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Measuring and Comparing Achievements of Learning Outcomes in Higher Education in Europe (CALOHEE)

Subject Area based Assessment Frameworks

Discussion Paper on the design of Assessment Frameworks based on Sectoral and Subject Area Qualifications Frameworks

Introduction

Over the last ten years and more, much time and effort has been invested in the development of what are often called 'meta-level Qualifications Frameworks'. Good examples in this respect are the Qualifications Framework for the European Higher Education Area (the QF for EHEA), based on the 'Dublin Descriptors'; and the European Qualifications Framework for Lifelong Learning (EQF for LLL). Both frameworks provide good indications of what is expected in terms of outcomes of a learning process at different levels. However, because of their purpose and role, the descriptors included in meta-frameworks are necessarily rather general.

Starting in 2001, benchmarks or reference points have been developed for specific subject areas or disciplinary fields as well as for academic domains or sectors in the context of Tuning and the Thematic Networks. The meta-frameworks and the subject area / domain qualifications frameworks are complementary. Although they are more detailed, subject area based qualifications frameworks or benchmarks are also still rather general by nature, since each one of them is expected to cover a broad academic field.

It is now widely accepted that both programme level descriptors and unit or module level descriptors, described as programme and unit 'learning outcomes', are useful to determine whether the intended level of learning has actually been achieved. Experience has shown that learning outcome statements should be clearly and precisely formulated in order to guarantee objectivity /fairness and transparency. Tuning has developed a model, related to the work of educational scientists Bloom, Biggs and others, which helps in elaborating reliable statements. Reliability is to be understood in this context as allowing for measuring and assessing the progress of learning and/or its achievement. The Tuning model distinguishes five elements that should be covered in a learning outcomes statement. Hence it is more precise than models which focus (mainly) on the use of the most appropriate 'verb' to indicate the level to be achieved during a specified piece of learning.[1] Dependence on verbs has its limitations because it lacks precision in defining the scope and complexity and therefore the level of a learning outcome.

[1] See for example: Cliff Adelman, *To Imagine a Verb: The Language and Syntax of Learning Outcome Statements.* (Occasional Paper No. 24). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment, February 2015: http://www.learningoutcomeassessment.org/documents/OccasionalPaper24.pdf

An additional instrument for determining the level of performance of an individual learner are so-called rubrics. Rubrics or score cards offer more detail and precision in terms of the criteria employed to assess and grade a piece of student work and the weighting of different elements. Rubrics can have quite different formats, and are used to assess an individual course unit or module.

Although qualifications frameworks, level descriptors and rubrics are all indispensable tools for judging the quality of learning, they are not sufficient for comparing the results obtained by different study programmes in the same field of study in a national or international context. This requires a new type of instrument: an assessment framework. Such a framework offers more detail than do qualifications frameworks about what a graduate in a particular subject area is expected to know, understand and be able to do when finishing his or her studies and/or a well-defined (structured) period of studies successfully.

This paper explains what is meant by a 'Subject Area Assessment Framework' in the context of the CALOHEE feasibility study, and should thus provide a basis for constructing a European Assessment Framework for each of the five academic domains and five subject areas covered by the project. It intends to offer insight into 1) the definition applied, 2) the application of Qualifications Frameworks and so-called dimensions, 3) the multi-dimensional parameters identified, that is the items to be assessed - in terms of theory, methodology, skills, application, employability and civic related competences -, and 4) the structure of the framework, that is the topics of assessment and their related approaches regarding teaching, learning and assessment (which can be applied).

Definition

The term Assessment Framework can have different meanings. On the one hand it may refer to an instrument used as a basis for an accreditation procedure, that is to check whether a study programme meets minimum quality standards. On the other, it can also be understood as a framework which offers a detailed scheme or schedule of phases in an assessment process, including the different approaches to be used with respect to the course units/modules that form a particular study programme. The teaching staff involved in such a programme is expected to respect this scheme when implementing the programme. It should offer a well thought through and balanced structure for assessment of the different programme components.

In the case of CALOHEE, 'Assessment Framework' has a third meaning. It is a table which contains the learning outcomes or descriptors defined as part of a Subject Area Qualifications Framework and more precise subsets of each one of them. Each subset, taken together, describes in some detail the key elements and topics covered by a learning outcome statement. In addition, the Assessment Framework intends to offer insight in the most appropriate strategies and approaches to assessing the constituent elements of each learning outcome. The term is used in CALOHEE in the same way as in the OECD AHELO feasibility study, where assessment frameworks were defined for the disciplinary fields of Economics and Civil Engineering, based on respectively the Tuning AHELO conceptual framework for those two Subject Areas.

Qualifications Frameworks and dimensions

As mentioned above, the Assessment Frameworks to be developed will be based on the grids or tables of descriptors included in the Tuning Sectoral and Subject Area Qualifications Frameworks.
The EQF for LLL uses the categories of knowledge, skills and competences to structure its descriptors. Thus the three columns form a 'knowledge framework', a 'skills framework' and a 'competency framework', linked by level. The last column, the competency framework, refers to the

world of work and identifies the competences required to operate successfully in the work place. In the EQF, the competency column builds on the other two elements: knowledge and understanding and the skills necessary to develop and use this knowledge. Together these can be seen as 'technical competences' or 'subject specific competences'. As is well known, besides these, Tuning distinguishes 'generic or general competences', which are grouped in three categories: instrumental, interpersonal and systematic competences. These should be covered in the 'competency' strand, but are also related to the 'skills' strand.

To illustrate this point, it is worth mentioning that over time many so-called *Competency Frameworks* have been developed for a specific job sector, company or institution. These define the requirements for a given job and are used in job vacancy announcements. These announcements normally contain content-related or subject specific competences as well as generic competences. As an example of a well-developed Competency Framework we may take the one the OECD produced in 2014 for the selection/assessment and promotion of its own staff.[2] This Competency Framework is linked to the catchwords: learn, perform, succeed. It makes a distinction between 'technical competences' (subject specific competences) and 'core competences' (generic competences). It identifies 15 'core competences' which are organised in three clusters: 'delivery-related competences' focusing on achieving results; 'interpersonal competences' focusing on building relationships; and 'strategic competences' focusing on planning for the future. The 'delivery-related competences' are: analytical thinking, focus on achievement, drafting skills, flexible thinking, resource management, teamwork, and team leadership. The Interpersonal competences selected are: client focus, diplomatic sensitivity, negotiating, organizational knowledge. The strategic competences identified are developing talent, organizational alignment, strategic networking and strategic thinking. For each of these competences a definition was formulated.

To offer some insight regarding the definitions used, two examples related to the levels 2 and 3, which seem to come close to the bachelor and master level are presented here:

Table 1

OECD key indicators

	Level 2	Level 3
Analytical Thinking	• Identifies critical connections and patterns in information/data. • Soundly analyses verbal and numerical data. • Recognises causes and consequences of actions and events that are not readily apparent. • Anticipates and thinks ahead about next steps.	• Independently engages in tasks requiring interpretation of complex and often vague sets of information. • Identifies gaps in information and makes assumptions in order to continue analysis and/or take action. • Seeks a wide range of sources of information.
Diplomatic Sensitivity	• Listens actively, considers people's concerns and adjusts own behaviour in a helpful manner. • Understands the reason behind, or motivation for someone's actions. • Is attentive when doing projects, assignments or interacting with people from different countries and backgrounds. • Expresses negative feelings constructively.	• Maintains objectivity when one's own positions or opinions are challenged by peers or stakeholders. • Encourages others to contribute by overcoming cultural barriers and background differences. • Remains objective when facing criticism.

Taken from: OECD Competency Framework, 2014

Based on these competences the OECD Competency Framework offers indicators for different levels, which are associated with types of jobs. Level 1 is typically associated with jobs as Assistants, Secretaries and Operators and the like; Level 2 with jobs as Statisticians, Corporate Management and Administration Assistants/Officers, Logistics Officers and Documentalists; Level 3 with jobs as

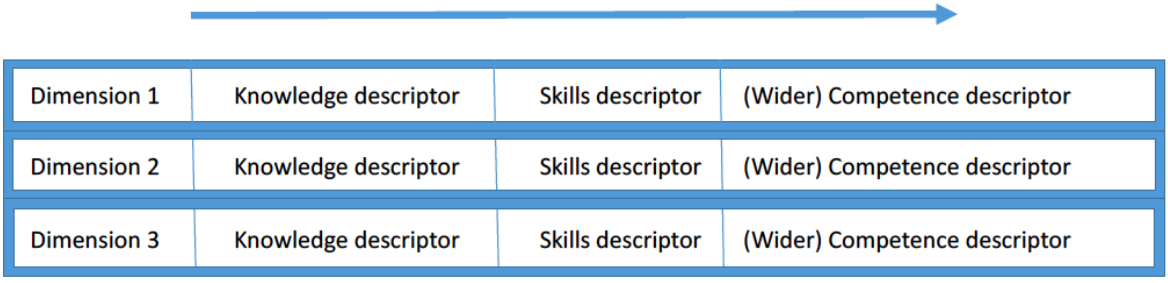
[2] OECD, Competency Framework: https://www.oecd.org/careers/competency_framework_en.pdf

Economists/Policy Analysts, IT Analysts and HR Advisers; Level 4 with jobs as Senior Economists/Policy Analysts or Managers. Level 5, the highest level identified, is associated with jobs as Heads of Division, Counselors, Deputy Directors and Directors and so forth. The typical jobs identified for the OECD might have limited value for many of the subject area covered by CALOHEE, but the operationalization of levels is useful. This is because the indicators used are clearly related to levels of responsibility and autonomy, the main indicators covered in the 'competence' strand of the EQF. The OECD Framework is also relevant because it makes a clear link to the 'tasks and roles' executed as part of the jobs identified. The OECD document distinguishes three job families: 'Executive Leadership', 'Policy Research, Analysis and Advice', and 'Corporate Management and Administration'. The OECD Framework is only one example; many others can be found on the Internet.[3]

For the purposes of the CALOHEE project, the EQF for LLL has been merged with the QF for EHEA to make use of 'the best of two worlds'. While the EQF is focused on the application of knowledge and skills in society, the focus of the QF for the EHEA is more related to the learning process itself: it applies descriptors which cover different areas or 'dimensions' of learning: knowledge and understanding, application of knowledge and understanding in relation to problem solving, making judgments, communicating information, conclusions etc., and learning capability. In developing the CALOHEE approach, we have drawn the conclusion that 'dimensions' are indispensable to define the field of study for which it is required to distinguish the different constituting areas. The 'dimension approach' is complementary to the three categories included in the EQF for LLL. Dimensions help give structure to a particular sector or subject area and also make these more transparent. The use of 'dimensions' facilitates breaking down the rather general level descriptors into more precise ones. This process is necessary in order to develop an Assessment Framework, which must be sufficiently detailed to permit comparing and measuring. Such an approach also provides far better indicators for evaluating the quality of a degree programme than are available at present.

Although there should be an obvious connection with the five or six areas of learning (depending on the cycle covered) or dimensions formulated as general descriptors in the QF for the EHEA, each sector must define its own set of sectoral / subject area dimensions in order to be able to do justice to its field. In the sectoral frameworks developed so far, diversity has been found between sectors as well as some overlap. Each dimension in a Tuning CALOHEE Qualifications Framework includes three related descriptors, respectively for knowledge, skills and (wider) competences. This is illustrated in the following image:

Image 1



The 'skills descriptor' builds on the 'knowledge descriptor' and the '(wider) competence descriptor on the other two. In Tuning and CALOHEE the term 'wider competences' is preferred, because it takes into account the fact that knowledge and understanding must also be understood as

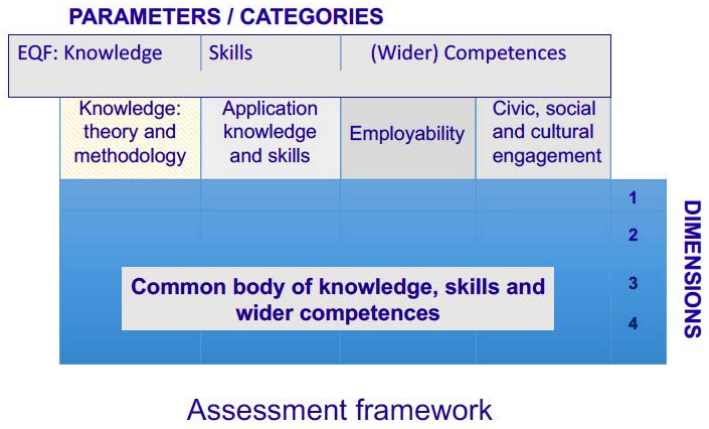
[3]See for example, the Microsoft Education competencies for teachers and school leaders: https://www.microsoft.com/en-us/education/training-and-events/education-competencies/default.aspx?tabselect=1

competences, in this case 'subject specific' ones or in OECD terms 'technical competences'. Using the term 'wider competences' also expresses the fact that the aim of a period of study is both to foster personal development and to increase the learner's competences for future employment.

Multi-dimensional parameters

In order to accommodate the different missions and profiles of Higher Education institutions and their programmes, the CALOHEE Assessment Frameworks will be based on four parameters or categories. This is completely compatible with the existing Tuning CALOHEE Sectoral / Subject Area Qualifications Frameworks whose core is formed by the grid or table of descriptors/learning outcomes. As the following image illustrates the four parameters of assessment are related to the three strands: 'knowledge', 'skills' and '(wider) competences'. The last strand is split into two: employability and civic, social and cultural engagement.

Image 2



Assessment framework

We make this distinction in strands for clarity, although it must be kept in mind that the four strands are closely interrelated, as are the three strands in the EQF for LLL and the five or six dimensions in the QF for the EHEA.

The first parameter encompasses the core knowledge of a particular academic field as well as the related theoretical concepts and methodologies which are judged essential for a good understanding of that field. The depth to which this knowledge and its understanding is developed in a programme depends on the type of degree programme and type of institution offering it. For example, in the case of a research intensive institution, deep knowledge of theoretical concepts and methodologies in relation to highly developed analytical competences / skills and critical thinking will be considered essential. While the outcomes of the Tuning surveys have shown that stakeholders consider the ability to apply knowledge and skills in practice – the second strand - very important in preparing for a societal role, in the case of the research intensive institution the focus will be much stronger on the first strand. The balance will be different in the case of a university of applied science or a more applied degree programme. However, the Assessment Framework will indicate the optimum achievement level in both categories (for both BA and MA), that is the highest level achievable and feasible for a higher education degree programme.

This means that students are not all expected to achieve the highest levels which are formulated as 'intended' learning outcomes in the Framework. The norm of achievement – threshold, average, above average, excellent – with regard to each of the parameters will depend on the type of programme taken by the student, as well as its aims. This approach, which can be compared to the tests used to select pupils/students for different types of secondary and higher education, does

justice to CALOHEE's multi-dimensional approach. It also takes into account that in national and international contexts a distinction is made on the basis of the different missions of universities or other types of higher education institutions if these exist (grand écoles, skola normal, etc.). Although all these institutions will offer bachelor and/or master programmes (or their equivalents) it does not mean that these are understood to be of the same Higher Education 'type' or 'character'. This is why it so important to distinguish profiles and missions of institutions, each of which have an intrinsic value and place and role in the Higher Education landscape, but therefore also have the obligation to describe and justify the choices they make.

Once the 'optimum' feasible learning outcomes are defined, it is essential to make subdivisions which reflect the different profiles of HE institutions and programmes in an appropriate manner. These should also be the basis for deciding the norms to use when comparative assessments are organized. In order to avoid complicating the model excessively, we propose to develop two main subdivisions (research based and applied), which can be further split into two subsets, so as to distinguish level. This would provide grids for four types of degree programmes, having partially different programme learning outcomes and taking into account more academic and more professional orientations. All types, however, are expected to cover the identified common body of knowledge, skills and (wider) competences and all students are expected to meet a threshold level to be identified and agreed upon by the academic communities responsible.

The parameter related to employability has already been discussed above by linking it to Competency Frameworks. As the OECD example shows us, different programme profiles might lead to different types of jobs given the tasks and roles related to these jobs which require different levels of competence. Employability can be defined in short as *the skills and abilities that allows someone to be employed*. The UK Higher Education Academy / ESECT have come up with the following definition of employability related competences: *"A set of skills, knowledge and personal attributes that make an individual more likely to secure and be successful in their chosen occupation(s) to the benefit of themselves, the workforce, the community and the economy."*[4] It is obvious that both subject specific and general/generic competences are understood to be quite important in this context. In this last respect the publication of the UK Higher Education Academy *Student employability profiles* is of relevance. It offers short profiles for each of the subject areas covered in the CALOHEE project.[5]

Given the role of Higher Education institutions to prepare students for their role in society and to form strong bases for personal development – in addition to preparing them for participating in the work force –, we hold that it is important – even essential – that attention in the learning process is paid to civic, social and cultural engagement. This formulation is often referred to in the European context as 'active citizenship'. It may well be that this aspect is not explicitly pursued at present in the vast majority of higher education programmes, but this is a serious omission, given the fact that the stability of many societies is under severe pressure. Interrelated challenges such as the refugee crises, the lasting effects of the 2008 financial crisis, the rapidly changing geo-political context, the negative consequences of globalisation, xenophobia, populism and most recently the Brexit and US Presidential election, which reflect all these elements, shake the foundations of societies and their constituent components.

We expect that the competences reflected in this strand will be largely the same for all subject areas, although the perception of their importance can differ. For academic fields such as history,

[4] Mantz Yorke, *Employability in higher education: what it is – what it is not*. Learning & Employability. Series One. York, 2006: http://www.employability.ed.ac.uk/documents/Staff/HEA-Employability_in_HE(Is,IsNot).pdf.
[5] Claire Rees Peter Forbes Bianca Kublerm, *Student employability profiles. A guide for higher education practitioners.* York, 2006: https://www.heacademy.ac.uk/system/files/student_employability_profiles_apr07.pdf

educational sciences and teacher training their 'weight' in the curriculum might be greater than in other disciplines. Recent publications show there is global attention for this category of learning. In 2010 the Australian Government published its *Civics & Citizenship Education Professional Learning Package*[6], and although it was meant for secondary education in particular, the topics covered seem to be relevant for Higher Education as well. It offers three modules to foster 'civics and citizenship', respectively 'in the class room', 'beyond the class room' and 'participation in the community'. The focus in the modules is on 'civics and citizenship education knowledge, skills and dispositions[7]':

Table 2

In the class room	Beyond the class room	Participation in the Community
• engaging with values that are important to Australian democracy and social cohesion and considering ways in which they can be enacted by individuals or groups to achieve common goals • developing knowledge and skills in collective decision making, informed action and working together for the common good to support or counter the behaviours and/or actions of individuals or groups • defining and exercising personal and shared rights and responsibilities associated with being a citizen within a classroom context • exercising a responsibility for establishing fair processes and procedures for participation and group decision making • developing an awareness of how values underpin the processes and procedures for participation • fostering a willingness to participate through agreed processes and procedures • developing a propensity to take action to bring about positive change • building a capacity for leadership in the decision- making process • having an awareness of self-held beliefs and values, and how these are informed, challenged and altered by interactions with others.	• recognising and understanding key features of Australian democracy • developing a critical understanding of the values and principles that underpin Australia's democratic institutions • identifying the rights and responsibilities of citizens in Australia's democracy • developing and exercising the skills of active citizen participation • applying civics and citizenship knowledge to authentic decision making • developing an awareness of how values underpin the processes and procedures for participation • exercising a responsibility for establishing fair processes and procedures for participation and group decision making • building a capacity for leadership in the decision- making process • having an awareness of self-held beliefs and values, and how these are informed, challenged and altered by interactions with others.	• creating and sustaining an interest in the world – social, political and environmental • fostering a willingness to participate in communities – local, national and global • raising awareness of social and political issues to make informed choices and decisions • developing a propensity to take positive civic action to bring about change • understanding the importance of working collaboratively for the common good to support or counter the behaviors and/or actions of individuals, business and governments • building a capacity for leadership in the decision-making process • having an awareness of self-held beliefs and values.

Taken from: Australian Government, *Civics & Citizenship Education Professional Learning Package*

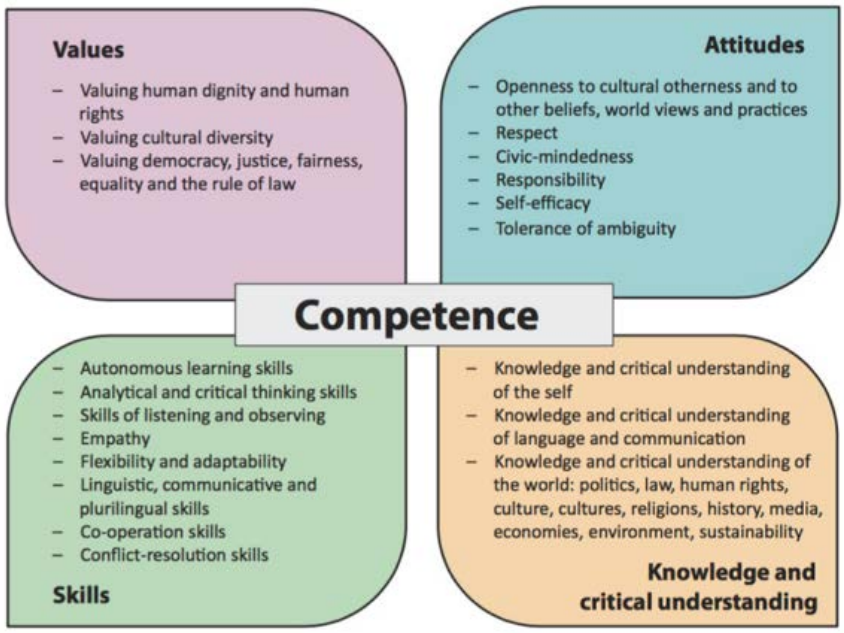
Probably even more important in the CALOHEE context is the 2016 publication of the Council of Europe, *Competences for Democratic Culture: Living together as equals in culturally diverse democratic societies*.[8] In the publication 20 competences are distinguished, which are clustered in four groups: values, attitudes, skills and knowledge.

[6] Australian Government, *Civics & Citizenship Education Professional Learning Package* (2010): http://www.civicsandcitizenship.edu.au/verve/_resources/DEEWR_CCE_PLP.pdf

[7] From Wikipedia: 'A disposition is an artificial habit, a preparation, a state of readiness, or a tendency to act in a specified way that may be learned'.

[8] Full report: http://www.coe.int/t/dg4/education/Source/competences/CDC_en.pdf

Image 3



Taken from: Council of Europe, *Competences for Democratic Culture: Living together as equals in culturally diverse democratic societies*

In this formulation it is obvious that competences relevant for employability overlap with those for civic engagement. It shows that combining both employability and civic, social and cultural engagement in the 'wider competences' parameter/category is a sensible solution. The list of 20 competences chosen by the Council of Europe is based on a longer list of 55 identified in 101 competences schemes. Each of the 20 competences is clarified in the document and supported by a number of pre-assumptions, ranging from 3 to 12 statements. They offer clarity about what is expected of a citizen in a democratic culture. Taken together, these statements should be measurable.

An ETS research group also has studied the issue. The report by Judith Torney Puta, a.o., *Assessing civic competency and engagement*. *Research background, Frameworks, and Directions for Next-Generation Assessment. Research Report*[9] (2015) stresses that civic learning is increasingly recognized as being important by both the Higher Education sector and workforce communities. It offers a review of the outcomes of some 30 projects covering 'existing frameworks, definitions and assessments of civic related-constructs'. It identifies 31 competences ranging from civic literacy, civic engagement, civic identity, political knowledge, civic knowledge and skills, ethical and social responsibility in a diverse world, civic-mindedness and civic responsibility to political and civic participation. It also addresses the term 'civic learning' in terms of learning outcomes in the Lumina Degree Qualifications Profile (DQP) both at associate level (level 6 of the EQF) and at bachelor level. The study offers a table of 'existing assessments measuring civic competency and engagement' and comes up with its own framework, distinguishing between the civic competency domain (covering civic knowledge, analytical skills, participatory and involvement skills) and the civic engagement domain (covering motivations, attitudes and efficacy, democratic norms and values and participation and activities). These competences are defined and completed with measurable topics / learning outcomes. The report concludes with examples of so-called 'test item formats' to assess civic competency and engagement.

[9] Judith Torney Puta, a.o., *Assessing civic competency and engagement*. *Research background, Frameworks, and Directions for Next-Generation Assessment. Research Report* (ETS publication 2015): http://www.ets.org/research/policy_research_reports/publications/report/2015/jvdz

These publications - together with others[10] - offer a good basis to give substance to the parameter of assessment and allows for defining concrete learning outcomes, which can be learned, taught and measured. It seems sensible to develop this set at project level first of all, at a later moment to be discussed and integrated at sectoral / subject area level. This in no way indicates that an initial discussion at subject area level – as input for the CALOHEE project as a whole – is not very much welcomed.

Topics of assessment (and teaching and learning)

Keeping the proposed four parameters, strands, dimensions and the main subdivision and its subsets in mind, the first step is to break down each of the descriptors linked to the 'dimensions' related knowledge, skills and (wider) competences. Only after their breakdown has been realized does it seems feasible to give substance to the subdivision-subsets as identified.

The splitting-up can be accomplished by identifying the different components which make up these descriptors. It is proposed to distinguish 3 to 5 components to be formulated as sub-descriptors. The lists of 'subject-specific competences' and 'general of generic competences' which have been identified by each Tuning subject-area group as being the most relevant for the academic field (sector and subject area), should serve as a basis. The breakdown can be visualized as follows:

Image 4

Dimension	Knowledge descriptor	Skills descriptor	(Wider) Competence descriptor
1.	Sub-descriptor 1-1	Sub-descriptor 1-2	Sub-descriptor 1-3
2.	Sub-descriptor 2-1	Sub-descriptor 2-2	Sub-descriptor 2-3
3.	Sub-descriptor 3-1	Sub-descriptor 3-2	Sub-descriptor 3-3
4.	Sub-descriptor 4-1	Sub-descriptor 4-2	Sub-descriptor 4-3
5.	Sub-descriptor 5-1	Sub-descriptor 5-2	Sub-descriptor 5-3

Each sub-descriptor describes - in the form of a learning outcomes statement – a core element or topic constituting the respective 'knowledge descriptor', the 'skills descriptor' and the 'wider competence descriptor'. These sub-descriptors can be compared to the learning outcomes statements as defined for the 'highest' of a range of successive units or modules in a degree programme (a so-called 'learning string'), defining the level to be achieved. The sub-descriptors have to be formulated in such a way that they can not only be measured, but also be taught and learned. Like descriptors, sub-descriptors should be appropriate for the cycle (BA and MA) for which they are defined. However, as in the case of the cycle level descriptors, it is advisable (if feasible and suitable) to develop these at the same time, to secure a fair balance. When formulating the sub-descriptors, we suggest keeping the Tuning model for defining learning outcomes in mind.[11]

As part of the process of defining a sub-descriptor it is necessary to identify the appropriate learning, teaching and assessment approaches, methodologies and techniques. This can be done at the level of the descriptor as long as all sub-descriptors can be covered. Experience of linking specific approaches to learning, teaching and assessment to descriptors has already been successfully applied in the TuCAHEA project, although not in as much detail as is proposed here. Use can also be

[10] See for an overview of relevant resource material: Campus Compact, Assessment of Students' Civic Learning and Development: http://compact.org/resource-posts/assessment-of-students-civic-learning-and-development/. See also the suggestion for further reading in the publication of the Council of Europe.

[11] Jenneke Lokhoff, a.o., *A Tuning Guide to Formulating Degree Programme Profiles. Including Programme Competences and Programme Learning Outcomes*. Bilbao, Groningen, The Hague, 2010.

made of the outcomes of the CALOHEE survey on assessment and of the examples of 'good practice' identified by the subject area groups as part of the process of updating the present Tuning Reference Points. The interrelation between descriptors, sub-descriptors and approaches for assessment, learning and teaching, is shown below:

Image 5

Dimension	Knowledge descriptor	Skills descriptor	(Wider) Competence descriptor
1.	Sub-descriptor 1-1	Sub-descriptor 1-2	Sub-descriptor 1-3
1a	Assessment approach	Assessment approach	Assessment approach
1b	Learning approach	Learning approach	Learning approach
1c	Teaching approach	Teaching approach	Teaching approach
2.	Sub-descriptor 2-1	Sub-descriptor 2-2	Sub-descriptor 3-3

Not every key element or topic described in a sub-descriptor has to be covered by each degree programme. Whether and to which level each will be covered in practice will depend on the profile and mission of the programme concerned.

Outcome of the exercise

The outcome of the exercise will be an Assessment Framework for the Subject Area covering both first and second cycle (bachelor and master). Based on the dimensions identified, it will contain 'knowledge descriptors', 'skills descriptors' and 'wider competences descriptors', all of which will be underpinned by more precise sub-descriptors. Each sub-descriptor formulated as a learning outcome will cover a core element or topic. For each sub-descriptor or combination of sub-descriptors learning, teaching and assessment approaches will be identified. These should allow for the achievement of the learning outcome(s) and be presented as examples of good practice. We do not consider it sufficient in this respect just to mention a method or approach, rather it is necessary to indicate 'why' this approach or method is used and 'how' it is applied in addition to the 'what' described in the learning outcome.

An Assessment Framework containing these elements will not only serve as an important reference for constructing new programmes and modernizing, revising, and enhancing existing ones, but will also serve as a fair indicator for the completeness and (high) quality of a degree programme allowing for different missions and profiles. But most of all, it will be a reliable instrument for measuring and comparing the achievement of learning outcomes in a national and international setting.

Groningen, November 2016