective science
- **Specialisation educational components** or major/minors or electives/options (level dependent)
  mostly a list of areas out of which a student can choose one or several which he/she wants to understand to a larger extent
- **Support educational components**
  Which complement the core modules to the extent that they help to clarify implications of e.g. business activities
- **Organisation and communication educational components**
  e.g. learning skills, working in groups, time management, rhetorics, foreign languages, academic writing…skills which many stakeholders have asked for a long time but which still are not necessarily included in the curriculum as independent components yet
- **Transfer educational components**
  Work experience/placement, projects, dissertations, business games, …areas which should develop those competences which are needed to close the gap between theory and reality and which have always been in demand but still provide a problem for many graduates when entering the labour market (Tuning)

Tool 13: Design Learning Outcomes for a Curriculum with Existing Educational Components in 6 Steps

Step 1: The dominant learning outcomes are structured according to the categories of educational components and the objectives of learning outcomes as specified in the Qualifications Framework

Educational component **Objectives of Learning Outcomes**	**Core**	**Specialisation**	**Support**	**Organisation and Communication**	**Transfer**
KU	X	X			
AKU			X		X
CICTNS			X		X
GCS				X	X
AR				X	X

Step 2: The identified subject areas are then allocated to the educational components derived from the profile (these examples do not refer to a complete programme). Of course, in the individual educational components the achievement of more than one learning outcome is intended. However, this table just shows some components and only those which the designers see as the most dominant ones. They will have to be mirrored with the programme profile.

Educational component **Objectives of Learning Outcomes**	**Core**	**Specialisation**	**Support**	**Organisation and Communication**	**Transfer**
KU	X Business Organisation	X Electronic Commerce			
AKU			X Information Technology		X Mobility Window: Placement
CICTNS			X Mathematics/ Statistics	X Foreign Language	X Ethics
GCS				X Project Management	X Business Game
AR	X Accounting				X Bachelor thesis

Step 3: Insert in this table the object(s) of the respective educational component (see matrix above: directed to? Object = What?)**Educational component** **Objectives of Learning Outcomes**	**Core**	**Specialisation**	**Support**	**Organisation and Communication**	**Transfer**
KU	X Business Organisation Details of business functions…	X Electronic Commerce Opportunities and threats…			
AKU			X Information Technology Adequate software		X Mobility Window: Placement
CICTNS			X Mathematics/ Statistics Suitable methods	X Foreign Language Writing reports	X Ethics Implications for business activities
GCS				X Project Management Structuring in terms of time and work	X Business Game Group dynamics
AR	X Accounting True and fair principles				X Bachelor thesis Collecting data

Step 4: As the next step the main activity of the learning outcomes in these modules are characterised by taking one active verb from Bloom´s list above and put it in front of the object of the educational component.

Educational component **Objectives of LO**	**Core**	**Specialisation**	**Support**	**Organisation and Communication**	**Transfer**
KU	X Business Organisation *Identify* details of business functions	X Electronic Commerce *describe* opportunities and threats			
AKU			X Information Technology *test* adequate software		X Mobility Window: *complete* Placement
CICTNS			X Mathematics/ Statistics *choose* suitable methods	X Foreign Language *differentiate* report from essay writing	X Ethics *assess* implications for business activities
GCS				X Project Management *identify* structures in terms of time and work	X Business Game *predict* group dynamics
AR	X Accounting *defend* true and fair principles				X Bachelor thesis *compose* collected data

Step 5: Missing is yet the „how“, i.e. the modality of the learning outcomes. According to the examples above this could be done in the following way:

Educational component **Objectives of LO**	**Core**	**Specialisation**	**Support**	**Organisation and Communication**	**Transfer**
KU	X Business Organisation *Identify* details of business functions *in terms of their connectivity*	X Electronic Commerce *describe* opportunities and threat *for particular target groups*			
AKU			X Information Technology *test* adequate software *to achieve the results wanted*		X Mobility Window: *complete* Placement *In an international setting*
CICTNS			X Mathematics/ Statistics *choose* suitable methods *for qualitative information*	X Foreign Language *differentiate* report from essay writing *for precise and concise information*	X Ethics *assess* implications for business activities *in the City Centres*
GCS				X Project Management *identify* structures in terms of time and work *to design a GANTT Chart*	X Business Game *predict* group dynamics *according to the project phases*
AR	X Accounting *defend* true and fair principles *for equal opportunities*				X Bachelor thesis *compose* collected data *to design recommendations*

Step 6: The final step is to include the subject, the learner/student and signal what he/she knows and is able to do. This is most times done by phrasing the introductory sentence by: At the end of the educational component the student knows and is able to…

It is also possible to use the first part of the sentence only for introducing the „Knowledge and Understanding" learning outcomes and then use either „The learner or student is able to…" or „The learner/student can… `` The names of the educational components can now also be dropped:

Educational component Objectives of LO	Core	Specialisation	Support	Organisation and Communication	Transfer
	The learner/student knows to…				
KU	*Identify* details of business functions *in terms of their connectivity*	*describe* opportunities and threat *for particular target groups*			
			The learner/student can…		
AKU			*test* adequate software *to achieve the results wanted*		*Complete a* placement *in an international setting*
CICTNS			*choose* suitable methods *for qualitative information*	*differentiate* report from essay writing *for precise and concise information*	*assess* implications for business activities *in the City Centres*
GCS				*identify* structures in terms of time and work *to design a GANTT Chart*	*predict* group dynamics *according to the project phases*
AR	*defend* true and fair principles *for equal opportunities*				*compose* collected data *to design recommendations*

The example above shows nothing but an approach. Only one learning outcome per educational component was selected. Normally, more than one outcome per component can be identified, some recommend 6-8. All learning outcomes of all educational component should be mirrored against the learning outcomes of the profile. The profile reflects the most essential learning outcomes of all educational components.

Step 7: To find out whether the learning outcomes are covered in the whole programme a mapping of the learning outcomes could be useful. For this purpose Bloom´s taxonomy (here: Cognitive Domaine) and the Armenian Qualifications Framework could be used:

Bloom´s Taxonomy Cognitive Domaine **Learning Outcomes**	**Know / remember**	**Understand**	**Apply**	**Analyse**	**Evaluate**	**Create**
KU	Identify, describe					
AKU		Identify, describe	Test, complete			
CICTNS				Choose Differentiate Identify	Assess compose	predict
GCS ***Affective domaine***					*working together in groups*	
AR					*Willingness to hear*	Defend design

In addition to the cognitive domaine one may look at the affective and psychomotor domaines and add learning outcomes (in italics), e.g. „working together in groups“ which could be inserted as a GCS and may be the result of a reflection on a performance, i.e. within the affective domaine „aluing“ or as an example from the psychomotor domaine „Receiving Phenomena“, willingness to hear. The learning outcomes of these domaines are often more difficult to assess.

To complete this part the defined learning outcomes have to be tested as regards their suitability, acceptability, feasibility and sustainabilityrelated to learning, teaching and assessing.

Tool 14: Design Learning Outcomes for a Programme for which the Educational Components are not yet Determined

In this case the stakeholders may take the following steps:

1. Determine the level of the programme to be designed
2. Describe the programme learning outcomes
3. Allocate programme learning outcomes to syllabi
4. Define the learning strategy as curriculum
5. Name the educational components
6. – 12. The seven steps detailed above

2 Curriculum Design: Modules And Credits

2.1 Tools For Modularisation

Tool 15: Characteristics: State-of-the art

To avoid any misunderstanding the User´s Guide introduced in 2009 the term educational component as the most general term for course, unit or module. A module is then specified as course unit in a system in which each course unit carries the same number of credits or a multiple of it. A module comprises a self-contained, formally structured learning process with theme oriented learning and teaching. As a prerequisite coherent learning outcomes have to be defined as well as the volume of study with required workload, expressed in credits, with unambiguous criteria of assessment. In this way a modularisation of a study-programme will be successful. Modularisation facilitates a description of the profile of individual study-programmes and also highlights the differentiated study-programmes on one defined level.

The quantitative characteristics of a module may be stipulated as a standard size of a module, e.g. 5 credits or a multiple of it. The maximum may be 30 credits, typically for a master thesis or a work-placement of 5-6 months.

In qualitative terms a module is characterised by defined learning outcomes of which the volume and the respective time of learning make up the workload, being expressed by credits. Regular evaluations have to prove the qualitative learning outcomes and the quantitative „learning windows“. Evaluation refers to learning, teaching and learning progress (test e.g.).

Additionally, modules facilitate and/or allow for

- programme design (modularisation)
- profile description of individual study-programmes
- polyvancy on a defined level
- recognition as a stand-alone
- reduction of the number of examinations
- learning outcomes oriented assessment

Modules are not a prerequisite for introducing ECTS; however, they facilitate it. It is good practice that a module carries credits as a whole; it is impossible to receive credits for part of a module and consequently recognition refers to whole modules, not to parts of them.

It is also good practice that a module should stretch across a defined period of time, preferably not longer than one semester and that a module is neither too small nor too large (as above, e.g. 5-6 credits or 10)

Within a study-programme a module may be of the following type:

- compulsory, elective, optional
- basic or profiling
- structuring (mobility window, placement)
- platform for several study-programmes in a faculty
- polyvalent for several study-programmes at the institution.

It should be realised that a module in one study-programme may be of a different type in another one, e.g. in one programme it is a compulsory component, in another it is optional.

The objectives of modularisation could be summarised as the following:

Guiding principle: To improve what is good!

This can be achieved by

- **Increase of study success-rate**
  How? The motivation of learners and staff have to be at a high level. The learning culture has to be developed to the extent that students are in the focus and their success makes learners and staff proud. It is useful to have continous feed-back rounds with staff and students and also each group on its own.

- **Improve transparency / improved understanding**
  Knowledge about the possibility of individual learning pathways should be widened, also the possible learning progression in a **vertical setting** (modules or degrees being vertically connected), for example: Iit might be useful to learn quantitative methods first before attending classes on research methods.
  Having successfully finished a bachelor degree programme may open the door for a Master progamme in the same area, in particular when employability in research areas may be intended.
  Same as regards a **horizontal setting**. To improve employability it might be useful to study modules or degree progammes which may not be directly related to each other: In a business study-programme at any level it might be useful to study foreign languages. Or, having achieved a degree in engineering, e.g. at bachelor level, could be supported by a bachelor degree programme in management if, for example, self-employment might be an intention later on.
  A **lateral setting** is characterised by an achievement in one study-field at bachelor level, e.g. natural sciences, being followed by a Master programme in pedagogy. Typical for lateral relationship are MBA programmes which take on students who qualified in natural sciences, law, languages, etc.

  Also, within this scope, Accreditation of Prior Learning and Accreditation of Prior and Experiential Learning have to be designed. Independent of where an applicant for a Master programme, for example, acquired knowledge, skills and competence, procedures should be in place to facilitate transparently mobility between different fields of study, of work experience, including non-formal and informal acquisition of learning. Students/learners and staff should be aware of these forms of mobility. In some countries there is a much greater openness than in some where – more or less – vertical links are seen as the only possibility. Regular updates of staff and students are essential.

- **Simplify comparability**
  It is very useful to adopt the Standards and Guidelines, ECTS, Quality Assurance, Diploma Supplement and all other elements of the former Bologna process, having developed instruments to facilitate the comparison of qualifications and parts of them at least

within the EHEA. This has also been proven by the TUNING project which was supported by the EU to „tune“ educational structures in Europe.

- **Increase employability**
  On top of what has been said above the knowledge and understanding about educational systems should be disseminated, in particular the models of continuing and professional education and training for the purpose of professional development.

Tool 16: Template For Module Identification

All modules of a study-programme should make transparent all details and therefore it is useful to use the following template:

Short Module Details (Provide details of the module for students, staff and quality assurance purposes):

1. Full Module Title
2. Module Code
3. Module Level
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
14. Module aims (3-6 aims the teaching staff hopes to achieve)
15. Learning outcomes (4-8 learning outcomes – perspective of the student)
16. Indicative syllabus content (brief description oft he module content)
17. Learning delivery (learning/teaching methods and 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 references, journals)
22. Intranet web reference (if applicable)
23. Validation date (if applicable)

2.2 Tools For Allocating Credits

Tools 17: At Programme Level

Within the European Higher Education Area it was agreed that all study-programmes and their educational components would carry credits, in line with the European Credit Transfer and Accumulation System (ECTS). The European Qualifications Framework for Higher Education Qualifications stipulates credit ranges for three main cycles and a short cycle, realising that the use of credits in the cycle is not yet common practice. As a consequence of the Framework the designers of programmes have to decide on the level of the programme, specify the number of credits to be achieved by the successful learner at that level and then allocate credits to the individual educational components which are awarded to the successful student and lead to the degree. This means that the programme designers decide whether a

- First cycle degree should have 180, 210 or 240 credits
- Second cycle degree should carry 60, 90 or 120 credits
- Third cycle degree should carry credits at all and if how many

For a short cycle qualification no credit range is given but the credits to be achieved amount typically to 120.

These credit ranges are also laid down in the Armenian Qualifications Framework. For the first cycle 180-240, for the second 60-120 and for the third cycle presently 180 credits are foreseen. National authorities, however, can stipulate a specific number of credits at one or all of the cycles respecting the ranges. The basis are 60 credits for learning outcomes and their associated workload of a full-time academic year or equivalent. (ECTS User´s Guide).

Whereas learning outcomes state what the learner is expected to know and able to do at an identified stage of the learning process, ECTS credits reflect assessed learning outcomes in the light of the workload associated with them. The guidelines for the learning outcomes are the Qualifications Framework, for ECTS these are the key features as stipulated in the ECTS User´s Guide.

Tools 18: At Educational Component Level

The ECTS User´s Guide does not specify in detail how credits can be calculated and allocated to educational components. Experience has proven three methods being used which seem to be suitable to define the number of credits, to be accepted by academia, to be feasible at both programme and educational component level and sustainable for an indefinite period of time :

- Deductive Method (Percentage Method)
- Inductive Method (Analytical Method)
- Determination Method

It is possible to change the method of calculation, however, they should not be mixed.

Deductive Method (Percentage Method)

Academic staff estimates a value in percent linked to defined learning outcomes which serves as an orientation for the investment of time needed in relation to the whole available time of the programme. A value of 10% for a given module in any bachelor-programme, for example, indicates

that a workload of 10% of 5,400 hours (3 times an annual workload of 1800 hours), that is 540 hours or 18 credits, may be regarded as a starting point for discussions among academic staff, comprising contact hours as well as independent studies. Academic staff has to find out whether these hours are suitable to reach the learning outcomes, acceptable for the type of students who will join the programme, feasible at all in terms of human and technical resources and sustainable over time. Most likely, the discussions result in a demand for an increase of workload foreseen. Also, other colleagues, discussing other modules of a study-programme may arrive at the same conclusions. It is then the job of the mediator, the faculty co-ordinator, to arrive at a compromise, as outlined later on.

The advantage of this method is the acceptance of academic staff of the limited time available in relation to achieving learning outcomes and the realisation that an increase of workload for one module automatically has to result in a decrease of another or even others, respecting the overall objectives of the programme defined before the process had been started. The disadvantage is that some staff might be more powerful than other and push their individual interests. It is obvious that these anticipated values have to be evaluated regularly - with the help of students.

Inductive Method (Analytical Method)

Other methods approach the workload in an analytical way, for example by measuring the time students need to read a page of an academic paper. This appears to be difficult and has not been tested yet at a large scale in higher education. Time studies are typical in many manufacturing industries and are used to predetermine time needed for doing jobs, e.g. replacing the exhaust pipe of a car. Others believe that the type of contact by teaching staff should be related to a fixed number of credits. For example: a lecture may carry 2, a seminar 3 credits. This method is bound to fail as there is no common understanding of these terms throughout Europe as was experienced in the Tuning project. Additionally, the duration of lecures etc. differ across disciplines and the way of teaching as well.

Also, a simple multiplication of the contact hours has to be rejected as most times existing structures form the basis and the only reform is to find a factor which arrives at 30 when being multiplied with the contact hours in a semester without considering l the real workload at all, i.e. taking into account other times a student has to invest. Also, there is no link to the learning outcomes and therefore an international comparison cannot be achieved by any means.

Furthermore it is inadequate to define a fixed relationship between contact hours and credits, for example, 4 semester hours per week make up 5 credits. Any creativity is blocked in such system.

Determination Method

With the exception of the thesis and placements, if foreseen, all modules carry the same value in terms of credits and workload, for example 5 credits, 150 hours workload. Academic staff now has the job to design the various modules to achieve the learning outcomes respecting the workload available not only superficially but in reality which will have to be tested in regular evaluation processes. It may be that it is found out that some modules should carry a multiple of 5 credits (, 10, 15…), e.g. modules which include field research, laboratory work, etc. It should be stressed that a mixture with 7, 8, 9 etc. credits for a module is not accepted.

This method has the advantage that academic staff most likely has to redesign their teaching methods and that within a faculty or even across an institution many options of potential combinations are created, e.g. a module might be used in various study-programmes (platform idea).

3 Curriculum Design: Assessment

Types of assessment are manifold. The ones to select depend on their suitability, acceptability, feasibility and sustainability to validate whether the learning objectives have been achieved. This means:

- Is the type of examination, for example a written test, ***suitable*** to validate whether the students have acquired presentation skills or the ability to work in teams?
- Is the type of examination, for example a written test, ***acceptable*** when it is scheduled at night? (it happens, for example, when students of a study-programme sit for examinations at a given time at home and the mobility students, sitting for the same examination, have to do it at the identical time although they are in different time-zones).
- Is the type of examination, for example a field test, ***feasible*** realising that the place to go is in a large distance?
- Is the type of examination, for example an oral examination, ***sustainable*** expecting more than 1000 students to be examined?

The types of examinations which are adequate should be clustered and linked to respective learning outcomes, first of all to the active verb. Staff will then have a range of types of examinations to choose from. They then relate the complete learning outcomes and the proposed types of examination with forms of assessment which could be used, such as quizzes, multiple choice, open-book examination, reflection meetings, defence, group work, presentations, computer simulation, business games, laboratory experiments, etc.

Active verbs (e.g. Bloom´s taxonomy)	**Types of Assessment**
Arrange, define, describe, duplicate, enumerate, identify… (knowledge); change, classify, reconise, translate (understanding)	e.g. Written examination (off-line/on-line): Quizzes, multiple choice
Apply, assess, calculate, change…(applying)	e.g. Written examination: texts, case studies, open-book examination Practical work: Laboratory tests
Compare, differentiate, criticise…(analysing)	e.g. Written examination: illustration e.g. Oral test: reflection role play, business game
Argue, arrange, assemble, categorise, generate… (synthesising)	e.g. Written examination: Essay Report Practical work: Laboratory tests Business plans Case study
Appraise, defend, justify, judge, measure, predict, relate, recommend…(evaluating)	e.g. Written examination: Thesis Oral examination/online: Defence, reflection

In case of the example outlined before, an engineering degree programme (BSc) could consider the following types and forms of assessment:

Qualifications descriptors		**Programme: Undergraduate engineering degree (BSc)** **Learning outcomes** **On completion of the programme the graduate can…**	**Types and Forms of Assessment**
EQF	AQF		
K	KU	Identify, formulate, analyse and solve engineering problems	*Written examination* – Knowledge questions (multiple choice, quizzes), analysis of texts…
S	AKU	Derive and apply solutions from knowledge of sciences, engineering sciences, technology and mathematics	*Written examination* - Open-book examination
S	CICTNS	Design a system, component or process to meet specific needs and to design and conduct experiments to analyse and interpret data	*Oral examination* – Presentation, Laboratory experiment
S	CGS	Communicate effectively with the engineering community and with society at large	*Written examination* – Article published *Oral examination* – Report
C	AR	Work effectively as an individual, in teams and in multidisciplinary settings together with the capacity to underake lifelong-learning	*Oral examination* – Group work

In a written paper, e.g. a bachelor thesis, all criteria of the following table may play a role with the respective weighting given – which of course, could be changed according to the ideas of the teachers, institutions, for example.

Example:

Type of assessment	**Possible criteria for each or some of the types of assessment**	**Example of Weighting in %** *Beware:* **No weighting according to the number of credits**
Written Oral On-line Theoretical Practical Questions – Answers Report Essay	Context	5
	Research Question	10
	Methodology	15
	Analysis	20
	Conclusion	20
	Recommendations	20
	Literature used	5
	Presentation, Language, Quotation	5

In an oral examination the major element of assessment may be the context, methodology applied, conclusions and recommendations. As there are only these four criteria for an assessment the distribution of the weighting may be: context 10, methodology 20 , conclusions and recommendations each 35%. Of course, on the basis of the experience on-site, this weighting may

be changed according to the intentions of the designers of the programme, the module representatives, for example. Any other weighting is possible as long as it is transparently explained.

Any assessment requires one or several specified types of the table above or some other types which may better suit the purpose of the assessment. It is a requirement, however, that all criteria have to be SMART(see below).

Tool 19: Linking Qualification Descriptors and Learning Outcomes With Types of Assessment and a Weighting

The objective of the assessment is to validate the achievement of the learning outcomes by the learner. The level at which the validation takes place has to be specified. It may be at a certain level, in relation to a cohort, may be a wandering cohort, or external benchmarks.

In the following assessment, types are proposed for the two programmes for which the learning outcomes were formulated in the light of the European and Armenian Qualifications Framework (see Tool 11). The forms of possible assessments are stipulated in a fourth column which has been inserted in the table of tool 11:

Qualifications descriptors		**Programme: Undergraduate engineering degree (BSc)**	**Type of assessment**	**Weight-ing in %**
EQF	AQF	**On completion of the programme the graduate can…**		
K	KU	Identify, formulate, analyse and solve engineering problems	Included in the case study or tested by quizzes, e.g. one per month (10 questions each – max. 30 minutes)	15%
S	AKU	Derive and apply solutions from knowledge of sciences, engineering sciences, technology and mathematics	Case study	30%
S	CICTNS	Design a system, component or process to meet specific needs and to design and conduct experiments to analyse and interpret data	Experiment	30%
S	CGS	Communicate effectively with the engineering community and with society at large	Presentation of results	25%
C	AR	Work effectively as an individual, in teams and in multidisciplinary settings together with the capacity to underake lifelong-learning	Included in the presentation and/or experiment	

Legende:
KSC = knowledge, skills, competence; KU = knowledge and understanding; AKU = applying KU;
CICTN = Communication, IC, numeracy skills; CGS = Generic cognitive skills; AR = autonomy and responsibility

Explanation:
In the case study, students work in teams and have to present their findings. Each individual has to have a specific role also in the presentation. It is possible to link this presentation with a one hour examination (open-book type) in which the students have to tackle one specific question. It is also possible to link this case study with an individual oral examination. Form and types depend for

example on the number of students to be examined. Although the communicative skills can be assessed by the presentation, they may also be tested by an experiment which may be focused on the organisation and implementation of the experiment. This can be linked with an oral examination. All these types of assessment form the whole examination. It is recommended to award a total of 100 percent or points to it. According to an individual weighting each part contributes to the total. The pass mark may be 50%. The percentages can be translated into the national grading system.

Qualifications descriptors		**Programme: Postgraduate Computer Science (MSc)** **On completion of the programme the graduate can…**	**Type of assessment**	**Weighting in %**
EQF	AQF			
K	KU	Perform problem solving in academic and industrial environments	Included in AKU	
S	AKU	Use, manipulate and create large computational systems Organise and pursue an scientific or industrial research project	Thesis and oral defence	30%
S	CICTNS	Write theses and reports to a professional standard, equivalent in presentational qualities to that of publishable papers Use a full range of IT skills and display a mature computer literacy	Thesis and oral defence	40%
S	CGS	Prepare and present seminars to a professional standard	Thesis and oral defence (outline)	30%
C	AR	Work effectively as a team member Perform independent and efficient time management	Together with CGS and AKU	

Legend and explanation as above. However, at master level, the focus may be on achieving and validating research skills and working both in teams and independently. This is reflected by the weighting of the various parts of assessment.

Tool 20: To Identify Adequate Types Of Assessment

Competence-oriented assessment should fulfill the SMART-criteria as listed below and respect what they require:

SMART Criteria	**Requirement**
Specific	Unambiguous, clear formulation, no doubts
Measurable	Feasible within the time available
Adequate	Acceptable level e.g.
Relevant	Realistic, competence oriented
Timely	In which / at which time

Tool 21: To Identify Potential Conflicts Between Smart Criteria And Learning Outcomes

It is a condition that a learning outcome which is not SMART, i.e. fulfilling these criteria, cannot be a learning outcome. The following reflections may be helpful:

Potential Conflicts	Learning Outcomes
Relevance versus Measurable	Ability to work in teams: Group work? Comment: it may be relevant that students can work in teams but how can this be measured? Is it enough that the group achieves results? Can the contribution of each member be assessed? Is a group automatically a team? The ability to work in teams has to be assessed in multiple ways to reflect what the group has achieved as a whole and what the individual has contributed. Also, how and if the group developed to a team has to be validated adequately (reflection meetings, coaching, observation).
Measurable versus Suitability / Fairness	Ability to speak: Written examination? Can a written examination measure the achievement of being able to speak in a foreign language?. Is a written type of examination the most suitable one, and is it fair to test in this way?
Relevance / Realistic versus Expectation / Adequate versus timeline	Proposals to act (1) level of bachelor thesis: Is the topic related to the level of a bachelor programme – this has to be checked in the light of the profile of the programme (2) time-line of 6 weeks : If such a limit is fixed, is the expectation by staff in line with the time limit?

On the assumption that all learning outcomes can be validated by one or several types of assessment the institution may then identify a general line of assessment criteria on their own and identify as well a range of grading. These criteria are specific to the learning outcomes and want to clarify to which extent the student has performed in the achievement of these respective criteria:

Tool 22: Criteria And Grading Framework

On the basis of the learning outcomes of an educational component academic staff may define its assessment criteria for one or several components adjusted to the type of assessment. In the last column the assessor may comment on the grade awarded respecting the following grading framework:

<50% = not been met at all
<60% = just met
<70% = criteria fully met
<80% = well done
80%-84% = top 15% of the students
85%+ = top 5% of the students

Criteria	<50	<60	<70	<80	80-84	85+	Comments
Clarity and relevance of terms of reference / aims and objectvies and these have been fully met							
Demonstration of KU and critical evaluation of relevant literature							
Justification and use of appropriate methods and data collection							
Evidence of systematic data collection and clear presentation of 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							

A more sophisticated and advanced way is demonstrated by the following table which ideally has been worked out by a group of colleagues, preferably of different gender, diversity of origin and language background:

Tool 23: Description of Achievement For Each Grading Range (Example: Written Assignment)

Criteria	%*	80+	70+	60+	50+	Fail
Generic Communi-cation	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
Knowledge & Understand-ing	20	Comprehensive, clear demonstration of required concepts and practical KU. Wide reading used	Mainly clear and comprehensive: small element missing or elementary	Basic KU of material across board or incomplete compensated by good elements	Elementary KU displayed. Incomplete	Demonstrate s no or very limited KU or required material
Analysis	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
Synthesis / Creativity / Application	10	Distinctive display of creativity and ability to synthesise material	Significant element of synthesis and creativity	Small element of synthesising arguments and showing creativity displayed	Limited / elementary creativity and synthesis	No creativity or synthesis of material displayed
Evaluation	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
Assignment Parameters	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 / guidelilnes followed	Parameters not followed

+ % of weighting

In whatever way the grades are awarded it is a requirement that „Blind Double Marking“ is the standard of assessment for any type. With the help of such tables a certain consistency in grading can be assured. On such a basis it is facilitated to give a sound feed-back to students as the explanations are transparent.

Tool 24: Grade Distribution as a Must

According to the ECTS User´s Guide of 2015 every institution is obliged to provide a grade - distribution table. The following steps have to be taken:

1. Publishing the grading scale (national/an institutional if existing – examples see above)
2. Explain the grading scale and its philosophy
3. Provide a statistical distribution table of the passing grades awarded in the programme / field of study or educational component
4. Allow for comparison with parallel reference groups of other institutions at home or abroad
5. Deliver additional information, e.g. the success rate (not part of the distribution table)

The elements of such a table are the following. The figures filled-in here are taken from the User´s Guide (page 41).

Example of an illustrative grading table (ECTS User´s Guide)

A	B	C	D
Grades used in institution (from highest to lowest passing grade)	Number of passing grades awarded to the reference group	Percentage of each grade with respect to the total passing grades awarded	Cumulative percentage of passing grades awarded
10	50	5%	5%
9	100	10%	15%
8	350	35%	50%
7	300	30%	80%
6	200	20%	100%
	1,000	100%	

In case a bachelor degree was awarded with a total grade 7 according to the national grading system, the following information is given in brackets: Total grade 7 (30%/80%). This means that 30% of the reference group have achieved this grade. However, 80% of the reference group have achieved this grade or a better one.

In Germany, the technical university of Darmstad presented the following distribution of grades in one programme to demonstrate its function:

Grade-category	Num-ber	Number accu-mulated	%-rang	Grade-category	Num-ber	Number accu-mulated	%-rang	Grade-category	Num-ber	Number accu-mulated	%-rang
Sehr gut (Very good)				Gut (good)				Befriedigend (satisfactory)			
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

This example demonstrates that a receiver of such document can understand the position of the various grades. No further calculation is needed. The table should be documented in the Diploma Supplement.

Within an institution or between institutions, nationally and internationally, a grade conversion might be useful. The ECTS User´s Guide supplies examples in the annex, being developed by a consortium of institutions financed by the EU. Here a simple form of the tool is outlined.

Tool 25: Grade Conversion as an Option

It is assumed that the grade achieved in the example above (grade 7 (30%/(80%) is compared with another institution which has published its distribution table as well.

Grade Conversion

Institution I			
A	B	C	D
10	50	5%	5%
9	100	10%	15%
8	350	35%	50%
7	300	30%	80%
6	200	20%	100%
	1,000	100%	

Insitution II (Comparison)			
A	B	C	D
1,0	150	3%	3%
1,3	300	6%	9%
1,7	800	16%	25%
2,0	1,300	26%	51%
2,3	1,500	30%	81%
2,7	500	10%	91%
....	...	...	...
	5,000	100%	

Attention: The lesser the degree of scaling, the more imprecisely the conversion

In this example the grade 7 achieved in institution I would correspond to a grade 2,3 in institution II situated in another country with another national grading scale (1-4 are success grades; 1 is the best, 4 just a pass). The comparison is made on the basis of the distribution of the grade 7 in institution I (30/80) and it can be seen that in institution II a nearly identical percentage distribution can be identified (30/81). Whereas in the first institution 1000 students from the reference group are included, in the second one 5000 students are included. It has to be stated that the comparative group may be further apart, e.g. if the student had achieved a 6 in institution I which 20% of the students did. However, none of the students achieved a lower grade [6(20/100)]. The grade would be converted to 2,7 in institution II where 10% of the students got the grade and 91% this or a better one. This case also demonstrates – what was stressed earlier – that the differences between marks should be as small as possible, e.g. instead of 1,0; 1,3; 1,7 it might be more just to introduce 1,0; 1,1; 1,2; 1,3 etc.

Further explanations are encouraged to allow the reader to get a fuller picture: make up of the reference group. Today, most often the reference group is the cohort the student is in, i.e. the results of those students who took the test and have not necessarily any furthr intentions. This, however, is not the adequate reference. The reference group should be made up by the cohort of students of that educational component (or study-programme or…) of the past 2-3 years, depending on the number of students. Statisticians sometimes say that about 100 students are sufficient as a student has at least 6 examinations per semester, multiplied by 3 years (bachelor programme) this amounts to 36 assessment events, in total for 100 students to 3600, quite a sound basis for comparison. In the following semester, when another cohort achieves results, those of the oldest cohort should be dropped, which means that the reference group is a „wandering cohort“.

These new tools might improve the quality of social responsibility of institutions. They increase

- Fairness
- Transparency
- Coherence
- Comparability
- Trust

Helping to support suitable, acceptable, feasible and sustainable assessment.

Part III TOOLS FOR FINALISING

Direction: Recognising Achievements – Not a Kindness, a Right

This part outlines legal and operational procedures in relation to recognising academic degrees and credited or non-credited educational components. The recognition is pursued by competent bodies which have to be impartial and independent and their decisions have to be transparent, fair, offering the option of appeal.

1. Legal Background and its Consequence

1.1 Recognition of Qualifications –

The Lisbon Recognition Convention from 1999 states in article 36 that „Qualifications of approximately equal level may show differences in terms of content, workload, quality, profile, and learning outcomes. In the assessment of foreign qualifications, these differences should be considered in a flexible way, and substantial differences in view of the purpose for which recognition is sought (e.g. academic or de facto professional recognition) should lead to partial recognition or non-recognition of the foreign qualifications". In article 37 of the same Convention it is stipulated that in case of foreign qualifications recognition should be granted „…unless a substantial difference can be demonstrated between the qualifications for which recognition is requested and the relevant qualification of the State in which recognition is sought…". The European Area of Recognition Manual (2012) explains: „By focusing on the five key elements that together make up a qualification (level*, workload, quality, profile, learning outcome) and by taking substantial differences into account, competent recognition authorities have transformed their approach from expecting foreign qualifications to be almost exactly the same as those offered in their own countries, to focusing on „recognition" by accepting non-substantial differences." (*Note: *In line with the shift to student-centred learning the focus on „content" has been replaced by „level" in relation to the learning outcomes).* Substantial differences are identified as those differences between the foreign and the national qualification „that are so significant, that they would most likely prevent the applicant from succeeding in the desired activity such as further study, research activities or employment"
Decisive is that the competent recognition body of the host country has to supply evidence about these substantial differences. The convention and its accompanying guidelines highlight that

- „Not every difference should be considered to be „substantial";
- The existence of a substantial difference entails no obligation to deny recognition to the foreign qualification;
- The difference should be substantial in relation to the function of the qualification and the purpose for which recognition is sought."

The last sentence indicates that a holder of a bachelor degree in law may very well enter a Master programme in business management as long as the receiving institution is of the opinion that the bachelor degree gives the student a sufficient basis to be successful in the Master programme. Or, in other words, higher education institutions should be much more flexible as regards requirements for specific qualifications for entering Master or any other level. The Qualifications Frameworks were not created as career ladder, as chimneys, in which a learner has to continue once having entered in a particular subject area, e.g. a bachelor degree in business allows only to continue in business subject areas to Master level. Similarly if students intend to achieve a Doctorate: it is not a requirement to hold a Master degree; a Bachelor degree is sufficient if the student stands a fair chance to achieve the qualification sought; it even does not have to be in the same subject area. In other words, recognition of qualifications has to be organised in a very flexible way to „open doors" and not in a

way how a development could be stopped. What has been stated above should refer to even more so between institutions in the same country: a flexible approach is needed but always respecting fairness and the whole process is transparent to the outside world.

Also, the number of credits linked to a qualification are first of all an indication of the workload invested but should not be used as a limiting factor for recognition: Within the EHEA a range of credits, never a fixed number of credits, indicate the achievement of a cycle of learning. A bachelor degree is a qualification which may be achieved with a workload of 180, 210 or 240 credits; in any case it stays a bachelor degree, not a better or a worse one. Differences as regards the workload may be based on various pathways of secondary education, or may have their origin in a wider approach, including e.g. mobility windows or widening subject areas, but always at the same level. The same is true as regards Master programmes, documenting a range of 60, 90 or 120 credits. Again, all these numbers of credits reflect the same level: Master, 2nd cycle. It is not intended that a Master programme of 90 credits only accepts students who have a bachelor degree with at least 210 credits. It is a misinterpretation to believe that 300 credits have to be achieved in total; the number interpreted as a requirement in some countries and institutions for being allowed to start a doctoral programme. The cycles of the European Qualifications Framework for Higher Education are independent cycles, each one exists on its own; the way of „adding up", 3+2 or 4+1 at European level is a misunderstanding; it has never ever been the intention of the „Bologna Reform".

As a consequence of these different interpretations, the „competent body", deciding on recognition of qualifications has to have an „open minded culture". If the restrictions are „home-made" – at national or institutional level – the competent body should try to dissolve this error. Employees with a wide background and professional experience, sound analytical and advisory skills are needed. The body´s mission is not to prevent learners from moving on but encouraging them, showing a wide range of options within and outside institutions of higher education, a range which has never existed to this extent in most of the countries before the Bologna Reform. The body should have close links with employment offices, employers´ federations and employees´trade unions, and also students should be represented. This insight should help national bodies to open national qualifications frameworks at higher level both for higher education as well as for professional qualifications being at the same level though differ from each other but allow for continuing learning with advisory support.

1.2 Recognition of Educational Components

Similarly, the recognition of educational components should be pursued and organised. In terms of recognising, for example, what a student has achieved at another institution, a competent body should respect the following:
It is unlikely that the number of credits and learning outcomes of a single educational component in two different programmes will be identical. The credits confirm that specified learning outcomes have been achieved but the number of credits linked to an educational component is not suited for recognition as it is relative as explained above. Therefore, also as regards the recognition of educational components, the five key elements - level, workload, quality, profile, learning outcome – are the basis for concluding whether there are substantial differences or not, whether respectively recognition can be granted or not.
Ideally a student should know before mobility how his/her achievements at a foreign institution or organisation will be treated – whether he/she returns afterwards to the home institution or not.

In case of „free mover“ mobility – outside prior learning agreements – institutions should act as in the case of recognising degrees – outlined above, having a competent body in place.

Much more than in the past the ECTS User´s Guide 2015 clarifies the work placement as an educational component and outlines how such learning activity should be integrated into a study-programme and the learning outcomes credited. The work placement, also referred to as traineeship or internship, is the technical term for a student working in an organisation for a limited period of time. It can be organised in a full-time or part-time mode, and the priority is laid on learning not earning. The work may even be unpaid. In such cases it is common that students receive some contributions in-kind. The legal status, however, is sometimes unclear, e.g. it may be different from a normal employee or not. The status has an impact on the remuneration (minimum wage e.g.) or insurance, for example. Important is that a contract should be worked out, at least between the student and the organisation, if possible, however, between student, organisation and the home institution of higher education, similar to the Learning Agreement of credit mobility.

A work placement may be placed as a mobility window or an alternative to a study-semester. A work placement within a study-programme makes sense

- at the beginning of studies to get a feelilng for the discipline to be studied
- in the middle to reflect on what has been learned so far and apply it to practice
- at the end to reflect on theory and practice and work on a thesis at any of the three cycles
    - Whereas in the first cycle the relationship between theory and practice is at the forefront,
    - The second, and in particular the third cycle, are planned to evaluate and critically develop the subject area further.

The student may prefer to place the traineeship

- between cycles
- before deciding on a specific career in a particular field.

The placement does not make students necessarily better employees or entrepreneurs; it will help them to be able to reflect much better on opportunities. In the eyes of the employers it may make them more employable.

In addition, the achievements reached by the end of the work placement should also be included in the Diploma Supplement, like any other educational component. Also, a Mobility Pass as a document of the EUROPASS may be handed out. The EUROPASS consists of templates for documenting Curriculum Vitae, Language Passport, Europass Mobility, Certificate Supplement, Diploma Supplement), facilitating the readability, knowledge and understanding of qualifications awarded in the EHEA (these tools are not detailed in this toolkit as they have been in use for a long time – with the exception for a workplace, see below).

2. Tools

In case of credit mobility the ECTS User´s Guide 2015 outlines details as regards supporting documents to safeguard academic recognition of learning experience within study-programmes. These are Learning Agreement (p58) and Transcript of Records (p60). Often institutions of higher education do not realise the binding commitment of a learning agreement arranged between student, sending and receiving institution listing all learning activities to be carried out. The

Transcript of Records is nothing but a confirmation of what the student has actually pursued successfully at the other institution. In addition to a Learning Agreement the Transcript of Records stipulates not only the credits but mostly also the grades of the student´s achievements. The credits have to be recognised without further ado as pointed out earlier in this toolkit. The grades should be seen in relation to a „Grade Distribution Table“ and may or may not be converted into a local grade – as outlined above.

The ECTS User´s Guide (p34) identifies a „…golden rule of recognition of credit mobility within the framework of inter-institutional agreements: all credits gained during the period of study abroad or during the virtual mobility – as agreed in the Learning Agreement and confirmed by the Tanscript of Records – should be transferred without delay and counted towards the student´s degree without any additonal work by or assessment of the student. Unfortunately, this is not always the case yet.

In the following tools used for credit mobility will be detailed. Chosen are those for work placements. Also other educational components could be covered by these tools but then they have to be adapted accordingly. The following tools are recommended templates published in the ECTS User´s Guide 2015 (57pp). They are designed to help institutions, also for comparative reasons. The templates can be adapted to specific institutional needs, however, it is advisable to keep the main body and also the sequence as much as possible to assure a better understanding acrosss institutions, borders and different languages.

The work placement is a learning experience normally outside the site of the institution, i.e. in a different environment. If it is part of a study-programme, it is part of the responsibility of the institution like any course component, preferably underlined by a tripartite contract. The benefit for the student in terms of acquisition of knowledge, skills and competence, i.e. an enhancement of employability is obvious. Key is the academic recognition which in the past has not always been granted. Problems were caused in case neither Learning Agreement nor Transcript of Records were worked out or the placement was not obligatory within a study-programme or after graduation of the student. Also the allocation of credits and grading caused concern. The situation has changed today to the extent that the EU Directive 2013/55/EU has extended its scope to the recognition of work placements which are required to have access to a regulated profession.

The ECTS User´s Guide 2015 stipulates the requirements for recognition of work placements completed in another Member States. It should be based on

- a clearly written description of learning objectives and tasks, being determined by the trainee´s supervisor in the host Member State.

Article 55a of the EU Directive „requires Competent Authorities to publish guidelines on the organisation and recognition of professional traineeships carried out in another Member State or in a third country, in particular on the role of the supervisor of the traineeship“.

Tool 26: Learning Agreement for Work Placements

Essentially the Learning Agreement is a binding document outlining the learning acvtivities to be carried out by the student within this educational component. The **receiving organisation** commits itself to

- provide quality work placement relevant to the student´s learning path
- clearly defined learning outcomes,

- issue a Work Placement Certificate upon completion of the work placement.

This certificate will become one part of the EUROPASS and/or will be included in the Diploma Supplement like any other educational component of a study-programme depending whether it is carried out while the student is still registered for a study-programme or not.

Basically also a work placement should carry credits, respecting the same guidelines as described above under the heading of credit allocation, facilitating its recognition. The following example may be helpful in this matter:

A student in business studies got a placement in an accounting department of a SME; the learning outcomes are clearly defined:
At the end of the work placement the **student** knows the

- processes being initiated when an invoice is coming in
- processes being initiated when an invoice has to be produced.

Likewise the **student** is able to

- communicate the procedural needs to his fellow employees
- manage the process within a given time-frame
- follow-up the processes within the scope of his/her work
- take corrective actions in case of problems
- evaluate different approaches in light of effectiveness and efficiency.

The sending institution commits itself to

- ensure the quality and relevance of the work placement
- monitor the student+s progress
- recognise the ECTS credits for the successfully achieved learning outcomes for the final degree.

The Learning Agreement for work placements should be signed by the three parties involved: the student, the sending institution and the receiving organisation. The credits could be calculated according to the following steps:
Step 1: Definition of learning outcomes
Step 2: Orientation about the time in relation to the volume of work
Step 3: Finalisation of working hours for one semester by linking the first two steps in the light of the credit allocation system of the institution (e.g. 1 credit = 30 hours).

Example 1:
Planned duration of the placement 20 weeks (1 week = 40 hours) = 800 hrs;
Student is expected to reflect on the work and to prepare a report; assumption = 5 hrs per week = 100 hrs
total = 900 hrs = 30 credits.

Example 2:
3-month-placement (12 weeks): Working hours per week 40 = 480 hrs;
Expectation to work on a report 5 hrs per week, about 60 hrs, total 540 hrs = 18 credits.

Example 3:
Blended work placement:

Two months practical work in an organisation = 8 weeks;
One month academic work related to the experience gained = 4 weeks;
Total 12 weeks = 480 hrs = 16 credits.
The work placement may also include a period of time prior to the start in the organisation/enterprise, e.g. 2 weeks = 80 hrs = about 3 credits (it is not allowed to award half credits); new total = 19 credits. It is also not permitted to award the credits for one part of the placement only. The placement is regarded as an educational component and therefore carries credits only as a whole, i.e. 19 credits in this case. Depending on the credit structure, these figures have to be adapted, e.g. in a modularised system if one module carries 5 or a multiple of 5 credits. Therefore the workload should be adapted so that 20 credits in total will be documented.

Recommendation:
Design the placement as a semester component / module with 30 credits. In case of shorter durations, add „reflection tasks“ to make it a workload of a semester; in particular if linked to a bachelor or master thesis.

Grading of work performance:
Value the student´s work by assessing his/her performance

1. In co-operation with the company supervisor according to measurable performance indicators, e.g. punctuality, work finished on time.
   Get in addition a general impression as regards „employability“ – not marked; take it as possible hints for revising the curriculum or ways of learning and teaching
2. Value personally (may also be a team) the student´s academic performance in line with the learning outcomes through reflection meeting/paper, log-book, identification of research questions e.g.

Recommended elements for the **Learning Agreement** for work placements (see ECTS User´s Guide 2015)

- Name and contact details of the student
- Names, addresses and contact persons of the sending institution and receiving organisation/company etc.
- Student´s field of study at the sending institution (perhaps ISCED-F codes)
- Study cycle (short/first/second/third cycle)
- Or in between cycles
- Type of organisation (private, public etc.)
- Period of training (from/to) at the receiving institution
- ECTS credits
- Learning outcomes having been acquired by the trainee by the end of the traineeship
- Detailed programme of the traineeship period, including tasks / deliverables
- Number of working hours per week
- Level of competence in the workplace language that the student has or agrees to acquire by the start of a following study period (if applicable)
- Monitoring arrangemens and evaluation plan
- Provisions for changes for the learning agreement for work placements
- Recognition arrangements in the sending institution

- Signatures of the three parties (student, representative of the sending institution and receiving organisation, including the supervisor of the trainee).

Tool 27: Work Placement Certificate

The work placement certificate aims to provide transparency and to bring about the value of the experience of the student´s work placement. This document is issued by the receiving organisation / enterprise upon the trainee´s completion of the work placement. It can be complemented by other documents, such as letters of recommendation.

Recommended elements for the **Work Placement Certificate** (ECTS User´s Guide 2015) are:

- Name of the student
- Name of the organisation/enterprise
- Contact details of the organisation/enterprise
- Type of organisation/enterprise
- Start and end of the work placement
- Detailed programme of the work placement, listing the tasks
- Knowledge, skills (intellectual and practical) and competence acquired (learning outcomes achieved)
- Evaluation of the student´s performance
- Date of issue, name and signature of the responsible person at the receiving organisation / enterprise.

These guidelines may also be applied to non-formal and informal, to voluntary and facultative placements, to any form of education, training and work – anywhere.

Tool 28: Competent Bodies

- **International level**

The European Commission, the Council of Europe and the UNESCO have set up the network ENIC-NARIC to help individuals and organisations to find information as regards international academic and professional mobility and procedures for the recognition of foreign qualifications. ENIC stands for „European Network of Information Centres in the European Region“, NARIC for National Academic Recognition Information Centres in the European Union. NARIC was established first within the European Union and has been extended to the EHEA; ENICS were created to cover UNESCO´s regions (1994). A quality assurance system SQUARE was developed for the network to support the ENIC-NARIC network to systematically review whether they themselves comply with the Lisbon Recognition Convention and the good practice the network has agreed upon (see www.enic-naric.net). At national level the Member Statesw have set up offices, sometimes in liaison with existing organisations like e.g. in Germany with the Central Office for Foreign Education in the Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs in the Federal Republic of Germany (KMK) and the German Academic Exchange Service DAAD). To support the ENIC-NARIC network a toolkit has been developed, the EAR (European Area of Recognition Project) manual, which contains standards and guidelines on all aspects of the recognition of foreign qualifications, a practical tool to assisst the credential evaluators from the network and to make the procedures transparent and comparable.

- **National level**

The arrangements at national level differ. Sometimes the national body is identical with the international one or both are „under one roof“ or separated from each other but – normally speaking – working closely together. The focus of their main task is spreading information and advising in relation to recognition of degrees and learning, including accreditation of prior learning, of prior and experiential learning, and also to articulation or other agreements between institutions across different countries.

- **Institutional/Faculty/Department level**

In many institutions of higher education a central body has been introduced to specialise on any form of recognition. It is decisive that this body is staffed with experienced personnel which is knowlegeable and independent as well as impartial. It is possible that general agreements of recognition exist at national level or those between institutions of higher education or with institutions of vocational/professional orientation. The latter is in particularly facilitated in case one common Qualifications Framework exists at national level. Many, if not most cases of recognition, however, refer to individual persons and have to be addressed and assessed individually. Following the principle of subsidiarity it is recommended that such cases are decided at the place directly concerned with the impact of the decision. As regards recognition of qualifications this normally will be a study-programme for which the holder of a qualification asks for entrance, e.g. someone has a degree awarded from an institution of higher education outside the EHEA or has achieved a professional qualification and wants to enter a Master programme. The competent body must have documented clear guidelines according to which recognition will be decided upon and the final decisions made are transparent, published and can – if necessary – be appealed. Recognition of components should not – although this is practiced quite often – left to the decision of respective teaching staff. They are apt to decide on the ground of a comparison between what they expect of a respective learning component which they may teach themselves and what is missing from the viewpoint of contents in the component taught at the other institution. Ideally, this decision should be taken by the staff responsible for the whole study-programme, based on the assessment whether the applying student will have a chance to continue his or her studies successfully. This body should be made up by the programme director, staff from the programme office and a student of the programme. Again, these decisions have to be taken transparently, are published and can be appealed.

Additionally several charters should be respected. The ECTS User´s Guide lists the following charters which provide a framework for arranging credit mobility and recognition within the ERASMUS+ programme:

- ERASMUS Charter for Higher Education (Institutional Commitment)
- European Quality Charter for Mobility
- ERASMUS Student Charter (European Code of Good Practice for ERASMUS+ students.

_They also help to strengthen integrity and combat corruption in higher education.

Conclusion

This toolkit comprises 28 tools to support institutions, organisations and ministeries to operate transparently within a framework on an ethical basis. All participants realise that they are accountable and have at their hand tools which help them to work openly according to agreed guidelines at defined standards. However, as it was pointed out at the beginning, the tools as such do not guarantee on their own a successful strengthening of integrity and combatting corruption in higher education in Armenia. Tools are applied by people, and people have to work together, developing their culuture. It is decisive that this is a culture which enhances and prioritise transparency and accountability in higher education and is built on trust without any form of bias, respecting diversity and equal rights without any doubt, allowing corruption no chance at all.

Literature

Carnall, C. Managing Change in Organizations, 2007

Chryssides, G.D., Kaler, J.H., An Introduction to Business Ethics, 2002

Daft, R.L., Murphy, J., Willmott, H., Organisation Theory and Design, 2007

Johnson, G., Whittington, R., Scholes, K., Angwin, D., Regnér, P., Exploring Strategy, 2014

Gonzaléz, J., Wagenaar, R. (eds), Tuning Educational Structures in Europe, 2003, 2005,

Kennedy, D., Writing and Using Learning Outcomes, 2007

Lokhoff, J. et.al., A Guide to Formulating Degree Programme Profiles, 2010

Publications by the European Commission

ECTS User´s Guide, 2015**CEDEFOP**
The shift to Learning Outcomes, 2008

Council of Europe

DAAD

Arbeitsbelastung und Credits im Kontext des ECTS (2012)

Yes! Go! – A Practical Guide to Designing Degree Programmes with Integrated Transnational Mobility

Lernergebnisse, Curriculumdesign, Mobilität – Ein Wörterbuch für Qualitätsbewusste

HRK, Hochschulrektorenkonferenz, Project nexus (Germany)

Anerkennung von im Ausland erworbenen Studien- und Prüfungsleistungen (2015)

Kompetenzorientiert prüfen (2015)

Modularisierung gestalten (2016)

QAA

UK Quality Code for Higher Education, Part B, 2013

Increasing frequency of unethical practices in higher education is undermining the credibility of higher education. Absenteeism, appropriation, bribery, cheating, corruption, deceit, embezzlement, extortion, favoritism, fraud, harassment, impersonation ... different forms of misconduct are the focus of the Council of Europe and the European Union joint initiative to strengthen autonomy and accountability of higher education institutions in Armenia. In this project the Ministry of Education and Science of the Republic of Armenia, university staff and students, representatives of civil society organisations joined efforts to develop guidelines of ethical behaviour and tools for institutional capacity development. In particular, the toolkit on accountability and transparency in curriculum development and student assessment is designed to help creating a fair and transparent environment for students, in fact, for all learners, as regards learning, teaching and assessment.

ENG

The Council of Europe is the continent's leading human rights organization. It comprises 47 member states, 28 of which are members of the European Union. All Council of Europe member states have signed up to the European Convention on Human Rights, a treaty designed to protect human rights, democracy and the rule of law. The European Court of Human Rights oversees the implementation of the Convention in the member states.

www.coe.int

The European Union is a unique economic and political partnership between 28 democratic European countries. Its aims are peace, prosperity and freedom for its 500 million citizens - in a fairer, safer world. To make things happen, EU countries set up bodies to run the EU and adopt its legislation. The main ones are the European Parliament (representing the people of Europe), the Council of the European Union (representing national governments) and the European Commission (representing the common EU interest).

http://europa.eu

Partnership for Good Governance

Գործընկերություն հանուն լավ կառավարման

EUROPEAN UNION

COUNCIL OF EUROPE

CONSEIL DE L'EUROPE