HERE Study Visit Report

Competence-Based Learning: Basics, perspectives, implementation

FH Campus Wien University of Applied Sciences, Vienna, Austria

9-10 September 2019

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1. Introduction

1.1 The topic

The focus of the study visit was on competence-based learning (CBL), using the example of the hosting institution - FH Campus Wien, Austria's largest university of applied sciences (7.000 students).

CBL has gained increasing relevance for higher education institutions and systems, particularly at a time when labour market and societal demands are changing and systems and institutions are under pressure to respond to evolving skills demands. There is also a growing need to transition in employment and to mitigate the high levels of graduate unemployment in some countries. CBL is topical issue in EHEA countries, where transforming teaching and learning has gained traction in the Bologna Process, as well as in other EU Partner/Neighbourhood countries, where graduate skills, labour market needs, university-business cooperation and graduate employment remain both policy and institutional challenges.

In practice, CBL can have a wide range of meanings and entail a range of different pedagogical practices which may or may not be sector dependent. It often implies reforming traditional ways of teaching and engaging students and external stakeholders in close cooperation when it comes to study programme design and delivery. In this context, the HERE study visit (9-10 September 2019) aimed at presenting examples on how a higher education institution develops and implements CBL in conjunction with its teaching and learning strategy. It also looked at issues related to the design and revision of pedagogics, curricula and assessment methods and provision of teaching staff support and development. The visit allowed participants to hear from teaching staff of different disciplines, management and administrators, including top leadership, and students. As context, it has also considered specific aspects of the Austrian higher education system and external stakeholders.

The study visit was a follow up on the 2016 Study Visit to Tallinn on student-centred learning and is also relevant to the 2017 Study Visit on Student Engagement (Edinburgh) and the 2018 Study Visit on Professional Development for Teaching Staff (London).

1.2 Objectives/Learning Outcomes

- Understand different definitions for Competency-based learning (CBL) and exploring potentially different approaches for CBL in different professions and disciplines
- Gain insight on what CBL mean for the mission and strategy of an institution
- Assess the role that different actors/institutional services plays when it comes to CBL (leadership, deans, teaching development support services, etc.)
- Explore examples of CBL in teaching practices and understanding better what this means to both teachers and students
- Discuss the impact of CBL on curriculum and course development, including assessment

- Assess how an institution may engage with external stakeholders on CBL, such as professional/business sectors, employers, local community, civil society in general, NGOs, etc. (for developing curriculum, working together on parts of curriculum or specific courses/modules, etc.)

1.3 Attendance

The study visit was attended by 43 HERE in addition to staff members from the FH Campus Wien University of Applied Sciences (1 participant cancelled at the last minute). The HERE participants represented 21 countries and were mostly from universities, including rectors, vice-rectors, professors and one student representative from Armenia. Six ministry representatives attended as well as two representatives of quality assurance agencies and three research and innovation centres.

2. Preparation for the study visit: background reader and pre-survey

The SPHERE Team developed two background papers, which are complementary to the present report. Readers should also consider the pre-survey results[1], which give insight into the expectations of the participants for the event and their background experience on the topic.

2.1 Summary of pre-survey results

The survey results document participants' perception of CBL and how it is discussed at different institutional and national levels as well as with external partners such as business and industry, public employers and international partners. It also looked at specific needs and interests and good practices.

Fourty-one participants from 22 countries (all Partner countries present) responded to the survey. Four provided written case studies to supplement this: Algeria, Bosnia and Herzegovina, Moldova and Uzbekistan. Case studies have been posted on the event website.

The key results were the following:

- The responses can generate a glossary for the understanding of the terms "learning outcome" and "competence": Participants from 10 different countries (9 HERE countries plus Austria) responded that their native/working language possesses different words for these concepts, while for the remaining countries, participants responded that was not easy to understand whether the two words differ in meaning.

49% of participants considered they were familiar with the CBL concept. The pre-survey showed that the discussion on CBL at national and institutional levels was well balanced: 26 respondents reported discussions at the national and 28 at the institutional level. But only five participants mentioned the CBL

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[1] https://supporthere.org/sites/default/files/pre_survey_results_vienna2019.pdf

debate took take place in other contexts, such as at quality assurance agencies, in professional sectors, under the Erasmus + projects frameworks and within their HERE Team.

Figure 1 - Where does discussion on CBL take place
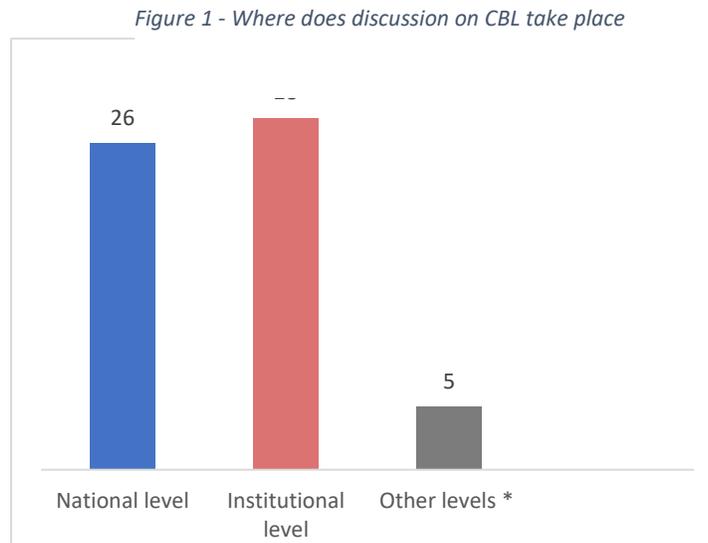
- Twenty-one of the participants confirmed the existence of a national strategy that encourages the use of CBL in their countries[2] whereas twelve indicated there is no strategy. In some cases, a national strategy was part of a broader strategy. For example, Morocco included its strategy for CBL in the national strategy for development 2015-2030. At the institutional level, fourteen participants mentioned they have a CBL strategy and seven had no strategy. Seven participants mentioned that a national strategy was under development and nine suggested an institutional CBL strategy was under development.

- In terms of the discussion of CBL with external partners, twenty-three participants confirmed that this dialogue exists, especially through projects financed by the European Union, with the business sector, quality assurance agencies and international partners.

Finally, participants who attended the study visit in Tallinn (2016) and/or the Study visit in London (2018) had the opportunity to list topics that arose from these events which could hopefully be explored during the study visit in Vienna. For example:

- Definitions of Learning Outcomes and student-centred learning
- Collaboration with external stakeholders (such as employers and industry)
- Implementing CBL: Challenges, experiences, lessons learnt
- CBL as seen through students' eyes

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[2] Austria, Azerbaijan, Egypt, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Morocco and Ukraine,

3. Highlights from the study visit discussions

Background materials prepared by SPHERE are available on the [event's website](#) as well as presentations from the event and other background literature. Some of this documentation is referenced in the text below.

3.1 The host institution - the institutional model and the education provided

3.1.1 The host institution, its mission and context

Established in 2001, the Fachhochschule Campus Wien (FHCW) is a relatively young "University of Applied Sciences" (UAS) in Vienna, Austria. It provides students with multidisciplinary education and ensures that they acquire "a scientific way of thinking". Thereby, its Bachelor and Masters degrees are - compared to universities - more professional- than disciplinary-oriented. The notions of student success and educational quality are measured through statistics on transition into employment: 95-98% of graduates are employed immediately after graduation. In this regard, a high percentage of students are "part-time", i.e. they actually study full-time and finish the Bachelor within three years, but the programmes design allows them to combine study with work. This also explains why 50% of the students are older than 26. While certain study fields tend to be more female (nursing) or male (engineering) in other institutions, the gender balance in FHCW is relatively even. In addition, many students are from non-traditional backgrounds, such as first-generation higher education students or migrants. Therefore, social inclusion is an important topic for FHCW.

FHCW educates in an "international professional perspective", preparing graduates for a global labour market. So far, the institution does not attract international students, notably because it clearly targets national, or even regional populations (Bavaria), and so far only two study programmes offer all the courses in English, although the number of English courses is steadily growing. In addition, non-EU students would have to pay as much as double the fee of domestic and EU students.

3.1.2 Institutional model and its impact on the organisation of learning and teaching

While the focus of the visit was on CBL and learning and teaching (L&T), there was a lot of interest among participants in the institutional model of FHCW. This is likely because this was the first time a non-university private institution has been visited for a study visit.

FHCW is a private HEI but the study places are funded by the government. In addition students contribute with tuition fees, which is not overall done so in Austria. The fees are fixed by law and appear modest from the student perspective: the individual students pay only 364 EUR, as the government co-funds a certain number of places with 6000-8600 EUR annually, depending on the subject. The number of funded places for a study programme is fixed for five years but can be shifted among the study programmes depending on the applicants.. Each year the government offers new places in a call. Due to the enormous demand,

there are a lot more funding requests than places. For example, in 2020 FHCW received 1400 applications for 300 places.

Unlike public HEI, FHCW does not receive any other support from the government (no block grant or similar). The per capita grant for students makes for 63% of the institution's income, while tuition fees account for 12%. It also undertakes commissioned research; per capita funding from industry interested in employing graduates is an emerging source.

Due to its status as a private HEI, the institution has a peculiar governance model which also impacts the organisation of learning and teaching: Teaching at FHCW was described as much less autonomous compared to universities. Heads of programmes have a relatively high level of autonomy in how teaching is provided. However, the top leadership can decide to discontinue a programme – considering also student and labour market demand and financial aspects. Between these two levels (leadership and programme heads), the "level 1.5" helps to mediate decisions and strategic planning for learning and teaching.

This works relatively well but is not fully defined in terms of procedures and relies to a large extent on the good will and interest of the Heads of Departments. Their work is of crucial importance as it helps to enhance communication on learning and teaching.

Level 1: Chief Executive Officer +Chief Finance Officer (economics & infrastructure) jointly with the Rector + 2 Vice Rectors (academic)

"Level 1,5": Department Heads (trusted by the heads of study programmes)

Level 2: Heads of Study Programmes(independent – defined by law)

"Much more communication between teachers" was identified as one of the key issues for learning and teaching in this event. While this works well among the 240 full-time staff, the institution is considering establishing a "CAMPUS CONNECT online communication platform" to provide better services for the 2000 external part-time teachers, who ensure the link to professional practice.

3.1.3   Learning needs of students versus skills needs of the labour market

FHCW describes its teaching offer as "demand driven" as it has to consider the learning needs of students, and the skills needs of the labour market. It regularly evaluates teaching content of programmes against industry needs and student feedback. But it emphasises that this does not mean "asking employers what they need today", but rather "predicting labour market and society needs at least three years ahead". By doing so, it also aims to contribute to social, economic and technical innovation – as the motto of the institution is "shaping the future with education".

New programmes are sometimes proposed by staff members but also by industry. For example, a bachelor has recently been developed in packaging technology. In either case, the proposal for new programmes is usually referred to an external organisation which undertakes a needs analysis.[3] It should also be noted

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[3] *More information of this issue is available in the two presentations provided by Vice Rector Mettinger:* *FH Campus Wien UAS - a dynamic, innovative, responsible HEI.*

again that FHCW has a small number of full-time staff and more than 2000 external teachers who are professionals engaged in part-time teaching. This is both an advantage and a challenge.

3.2 Curriculum development

In light of this context, CBL has also a direct impact on curricula. A presentation (Susanna Boldrino, Head of Academic Institutional Development) illustrated how future environmental challenges and the need to develop "21st century skills" lay ground for new curricula and also for the assessment and redesign of existing programmes. Participants discussed then how "future skills" such as critical thinking, problem solving, people management, decision making and negotiation, but also "emotional intelligence", could be taught and learnt and what that means for curricula development.

It was also explained how curricula development is done in practice at FHCW: the legal framework requires universities of applied sciences to involve at least four people: two persons with a habilitation (a post-doctoral qualification, which grants it holder to unrestricted rights to teach at universities) two persons with a proven background of activity in the relevant professional field.
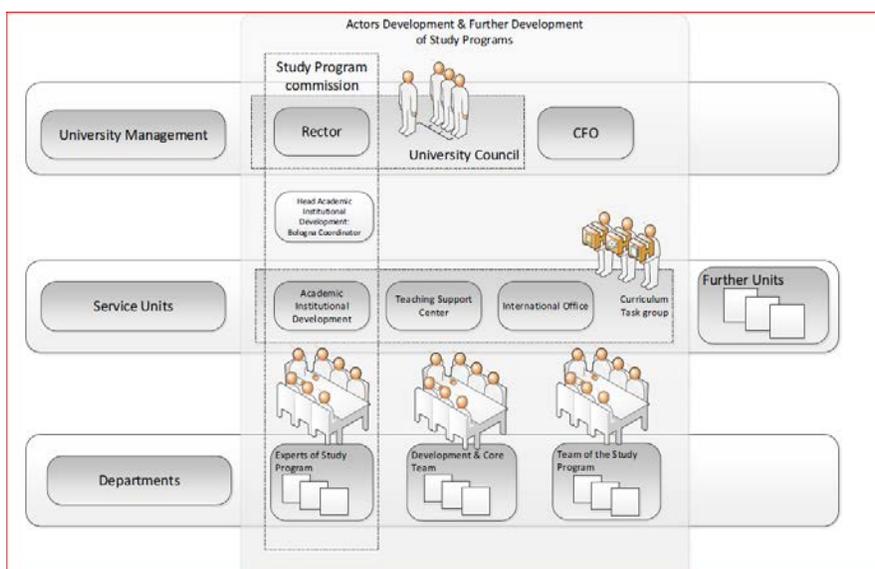
But at FHCW, the "development-team" for curricula also comprise experts, students and graduates, and various other stakeholders, and the curriculum goes through different phases and feedback loops. In order to ensure that the approach is commonly understood and systematically implemented, the institution has developed a "Curriculum Handbook". In a separate session, it has also been presented how mobility and internationalisation are accounted for in curricula development[4].

The strategic perspective: CBL as the foundation of an institutional teaching philosophy.

[4] *More information on this issue:*
The Curricular Perspective: CBL and learning outcomes. Susanna Boldrino, Head of Academic Institutional Development.

3.3 Recognition of prior learning

FHCW emphasized recognition of prior learning (RPL) as a key issue due to its mission (providing lifelong learning opportunities in professional fields) and its student profile. FHCW attracts a considerable number of students from non-traditional backgrounds. In total, half of the students are older than 26, and every second student is already in the workforce and formally a "part-time learner".

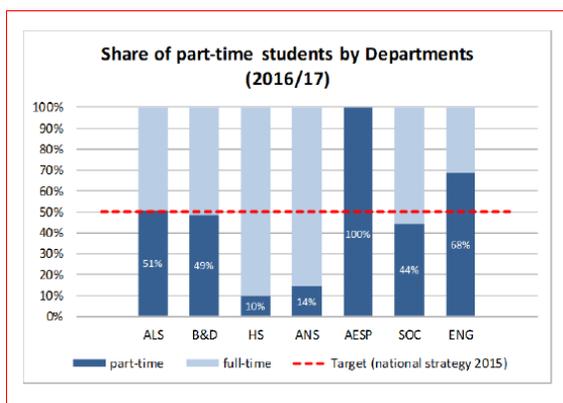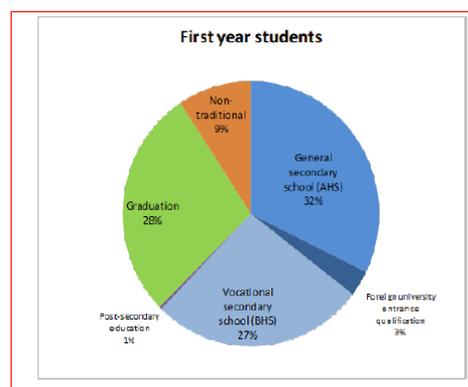*Figure 2 - Boldrino – Curricular perspective*

Figure 1 -Boldrino – Curricular perspective

This varies between departments: In Health Sciences (HS) and Applied Nursing (ANS) the percentage is relatively low, whereas in Applied Life Sciences (ALS) and Engineering (ENG) it makes for more than half of the students. Administration, Economics, Security, Politics (AESP) is an exception, because admission to the study programmes was limited to an appropriate target group at the very beginning. And currently, all study programmes are offered in a part-time form. In addition this department offers several continuing professional development programmes.

Therefore, "permeability of its educational offers" is a key quality of FHCW. This requires a complex interplay between students, teachers and heads of study programmes: Students' educational backgrounds have to be assessed and possible substitutions for modules agreed upon. A challenge is clearly to perform this in a systematic and responsible fashion and to keep bureaucracy levels low. Various presenters stressed correctly formulated learning outcomes with clear reference to the NQF framework" as indispensable basis for RPL.[5]

[Learning outcomes as an enabler for international and intercultural learning. Elisabeth Brunner-Sobanski, Head International Office.](#)

[5] *More information of this issue:*
[The Curricular Perspective: CBL and learning outcomes. Susanna Boldrino, Head of Academic Institutional Development.](#)

3.4 Teaching philosophy

FHCW has an institutional strategy (2016-2020) which emphasises education, but also developed its own "Teaching Philosophy", a two-page document, which summarises the main principles and characteristics of its teaching. The original is in German, but the institution kindly prepared an English translation. The development of this document has been an important mechanism for awareness-raising and establishing a shared understanding among staff. It was discussed that it helps to communicate the general goals and approaches in learning and teaching. FHCW does not prescribe specific teaching methods, but rather emphasises "methodological diversity" and important issues such as the relationship of teaching and research, the use of e-media and also pedagogical staff development.

The Teaching Philosophy, along with other instruments and structures, help to identify gaps and challenges and to find solutions to teaching challenges. The communication situation of part-time teachers is one example; another one is performance assessment, which was mentioned as the most underestimated part in the institution's CBL approach.

In examining this approach, participants were pointed towards the European Principles of the Enhancement of Learning and Teaching – a document that the European University Association developed in collaboration with a wide range of organisations and institutions. These two documents suggest the need of establishing and documenting a consensus on learning and teaching at the level of institutions and also at sector level.

3.5 Student-centred learning and the role of QA

FHCW is routed in the achievements of the Bologna Process, i.e. Bachelor and Master degrees structured in modules and defined by learning outcomes, expressed in credits. This provides the basis for the competence orientation of the institution, i.e. learning outcomes in the form of competences ("knowledge & ability"). This requires a change of perspective "away from centering on instruction towards the arrangement of learning environments or situations" and "promotion of self-organised and active learning". For the role of the teacher, this means moving "from the sage on the stage to the guide on the side". But this also has consequences for learning provision and formats, favouring approaches that enable learners to become active and responsible. The presentations provided evidence how these different teaching approaches lead to a different quality of learning. It was concluded that teaching should rather be understood as "designing problem-based learning environments". It was made clear that this is not a plea to ban traditional lectures, but rather to think about the appropriate means for learning, considering time, social form, layout of classroom etc.

CBL has also consequences for assessment ("how you teach is how you assess "). It was pointed out that while testing would usually slice up content and skills into small bits, it remains a challenge of "test" competence in an absolute and unambiguous fashion – and that assessment would be rather about observable action (based on performance).

Figure 3-Hanzl- From the sage on the stage
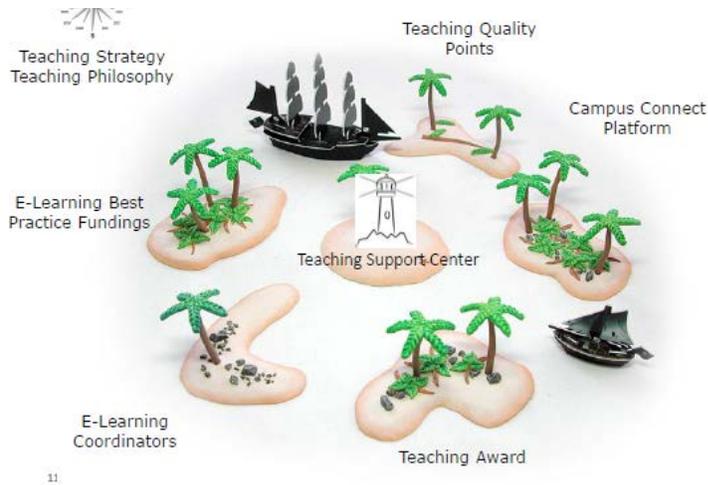
It is clear that this in no longer about tasks for individual teachers but requires a carefully crafted learning environment where teachers and other support staff collaborate on the provision and enhancement of learning.

Interestingly, FHCW developed first a Centre for E-Learning, but came soon to realise that the challenge was not the digital learning, but how to conceptualise and organise learning. Today, it employs four staff at the learning centre.

Linked to this, the (changing) role of internal QA was mentioned as one of the ways to assess whether strategies and activities are implemented and to provide evidence on impact and success, to support enhancement of learning and teaching.

For this purpose, the Quality management office conducts surveys among students, asking, beyond questions on their satisfaction, what type of teaching provision they encounter during studies. It also surveys graduates to find out on how their education helps them in the workplace. It also reports to the leadership team and follows up with departments and individual teachers. To compare some of the results, the institution also engages in benchmarking exercises with other institutions[6].

An important aspect is that the Quality management office also helps to assess learning in specific modules and courses so as to enhance the education offer.

3.6 Disciplinary case studies on CBL

Two case studies were presented to illustrate on how CBL can improve learning results:

3.6.1   Nursing internships: from a paper document to a digital learning tool

Clinical internships are an important element of nursing education, and therefore considered in the 1994 Austrian Nursing Act and detailed in the 1997 "Internship Manual", which contains checklists for the three-year period. The presentation showed how an app has been developed to replace the paper document that every nursing student had to enable documentation and evaluation. Besides obvious advantages, this also enables central administration to have an overview on students learning progress: Teachers, internship

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[6] *More information of this issue:*
From the 'Sage on the Stage' to the Guide on the Side (The Didactic Perspective: Preparing Teachers for CBL). Dr. Christopher Hanzl, MA , BEd
CBL as seen through Students' Eyes. How students' feedback can be used to evaluate CBL-measures.

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supervisors and students understand better what students have already learnt and what they still have to learn. This makes placements easier and improves (the assessment of) their quality and impact. And it was also felt that students are much more motivated and feel more in control.[7]

3.6.2   Conversion of a traditional academic programme into a mobile CBL

Another example was how an optional module in coding in computer sciences was converted into a competence-based online learning programme. This change brought the time needed for learning down from 625 ECTS to 300 ECTS. The learning results were better, not only immediately at the examination, but also months after, confirming that the problem-based learning approach via the app achieved a more in-depth learning than the previous lecture and seminar based approaches ("addressing all the knowledge levels of Bloom's Taxonomy contributes to sustainable knowledge"). Results were positive for both, part-time and fulltime students. It was mentioned that, while there was lots of on-line and face-to-face interaction among full-time students, this was not the case for the part-timers, who were described as very focused and outcome-oriented, also as they have little time to spend.

FHCW leadership commented that it was a new staff member who recognised the problem with the previous learning approach and developed the new approach to improve it. While this led to an outstanding result - double the impact in half the time – this was of course a risk, and it was important that the institution is willing to take this risk and provides all necessary support[8].

In both cases, the Quality management office supported the development in providing detailed data on learning (before/after), and by doing so, providing the ground for further development (upscaling, extension of the approach to other disciplines).

3.7 Student perspective

Presentations on the education approach and the role of QA (3.7) also emphasised the goal to activate students as part of the learning process and its quality assessment. Two student representatives presented on CBL and more generally on their learning experience and the role that students play at the institution. They made clear how important the diversity issue is, as many students arrive without general upper secondary school leaving degrees. Hence, they come to the institution to learn the competences that prepare them for a specific professional career.

The students confirmed that there is *"no common agreement on what a competency is - we would like to define it as a combination of knowledge, understanding, skills and abilities. It is the lectors and the college's*

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[7] *More information of this issue:*
PraxisAPP – a tool for CBL.Department Angewandte Pflegewissenschaft (Applied Health Sciences) – Bachelorstudium Gesundheits- und Krankenpflege by D. Vitek & A. Patschka
[8] *More information of this issue:*
Leveraging Collaborative Mobile Learning for Sustained Software Development Competencies, by Dr. Ingrid Schefer-Wenzl and Dr. Igor Miladinovic.

responsibility to support and enable students in this process of acquiring the aforementioned. After all, after graduation students are expected to know, understand and be able to demonstrate their acquired knowledge. Education therefore must not only consist of the conveying of knowledge, but understanding, reflecting on and utilising the above-mentioned."

Concretely the students underlined that the institution was expected to explore ways to ensure that the students acquire the skills for jobs and also for further professional development. Quality internships and laboratory experience were mentioned in this regard as well as didactive approaches, such as "reflectonary groups". They also gave their perspective of student-centred learning: "The college must know its students and find fitting teaching methods for each type of student". The students clearly voiced their expectations, which mirrored what several staff had described in different presentation regarding educational goals.

4. Conclusions, take-aways and recommendations for HERE, HE institutions and systems

The study visit clearly demonstrated that CBL is not necessarily about specific methods, but generally about finding probable answers to the question on how learning can best be organised. It became also clear that student centred learning does not mean letting students work alone, but rather providing the necessary 'scaffolding' to enable their learning, to ensure their motivation and reduce frustration and fear, and to bring them gradually to higher levels of learning autonomy.

This requires not only engagement of individual teachers, but communication and cooperation among teachers. It also involves students themselves, a process that has to be organised and supported (by leadership and the learning centre), and also evaluated and informed (by the units responsible for QA). FHCW showed how the development of the teaching philosophy and the curriculum manual can contribute to this, but in first instance, it depends on the active engagement of the members of the institution.

FCHW is an interesting case of institutional and pedagogic change: It has implemented what was resisted against many years ago across Europe. Interestingly, in the 2015 EUA Trends study, most institutions identify the flipped classroom as a challenge, whereas staff at FHCW confirmed that it would work across the institution. These kinds of example can help to promote and accelerate change, and also to convey know-how on how to achieve it.

The visit also showed how the mission and the organisational and economic model of the institution can impact learning and teaching, and hence should encourage each institution to reflect on how it can use its assets in the best possible way.

CBL in Partner countries

Some participants pointed to the lack of infrastructure and resources that they might face in their own environment, but in principle there was not real concern that CBL could not be implemented in their own HE system or institution (no cultural obstacles or similar). The need to build national and institutional

culture for the involvement of all stakeholders in the process was seen as a challenge by some, and also on how to ensure that students respond actively to SCL and CBL. A concern was that flexible learning provision would bring the risk that students fail, given that schools in many countries use more traditional approaches. Hence CBL should be considered from school level.

Breakout groups developed suggestions on how to assist HEI in implementing CBL:
- Develop a matrix for every curriculum and map academic activities with the skills they provide;
- Develop incentives to include more life-like learning opportunities (internships, social engagement) into the curricula;
- Organise national and institutional round tables on the issue, which should also include industry;
- Develop approaches for enhancing teaching competences, given that teachers are not experts on teaching;

Annex 1: Additional references

The following issues have been addressed during the visit, and information provided by SPHERE after the visit:

1. **Regulated professions**

Regulated professions have been mentioned with regards to recognition, and also the definition of learning outcomes and competences.

For the EU database on regulated professions
https://ec.europa.eu/growth/single-market/services/free-movement-professionals/regulated-professions-database_en
https://ec.europa.eu/growth/tools-databases/regprof/index.cfm?action=regprofs
An explanation on how professional qualifications are regulated at European level, can be found at
https://ec.europa.eu/growth/single-market/services/free-movement-professionals/qualifications-recognition_en
The Bologna Process and the Recognition of Professional Qualifications: an update on developments
A reflection on how this relates (or better: does not relate) to the Bologna Process can be found in the article The Bologna Process and the Recognition of Professional Qualifications: an update on developments by our colleague Howard Davies

2. **HE Innovate**

The European Commission and the OECD have joined forces in the development of HEInnovate. It is free, confidential and open to anyone to use. HEInnovate can be used by all types of higher education institutions. This website offers more than just an interactive tool; it also contains case studies, user stories and supporting material to help you to design solutions tailored to your needs.
https://heinnovate.eu/en

3. **European Principles for the Enhancement of Learning and Teaching**

FH Campus Wien presented its Teaching Philosophy, which in respects is very similar to the European Principles for the Enhancement of Learning and Teaching. This is a 2 page document, of high-minded Principles, developed under the EFFECT Project (2015-2019 – closed in March) with a larger consortium of EUA, ESU, ETUCE/EI, the UK Higher Education Academy, and the Irish National Forum, and National Rectors Conferences, some of which delegated to universities,
The principles can help colleagues to develop a shared language and understanding, but also to become aware of the differences (within an institution, across institutions), and learn from them. This can be part of a reflection on institutional strategy, its development, implementation or enhancement.

There is also a tool kit consisting of the Principles, and a set of Guiding Questions for each of them. They help to get the discussion going, though the institutions are encouraged also to develop their own questions.