Line 2

Subject Specific Competences

Business Subject Area Group: *Subject Related Competences*

Introduction

Several attempts have been made to identify a way how credits can be allocated to the subject areas / modules or whatever they might be called. This has been a matter of much a debate and often neither presenters nor the audience were completely satisfied as at this point the formal approach (according to the workload) could be explained but this left a lot, including the nitty-gritty, to the «local heroes». Also this paper cannot offer «100 %» solution but it offers a «99 $^{44/100}$%» pathway (the measure for purity according to Michael Porter, a management guru) which still leaves enough space for the local champions but also enough guidance to convince those reluctant to change.

In contrast to many other proposals the suggestion of this paper is a deductive rather than an inductive approach, in fact, it contains both elements. Both research in industry and university has been done and the method has been tested on many occasions. The proposal is not to start with a determination of time for individual activities of the student but with defining an overall structure of subject areas first (top-down) before workload per module is going to be evaluated in the final step (bottom-up).

Structuring of university programmes

Independent of names of individual subjects very similar subject areas /modules can be identified throughout all types of universities in

all Member States. However, they may be represented in a given study-programme to a lesser or higher extent. In some first-or second-cycle study-programmes some of these areas may not be included at all or may not be defined as subjects (e.g. rhetorics). One of the reasons may be that some —in particular those referring to transferable skills— have been in the discussion of late due to the needs of industry (see e.g. Skill Needs Project of the EU), however, not all universities felt the necessity to add such areas to their syllabus. Also, some universities are of the opinion that such matters are inherent parts of the various syllabi anyway and do not have to be taught / learned in specific classes.

In the following the «widest» groups of subjects you can find are listed:

- —***core modules***, i.e. groups of subjects which make up the backbone of the respective science (e.g. in Business and Management (BM): Business in Context, Business Functions, Business Environment)
- —***support modules***: which complement the core modules to the extent that they help to clarify implications of e.g. business activities (e. g. in BM: Mathematics, Statistics, Information Technology)
- —***organisation- and communication skills modules*** (e.g. Learning skills, Working in Groups, Time Management, Rhetorics, Foreign Language(s)…, skills which many stakeholders have asked for a long time but which still are not necessarily included in the curriculum as independent modules yet
- —***specialisation modules /major/minor/ options / electives*** (mostly a list of areas out of which a student can choose one or several which he wants to understand to a larger extent (in BM for example these may be grouped according to business functions [logistics, marketing, finance…] or types of enterprises [SME, MNC,…] or geographical areas [Pacific Rim, Eastern Europe…] or business sectors [service-, pharmaceutical-, automotive industry…]
- —***transferable skills modules*** (e.g. work experience/placement, projects, dissertation, 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)

These subject areas could also be grouped in the following way:

Knowledge Acquisition and Widening	Knowledge Acquisition and Deepening	Methodology: Skills/Competences to learn and transfer
Core modules Which syllabi are the essential characteristics of this degree programme? Without which course would no one consider this as the identified degree programme?	**Specialisation modules / major / minor / electives / options** Which areas could be identified —vertically, horizontally or laterally— for further useful studies? (vertical: specialisation in a narrow sense = deepening; horizontal: interdisciplinary = enlargement; lateral: unrelated subject areas, supplying additional areas, diversification	**Support modules** What else is needed to understand issues, identify and to express them in different ways? To which extent can a quantitative approach help to explain things?
		Organisation and communication modules How can I learn and organise myself? How can I present / express best what I want to say?
		Transfer modules How does theory relate to practice? How can I relate theory to practice? What are the methods

The difference as regards these subject areas in cycle one or two are not based on the area as such but rather on the basis of the degree they are openly stated. As a general guideline one can say that the higher the level the more modules which deepen the knowledge are represented most. Also the basic study skills, i.e. organisation and communication modules, will tend not to be listed at higher level. On the other hand, transfer modules are most likely to appear to a larger extent at a higher level only. This could be demonstrated by the following model which serves as nothing but an example:

Module	Cycle			
	First Cycle 3 yrs	First Cycle 4 yrs	Second Cycle 1 yr	Second Cycle 2 yrs
Core	30%		20%	
Support	25%		10%	
Organisation and Communication	10%		—	
Specialisation	10%		40%	
Transfer	25%		30%	
	100%	100%	100%	100%

Any other form of distribution is possible. This has to be decided by the various experts who design study-programmes. They will perhaps put the emphasis of some of these modules to express a certain profile (e.g. at universities of applied sciences the percentage of transfer modules is presumably higher than at traditional universities). Also, if some institutions do not want to offer any of these modules at any level, it is obvious that the percentage share of the others will increase (as shown above in the second cycle). In the Tuning project, e.g., the subject groups could identify a general framework for the various modules. There does not have to be a fixed percentage for the subject areas, rather a percentage range, e.g. «core modules» between 25-35 % at first cycle level, and 20-30 % at second cycle level. The distribution of the modules should always be left to the professors at departmental level (bottom-up approach). Tuning, however, could recommend the structure (list of modules - top-down approach).

Implications for ECTS

If the study-programmes have identified the percentages for the various modules, this should be agreed upon by those who are responsible for the respective study-programme. This automatically leads to the limits of credits which are available for the various modules. If, e.g. in the above mentioned example 30 % of the first cycle, e.g. a three year BA-programme, is reserved for core modules, a maximum of 54 credits can be achieved in all courses which fall within this category of modules. This is demonstrated in the following table.

Module	Cycle			
	First Cycle 3 yrs % - credits	First Cycle 4 yrs % - credits	Second Cycle 1 yr % - credits	Second Cycle 2 yrs % - credits
Core	30 = 54	30 = 72	20 = 12	20 = 24
Support	25 = 45	25 = 60	10 = 6	10 = 12
Organisation and Communication	10 = 18	10 = 24	—	—
Specialisation	10 = 18	10 = 24	40 = 24	40 = 48
Transfer	25 = 45	25 = 60	30 = 18	30 = 36
	100 = 180	100 = 240	100 = 60	100 = 120

Here again, the various experts at «local» level have to find out what their course preference is as regards the distribution across the various elements. As this process has to be encouraged for the other modules as well, it becomes evident —knowing the wishes and wants of professors— that a clearing has to be made to find a final distribution. However, the framework stays the same.

Additionally it is advisable, not to have any figure of credits for a module. An agreement should be made beforehand «top-down» that e.g. a module should carry at least 5 credits or a multiple of this (10, 15…). Tuning could help here again. There might be an understanding in the various subject areas to have this figure (or any other as a minimum). Experience shows that the credits awarded to a module should be about 5 or 6 as this in turn determines the number of modules per year/semester. Whereas in some countries you find the maximum number of modules per semester which a student can take limited to three —which means that each module carries 10 credits or two carry 5 each and one 20, e.g.— other institutions in other countries allow e.g. up to six, which in turn means that all modules carry 5 credits. Experience with ECTS gives evidence that a lower number of credits does not lead to a greater flexibility but just the opposite as more and more professors tend to look for an exact translation of their contents of a subject in that of the other institution. The less this is possible the more they have to accept the ECTS terms of a workload of a semester. Also, modules with 1 or 2 credits mean that hardly one hour per week of workload is scheduled. It is worthwhile to consider that such subjects should rather be amalgamated with others so that a module is being designed.

Module	Cycle			
	First Cycle 3 yrs* % - credits	First Cycle 4 yrs % - credits	Second Cycle 1 yr** % - credits	Second Cycle 2 yrs % - credits
Core	60	70	5	20
Support	45	60	5	10
Organisation and Communication	15	25	—	—
Specialisation	15	25	20	50
Transfer	45	60	30	40
	180	240	60	120
Range of B-/M-level	180 - 240		60 - 120	
Max. for M-level	300			

Note:

* This refers to a full-time programme (min.40 weeks, 1.400-1.800 hrs workload).

** It is most likely that there will not be a Master programme of 40-45 weeks = 1.400-1.800 working hours. If so the reality will be more than 45 weeks and more than 1.800 hours. Only then will this lead to more than 60 credits. The present —mainly British— Master-level programmes of one year most times last for at least 60 weeks (including examinations) and thus would lead to 90 credits. On the other hand one has to realise that these programmes were designed before the Bologna agreement and are not related to the present 3+2 or 4+1 discussion. 1-year Masters are perhaps possible when they build on a B-level programme in the same field. Even then, taking into account that normally a thesis / dissertation has to be written, the overall length of the programme will exceed 1 year = 40-45 weeks = 1.400-1.800 hrs of workload. If the Master level of a given course can be entered with any background, the duration is most likely to be at least 2 years.

In other words: In a top-down approach «Tuning» determines the framework for the various subject areas on the basis of the agreement of the subject groups. In this way the workload and thus the credits are identified as a guideline. Then the institutions themselves and their specific staff —including the students— of the respective area, have to come to terms about the distribution within a subject area (bottom-up). If this was not done teaching staff and students would not feel involved, would not «own the credits» and this would most likely lead to disapproval and disregard in the future. However, at this level, the demands cannot go beyond the credit ceilings unless other subject areas need less workload. Taking our example further the following credit allocation agreed upon by the various professors etc. in Business and Management e.g. may evolve (taking the subject areas outlined above):

Module	Cycle			
	First Cycle 3 yrs* % - credits	First Cycle 4 yrs % - credits	Second Cycle 1 yr** % - credits	Second Cycle 2 yrs % - credits
Core	**60**	**70**	**5**	**20**
Business/Man.	20	30	5	
Business in Context	15	10		
Business Functions	15	20	—	
Business Environment	10	10	—	
Support	**45**	**60**	**5**	**10**
Mathematics	10	10	—	
Statistics	15	20	—	
Information Technology	20	30	5	
Organisation and Communication	**15**	**25**	**—**	**—**
Learn to learn	10	15		
Presentation etc.	5	10		
Specialisation	**15**	**25**	**20**	**50**
Logistics	15	25	20	
Transfer	**45**	**60**	**30**	**40**
Project	10	20	—	5
Business Game	5	10	—	5
Bachelor- Master-thesis	30	30	30	30
	180	**240**	**60**	**120**
Range of B-/M-level	**180 - 240**		**60 - 120**	
Range for total M-level	**270 - 300**			

These models only work if the teaching staff themselves have accepted the ceilings and distributed the predetermined credits to the various subjects of their respective area.

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Line 2: Subject related Competences - Business and Management

Area	Skill / Competence	Modules: Knowledge widening (Basics) Learning objective	Examples
Business Environment	Analysis	Use the respective instruments	Industry analysis Market analysis PEST
Macro/ Micro-economic Environment	Analysis and Synthesis	Identify the impact of macro- and microeconomic elements on business organisations	Financial and Monetary Systems Internal Markets
Business Organisation	Analysis	Identify the constitutional characteristics of an organisation	Goals and objectives, ownership, size, structure
	Analysis	Identify the functional areas of an organisation	Purchasing, production, logistics, marketing, finance, human resource
	Analysis and Synthesis Critical thinking	Define criteria according to which an enterprise is defined and link the results with the analysis of the environment to identify perspectives	SWOT Internal and external value chain
	Critical thinking Synthesis	Lessons learned: identify new developments of business organisations to cope with the changing environment	Change strategies, i.e. Strategic Alliances, Globalisation

Area	Skill / Competence	Modules: Knowledge deepening (Vertical) Learning objective	Examples
Business Organisation	Analysis and Synthesis	Understand details of business functions, types of business enterprises, geographic regions, size of enterprises, business sectors and link them with the basic knowledge	Logistics etc. MNCs, Asia-Pacific etc., SMEs, automotive industry
	Analysis and Synthesis Critical thinking	Identify related issues and understand their impact on business organisations	Business Ethics Cultural Management
	Analysis and Synthesis Critical thinking	Managing a company (tools and concepts): Planning and control	Strategy design and implementation Benchmarking, TQM etc.
	Analysis and Synthesis Critical thinking	Audit an organisation and design consultancy plans	Tax Law, Investment, Case studies, Project work
		Modules: Knowledge deepening (Horizontal) Learning objective	
Business and Law	Analysis and Synthesis Critical thinking	Understand the principles of Law and link them with business / management knowledge	Competition Law Intellectual Property
Business and Engineering	Analysis and Synthesis Critical thinking	Understand the principles of engineering and link them with business / management knowledge	Operations Management Gantt methods Information Technology
		Modules: Knowledge deepening (diversification)	
Ethics	Analysis and Synthesis Critical thinking	Understand the principles of ethics, identify the implications for business organisations, design scenario	Exploitation of human resources, environment
Psychology	Analysis and Synthesis Critical thinking	Understand the principles of psychology, identify the implications for business organisations, design scenario	Working in groups, teams, behavioural studies

The dissertation / thesis could also be put into this table. However, it listed among the transferable skills. This, of course, depends to a large extent on the objective of the dissertation which is very much linked to the respective study-programme and / or to the type of institution.

Area	Skill / Competence	Modules: Knowledge Opening (Support) Learning objective	Examples
Mathematics/ Statistics	Analysis and Synthesis	Identify and use adequate tools	Market research Comparative ratios
Information Technology	Analysis and Synthesis	Identify and operate adequate software Design information systems	Data base
Accounting	Analysis and Synthesis	Understand and use bookkeeping and financial systems	Profit and Loss Account Balance Sheet
Technology	Analysis and Synthesis	Understand technology background and understand its impact for new / future markets	Basics in engineering

Area	Skill / Competence	Module: Knowledge Opening (Organisation and Communication) Learning objective	Examples
Any subject	Soft skills	Learn-to-learn, i.e. How, when, where - personal management	Rhetorics, presentation, working in teams
Foreign Language	Hard and soft skill	Understand the structure of the foreign language, learn vocabulary Understanding, reading, speaking, writing in a foreign language	Working in English as a foreign language

Area	Skill / Competence	Module: Knowledge Transfer Learning objective	Examples
Project	Analysis, Synthesis and soft skill (transfer) Critical thinking	Analyse a problem of an enterprise and design a solution	Entering a new market
Placement	Analysis, Synthesis and soft skill (transfer) Critical thinking	Work assignment (any type of organisation —depending on the objective of the respective study-programme)	Work experience in an enterprise for 20 weeks abroad
Dissertation	Analysis, Synthesis and soft skill (transfer) Critical thinking	On the basis of knowledge acquired identify the impact of culture on market research	The impact of culture on the intention to send out a questionnaire in Mexico